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**INVENTORY OF MUNICIPAL WASTEWATER TREATMENT
PLANTS OF COASTAL MEDITERRANEAN CITIES WITH
MORE THAN 2,000 INHABITANTS (2010)**

In cooperation with



WHO

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PREFACE

Throughout the centuries and long before the start of the industrial revolution, men have been using the sea as the most convenient place for the disposal of wastes resulting from human activities. The sea's self-purification ability has been largely abused. Dumping of domestic, industrial, and radioactive wastes, as well as the run-off from agricultural products have not only created considerable hazards to human health but have also endangered the marine environment.

The United Nations Conference on Human Environment (Stockholm, 1972) underlined the growing importance of the protection of the marine environment. During the same year in London, the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters was adopted which entered into force in 1975.

The major problems linked to the uncontrolled disposal of wastes in the marine environment were found to be:

- a) Dispersion of pathogen organisms capable of endangering human health;
- b) Toxic effects on aquatic life – including human life – caused by the various chemical substances reaching the marine environment;
- c) Deterioration of the quality of seawater – eutrophication – resulting from the widespread dispersion of nutrients and other organic and inorganic matters.

The above-mentioned problems do not affect the area of activities of one single international organization or of one single country. Instead, they have an impact at global level therefore several institutions of international character such as UNEP, WHO, IMO, OECD and others, developed programmes aimed at finding solutions to their respective priority problems.

At the level of the European Region, since the late 70's, studies and reports prepared by scientists and researchers from different European countries indicated that the quality of the marine environment of the Mediterranean Sea was deteriorating. The studies clearly demonstrated the urgency for introducing remedial measures to stop the pollution of Mediterranean Sea.

The causes for the deterioration in the quality of the marine environment are numerous and most of them are interconnected, resulting in a very complex pollution situation.

One of the important causes of marine pollution is the high rate of population growth that the coastal zones of the Mediterranean Basin have experienced since the 1960's and 1970's. This widespread population growth has been accompanied by an increase in the standard of living leading to an equal increase in industrial development to satisfy the needs of the population.

As a consequence of urban and rural development in areas of extraordinary geographical beauty, the tourist population visiting those places has not ceased to grow. This increase in population has had a profound impact on the quantity and quality of wastes produced. Quite often during the tourist season, municipal services in charge of the safe disposal of solid and liquid wastes are totally unable to cope with the additional waste-load that invariably reaches the coastal waters.

However, in spite of the importance of pollution loads originating directly from human agglomerations in coastal areas, they appeared to be of minor importance when compared to other forms of pollution originating inland and discharged into the sea by various means. Discharges from "inland" municipal, industrial and agricultural districts, which are only

partially treated or even in untreated form, are still reaching the sea through the hydro-graphic river network of the Mediterranean Basin.

Municipal wastewater is discharged directly into the immediate coastal zone, either untreated or subjected to various treatment procedures, through outfall structures of variable length, or reaches the sea by seepage as a result of leaks in sewerage systems or other causes. Municipal sewage carries increased loads of nutrients such as nitrogen and phosphorus, and a heavy load of microorganisms, including bacterial and viral pathogens. In large cities, it usually contains a variety of chemical wastes both from households and from industries discharging directly into the public sewerage system.

PART I

1. ABOUT THE STUDY

1.1 Historical Background of the Study

The protection of the marine environment is an important issue that concerns the countries of the Mediterranean Region. The Mediterranean Action Plan (MAP) that was convened by the United Nations Environment Programme (UNEP) and was approved by all countries (Barcelona, 1975) is a common effort for the protection and upgrade of the marine environment.

In 1976 the representatives of the Mediterranean countries adopted the legal support needed for the implementation of the MAP Programme at a conference convened by UNEP in Barcelona. More specifically, in February 1976 the **Barcelona Convention** was signed as an international agreement between Mediterranean Countries for the protection of the Mediterranean Sea against pollution.

In addition to the Barcelona Convention, the Barcelona Conference adopted and signed two supplementary Protocols. One concerned the preventive measures required for protecting the Mediterranean Sea against the dumping of polluting matters from ships and aircraft and the second protocol referred to the establishment of international cooperation to reduce pollution resulting from accidental spills of oil and other harmful substances. Both protocols were adopted and signed simultaneously with the Barcelona Convention, and entered into force in February 1978.

The preparation of appropriate legal instruments to deal with land-based sources of pollution is an issue of major concern since it is estimated that land-based sources of pollution constitute more than 80% of the total pollution load of the Mediterranean Sea.

The Protection of the Mediterranean Sea Against Pollution from Land-Based Sources Protocol classified substances that have a deleterious effect on the aquatic environment in two main categories; a "black list" for substances that eventually have to be eliminated and a "grey list" for those substances, by which pollution has to be reduced.

In the 1995 Barcelona Resolution the Contracting Parties affirmed their determination to use MAP as a tool for sustainable development. To this end the Barcelona Convention was revised and MAP was reformulated with the title of MAP Phase II, while the Mediterranean Committee on Sustainable Development (MCSD) was established as a consultative body to the partners in sustainable development in the Mediterranean. MAP's component programme for pollution monitoring and research in the Mediterranean Sea (MED POL) then entered into its third phase for the period 1996 - 2005.

In Genoa, Italy (1985), the Contracting Parties to the Barcelona Convention, reviewed the previous cooperation established, and adopted a new declaration named **The Genoa Declaration**, to cover the second decade of the Mediterranean Action Plan. Ten targets to be achieved by the end of the decade were approved. Amongst the targets approved, was the establishment of sewage treatment plants in all cities around the Mediterranean Sea with more than 100,000 inhabitants and appropriate outfalls and/or appropriate treatment plants for all cities with more than 10,000 inhabitants.

At the level of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities, the United Nations Environment Programme convened in Washington in 1995 an intergovernmental Conference to adopt the above- mentioned Plan of Action. The Conference clearly defined the need for action at the various levels of

interventions required. Thus, at national level, emphasis was placed on the introduction of strategies and measures to enable the appropriate management of priority problems. Recognizing the need for the participation of countries in regional and sub-regional arrangements, the Conference stressed the importance of ensuring at national level the resources and instruments required for the effective functioning of regional and sub-regional arrangements.

In what concerns the role and involvement of the World Health Organization, the Fiftieth World Health Assembly in Geneva, concerned about the potential risks to human health resulting from the deterioration of the Marine Environment, endorsed the Washington Declaration. Therefore, Member States were urged to support the implementation of the Global Programme of Action in general, especially with regard to public health aspects. They were also urged to participate in the development of a clearinghouse for the implementation of the Global Programme of Action and, in particular, to support WHO's efforts to lead the development of the clearinghouse mechanism for information on sewage.

1.2 Report on the Municipal Wastewater Treatment Plants in the Mediterranean Coastal Cities: Methodology and Procedures

The marine environment is subjected to various pressures related to human activity, in the form of point and non-point sources of pollution. The production of wastewater results from human activities where use of water is very important either domestic or industrial, the former as point and/or non-point source of pollution and the latter as a point source of pollution.

Throughout the years in the framework of the MAP Program several reports have been produced related to the situation of municipal wastewater treatment facilities in the Mediterranean countries, with particular emphasis to the population served by wastewater treatment plants, the degree of the treatment provided, quantities of wastewater produced and disposal alternatives. The data collection periods and respective reports are listed below:

- **Status of wastewater treatment in Mediterranean coastal cities with population of more than 10,000 persons.** The study was conducted with reference the year 1999 and the results were published at the MAP Technical Report Series No 128 (2000). The study was updated in 2003 (reference year) and a report with the updated information and comparison between the two reporting periods was published at the MAP Technical Report Series No 157 in 2004.
- **Status of wastewater treatment in Mediterranean coastal cities with population between 2,000 and 10,000 persons.** The study was conducted with reference the year 2006 and the results were collected by each country in early 2007 and was published at the MAP Technical Report Series No. 169 in 2008.
- **Status of wastewater treatment in Mediterranean cities with population greater than 2,000 persons in the vicinity of big rivers ending up in the Mediterranean Sea.** The study was conducted with reference the year 2008 and the results from eight countries (i.e. Albania, Croatia, Egypt, France, Greece, Italy, Spain and Turkey) were submitted at the MED POL Focal Points Meeting in Kalamata, Greece, in 2009 .

In all reports similar data were requested from the Contracting Parties which included:

- List of cities and the respective population (permanent or seasonal as expressed in some cases as population equivalent).
- Status of wastewater treatment plants (operational, under construction, in the design phase, out of order etc);

- Degree of wastewater treatment provided (primary, secondary, tertiary, or other degree of treatment);
- Quantity of wastewater treated and method of discharge;
- Quantity of wastewater untreated and method of discharge.

The planning, methodology and working procedures of the current study were prepared within the framework of the MED POL Programme and involved two phases.

During **Phase I** all countries were requested to update their data which were collected in previous reporting periods using as reference the year 2010. The required information was prepared at national level by the officially designated National MED POL Coordinator or consultant assigned for the specific project.

A comprehensive analysis of the collected data at country level was performed (**Phase II**) in order to identify specific issues for each country, minimise the discrepancies between the submissions, thus enabling the formulation of realistic conclusions regarding the current situation on wastewater collection, treatment and disposal in the Mediterranean.

2. MUNICIPAL WASTEWATER IN THE MEDITERRANEAN

2.1 Characteristics of Municipal Wastewater in the Mediterranean

In general, municipal wastewater refers to a mixture of domestic wastewater (residential settlements and services which originates predominately from human metabolism and from household activities) and industrial wastewaters. Industrial wastewaters may be discharged to sewerage collection systems or directly enter the wastewater treatment plants, with or without previous treatment. Sewers may also convey groundwater and precipitation that infiltrate into the sewerage networks.

The quantity of wastewater entering the sewerage networks is site specific and depends upon different factors. For the Mediterranean region, water consumption is on average to the order of 150-250 l/cap per day, a figure that in some countries is reduced significantly down to 50-60 l/cap per day. Of the total quantity of water supplied to the communities 70-80% reaches the sewerage system, while the rest is infiltrated into the soil (e.g. irrigation of gardens). This figure usually does not include industrial wastewater, which depending on local conditions, should also be taken into account, or infiltration inflow into the sewer.

Wastewater flows depend upon both the climatic conditions and the size of the community, while at the same time in coastal communities of the Mediterranean, seasonal variations can be particularly pronounced due to tourist activity, with characteristics that vary among different standards of living, climatic conditions, water supply systems, the available quantities of water, as well as composition of industrial wastes. The basic quality parameters of municipal wastewater are the organic load (BOD₅ biochemical oxygen demand at 20°C over 5 days and the COD parameter), suspended solids, nutrients (nitrogen as N, phosphorus as P) and pathogens. The concentration of each substance in wastewater depends on the water consumption per capita per day. In the Mediterranean countries, the limited available quantities of water, result to low daily consumption, thus higher concentrations can be expected in domestic wastewater. Further to the main conventional pollutants of wastewater, the presence of other substances such as total dissolved solids and specific ions like sodium, calcium, magnesium and boron may also occur in wastewaters. In communities where industrial activity is intense, the contribution of industrial wastewaters to domestic wastewater is related to the presence of specific compounds or elements, such as phenols, pesticides, chlorinated hydrocarbons and metals (Cd, Zn, Ni, and Hg, etc.). These substances are of particular concern due to their toxicity and because they tend to resist conventional methods of wastewater treatment.

The presence of micro-organisms in municipal wastewater depends on the conditions of sanitation of the population and primarily of indicator organisms, which can be more easily estimated in wastewater than the pathogens, (coliforms, faecal streptococci, shigella, salmonella, *Pseudomonas aeruginosa*, *Clostridium perfringens*, *Mycobacterium tuberculosis*, protozoan cysts, helminth ova, and enteric viruses).

2.2 Impact of Wastewater Discharges to the Marine Environment

Water pollution is usually related to one or combination of more of the following: solids, colour, odour, taste, toxicity, presence of pathogens, thermal pollution, oxygen depletion and eutrophication. Toxicity and thermal pollution are associated to the discharge of industrial wastewater, while taste and odour are linked to the quality of surface waters.

Solids

The suspended solids and colloidal matter constitute an important pollution factor. By the diversion and absorption of light they prevent its passage, increase water turbidity, thus seriously affecting the ecological status of water bodies and can even be dangerous for

swimmers. The prevention of the passage of sunlight causes decreased production of phytoplankton. The suspended and colloidal solids can adversely affect aquatic organisms and provide protection against pathogens in natural and artificial processes of destruction. The solids when settling form sludge bottoms that can affect the communities of invertebrates and block bottom layers of gravel where fish lay their eggs.

In the irrigation water, solids create problems of solid deposition in reservoirs and pipes, clog the surface layer of the soil thus preventing the penetration of water and air and may even form a coating on the leaves of plants which prevents photosynthesis and can be detrimental to the marketing of some products.

Colour

To be aesthetically pleasant, water must be practically free of colour. Moreover, the colour of the water bodies can prevent the passage of light and thus the process photosynthesis. Organic and inorganic materials originating from nature and a wide variety of industries may add colour to the water. Actual colour is called what remains after the removal of turbidity. In inland waters natural colour generally occurs as yellowish brown, while for bathing waters unusual change of colour is a pollution indicator.

Eutrophication

Based on their trophic state, water bodies can be classified as oligotrophic, mesotrophic and eutrophic. Oligotrophic water bodies contain low levels of basic nutrients, mainly phosphorus and nitrogen, resulting in low primary and therefore secondary productions. The various forms of life have relatively limited presence and the resulting low concentrations of algae promote high water clarity.

The mesotrophic water bodies are characterized by high concentrations of basic nutrients and the variety and abundance of aquatic organisms. Due to increased concentrations of algae, the clarity of water is diminished compared to that of oligotrophic bodies. In eutrophic bodies the concentration of nutrients and algae is particularly high and the water clarity is very low. The variety of species is also diminished. The concentration of dissolved oxygen varies greatly between day and night due to the intensive photosynthesis and endogenous metabolism, respectively. Hyper-eutrophic conditions result to significant decomposition of dead algae, thus enhancing permanent anaerobic conditions in the lower layers with a prevailing final result of the elimination of the higher forms of life.

The evolution of aquatic ecosystems from the oligotrophic to the eutrophic state is a natural process which is mobilised by the nutrients naturally drifted from run-off. Discharges of wastewater with high nutrient concentrations enhance eutrophication of water bodies, especially lakes and other water bodies with poor water regeneration.

The main nutrients causing eutrophication are nitrogen in the form of nitrate, nitrite or ammonium and phosphorus in the form of ortho-phosphate. In addition, supply of organic phosphorus and nitrogen cause eutrophication, since bacteria regenerate the organic phosphorus to phosphate and the organic nitrogen to ammonium, which is further oxidised to nitrite and nitrate. Silicate is essential for diatom growth, but it is assumed that silicate input is not significantly influenced by human activity. Its most serious impact to the aquatic environment is related to algal blooms (red tides), algal scum, enhanced benthic algal growth, and at times a massive growth of submersed and floating macrophytes.

In addition to the effect on the aquatic ecosystem, eutrophication and its side effects cause discolouration of waters, reduced transparency and disturbance to bathers thus impairing recreation activities. Dense macrophyte and macro-algae agglomerations chop channels,

lagoons and estuaries impairing fishery and navigation and reducing flow and the holding capacity of freshwater reservoirs, etc.

The decaying organic material results to oxygen depletion of the water causing an array of secondary problems such as death of the benthic fauna, formation of corrosive and other undesirable substances such as CO₂, CH₄, H₂S, NH₃, organoleptic (taste and odour producing) substances, organic acids, toxins, etc.

Attachment of algal material and high pH can cause dermatitis and conjunctivitis, while ingestion of algae can cause diarrhoea in sensitive individuals. The development of toxin producing algae in the marine environment, when accumulated in fish, particularly shellfish, is a threat to human health.

The increase in frequency of algal blooms of toxic algae is responsible for causing paralytic and diarrhetic shellfish poisoning (PSP and DSP, respectively, produced by saxitoxin and other toxins in certain dinoflagellates and chrysophyceae), both already known for some time, and the appearance of new forms previously unknown or ignored such as amnesic shellfish poisoning (ASP) produced by domoic acid in diatoms.

Pathogens

The presence of pathogenic micro-organisms in the marine environment may result to impact of the public health, through direct contact with polluted seawater and/or sand, including ingestion of the former while swimming and through consumption of contaminated seafood.

Microbial pollution of the marine environment (seawater, sediments and beaches) may affect the gastrointestinal tract, or other parts of the body. As far as the former category is concerned, all the diseases which are spread by the faecal-oral route, and whose aetiological agents are shed in the faeces of diseased individuals or carriers, could be contracted by swimming in polluted waters. Apart from diseases affecting the gastrointestinal tract, a number of diseases or disorders affecting the eye, ear, skin, upper respiratory tract and other parts of the body have been associated with bathing in waters where microbial pollution occurs. The direct discharge of untreated wastewater into aquatic environment is one of the predominant reasons for the microbial pollution and deterioration of the marine environment. However, the general situation is progressively improving through the wastewater treatment facilities and the construction of submarine outfalls.

The permanent population that is concentrated at the Mediterranean coast is to the order of 130 million inhabitants. It should be stressed however, that this figure may be doubled during the summer period since the area attracts many tourists from all over the world. During the summer months, the sea constitutes the main recreational amenity for local and tourist populations and consequently most beaches, especially those in the vicinity of cities and touristic resorts are heavily overcrowded, particularly on weekends. The heterogeneous nature of beach populations further facilitates the spread of infections.

The prevailing warm climatic conditions result in a relatively long bathing season and thus longer exposure of the public to seawater and/or beach sand, as compared to other, more temperate, countries.

Microbial pollution may also be enhanced by the presence of aquacultures. Water and shellfish quality control measures vary in each country, and in many cases are practically based on "acceptable" concentrations of bacterial indicator organisms. While such organisms can provide a reasonable estimate of the degree of pollution, and perhaps a relative satisfactory correlation with concentrations of bacterial gastrointestinal pathogens, they have not so far been accepted as providing any clear correlation with the presence and density of either viruses or non-gastrointestinal pathogens and the biotoxins from algae (PSP, DSP). In

general, there is very limited control over the quality of beach sand, which has only recently commenced to be recognized as a factor to be considered in the transmission of a number of skin and other contact infections, including fungal ones.

Oxygen depletion

The dissolved oxygen has the same vital importance on the aquatic ecosystems, as that of atmospheric oxygen to terrestrial ecosystems. Reduced levels of dissolved oxygen below saturation level are caused by the decomposition of organic matter and nitrification of ammonia nitrogen.

Urban wastewater contains organic matter, ammonia and organic nitrogen in significant concentrations. The organic nitrogen after ammonification is transformed to ammonia and thus becomes available for nitrification. In addition, the nitrogen and phosphorus content in wastewater mobilize the production of live organic matter in the receiving water, which after its death decomposes thus exerting demand in dissolved oxygen. Reduction of the dissolved oxygen concentration in water bodies depends on the relationship between the rate of oxygenation and oxygen depletion. During the temperature stratification of lakes and seas, the atmosphere and photosynthesis can not provide for oxygen in the lower layers.

In general, for rivers and lake ecosystems a minimum median dissolved oxygen concentration of 9 mg/l is required and an absolute minimum value of 7 mg/l for the survival of salmonidae is necessary. For shellfish aquacultures a minimum oxygen saturation of 70-80% is necessary. For bathing waters the recommended minimum oxygen saturation is 80%. The increased temperature and presence of toxic substances in wastewater affect the resistance of fish to low levels of dissolved oxygen. The aquatic organisms in the fetal state and larvae are vulnerable because they have impaired oxygen uptake capacity and are unable to move away from this hostile environment.

2.3 Municipal Wastewater Treatment

The collection and treatment of wastewaters result into point source pollution load that is discharged into the environment which depending on the treatment provided can be reused. When there is absence of collection and treatment facilities, the untreated wastewater adversely influences the environment mainly in a form of non-point source of pollution, which is more difficult to quantify.

A successful treatment system should consist of a proper combination of unit process in series, aiming to produce a final effluent which is suitable for the selected type of discharge or reuse, in terms of compliance with existing regulations, acceptability by the end user and feasibility. The required level of treatment is an obvious parameter influencing the treatment configuration. However, for a given treatment level, different configurations are possible based on combinations of alternative unit processes. The selection of the appropriate configuration for each particular case should therefore be based on an understanding of the efficiency, reliability, operational characteristics and financial requirements of the individual unit process.

Wastewater treatment is achieved through physical, chemical and/or biological processes. Depending upon the degree of treatment, the following basic processes can be identified:

- i) Pre-treatment: To improve the downstream operations and processes and to avoid problems caused by large particles of solids that are present in wastewater, screens and grit chambers are designed in order to remove heavy solid materials that have subsiding velocities or specific gravities substantially greater than those of the organic solids in wastewater.

ii) Primary treatment: During primary sedimentation, solids with density greater than water are removed by gravity separation. The most common treatment system used for isolated groups of houses is the septic tank (ST), which provides a partial treatment only, comparable to primary treatment in sedimentation tanks. The performance of the process without chemical assistance can achieve removal of BOD and SS in the range of 20-30% and 50-60% respectively. Removal of nutrients (i.e. nitrogen, phosphorus) is not significant at this stage. Chemical precipitation can be applied for the improvement of the performance of primary treatment up to 80-90% in terms of SS removal and 50-80% in terms of BOD removal, while removal of bacteria can reach 90%.

iii) Secondary treatment: Activated sludge is a common method for secondary treatment. It is a suspended growth biological treatment process in which biodegradable organic substances are utilized as substrate by microorganisms. Treatment is accomplished by agitating and aerating a mixture of wastewater and biomass -which is called mixed liquor- in a reactor, followed by solids sedimentation in a secondary clarifier. Other technologies for secondary treatment are related to attached-growth treatment process such as biological filters or rotating biological reactors. In some cases stabilization (oxidation) ponds may also be adopted. Secondary treatment is generally related to high performance in terms of suspended solids and organic load, to the order of 70-90% for SS and BOD₅, and by at least 75% for COD. When biological treatment is applied a minimum reduction of nutrients to the order of 20% can be also expected. In many cases increased nitrogen reduction (80%) can be achieved through the processes of nitrification (oxidation of ammonia to nitrate nitrogen) and denitrification (reduction of nitrate-nitrogen to nitrogen gas), usually referred as secondary treatment with nitrogen removal.

iv) Tertiary treatment: The conventional tertiary treatment configuration includes rapid mixing-flocculation-sedimentation and filtration in order to further reduce the SS and organic load. The process involves, production of strong solution of coagulants and chemical dosing in accordance to flow and other characteristics of the wastewater, rapid mixing followed by flocculation and sedimentation and finally by filtration.

v) Disinfection is a separate process, which is applied in order to further reduce the pathogenic micro-organisms in treated water. The most commonly used disinfectant is chlorine, while ozone or ultraviolet disinfection (UV) are also effective methods in removing pathogens. The factors that need to be considered in selecting the appropriate disinfectant are the effectiveness and reliability of disinfection, the capital cost, the cost for maintenance and operation, the ease for transport, storage or in-situ chemical production, the ease of application and control, safety and the potential adverse effects such as the formation of toxic or carcinogenic by-products. Additionally to the above mentioned processes, maturation ponds are also considered as a disinfection stage following the secondary or tertiary treatment. The application of treatment processes further to secondary (e.g. filtration, additional chemical treatment, membranes), combined with the process of disinfection, result in better effluent quality. In these cases and according to the existing national legal framework wastewater can be reused. The reuse applications can be distinguished in two main categories: non-potable (urban, industrial, agricultural, habitat restoration, enhancement and recreational, groundwater recharge) and potable (direct, indirect).

The most important factors that should be considered when evaluating and selecting unit operations and processes for each case, may be grouped as follows:

- process applicability, performance
- environmental constraints (way of discharge, location)
- maintenance and operation requirements (cost, personnel, education level of the personnel)

In any case the treatment and discharge of wastewater to the aquatic environment should follow the respective in each country, legislation in force. For example, Mediterranean countries that are members of the European Union should follow the provisions of the Directive 91/271/EC concerning urban wastewater treatment and provide for example, for discharges to fresh-water, estuaries and coastal waters from agglomerations (i.e. cities or group of cities) greater than 2000 p.e. at least secondary treatment or equivalent. Furthermore, according to the Genoa Declaration, the establishment of sewage treatment plants in all cities around the Mediterranean Sea with more than 100,000 inhabitants and appropriate outfalls and/or appropriate treatment plants for all cities with more than 10,000 inhabitants was one of the targets foreseen.

In cases of wastewater discharges to rivers the selection on the degree of treatment should consider the specific characteristics of the recipient, in terms of quantity (e.g. rivers with significant flow variations), and quality (e.g. nutrient concentrations), as well as the possible long-term impacts to the aquatic environment. Reduction of nutrients is a good practice, which could then increase the assimilated capacity of the recipient in order to avoid phenomena of eutrophication and oxygen depletion in the water bodies.

3. RESULTS ACHIEVED

3.1 Brief Summary of Data Collection - Constraints and Assumptions

Data from 20 Mediterranean countries were progressively collected until country summaries were produced using the information provided. The following list presents, in alphabetic order, the countries involved in the study.

Albania, Algeria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia and Turkey

Considering the specific characteristics and possible difficulties experienced by each country during the collection of data and preparation of the country reports, it was inevitable not to encounter a series of constraints, which in most cases were overcome through proper assumptions. Acknowledgement however, should be made to the efforts made by a number of national MED-POL Coordinators to overcome the constraints encountered.

The most important constraints encountered and relevant assumptions made are quoted below:

- Regarding the population of each city, some countries reported the permanent population, while there was no separate information for seasonal increase of the reported figure due to tourists. The only indication for the population increase derived from the population served by a wastewater treatment plant. Other countries, mainly EU Member States, reported population equivalent (i.e. permanent plus seasonal population) that practically coincides to the reporting format required by the European Commission. Some countries did not report clear or adequate population data for each city and this gap may have caused a slight drawback when comparing different reporting periods.
- In some cases the requested tables were not fully completed. For example, although information regarding the quantity of treated wastewater (i.e. wastewater production, collection, treatment and final disposal) was provided, that was not the case for untreated wastewater discharges. Non-complete data were not considered during the synthesis of information.
- With respect to the type of discharge of wastewater, the main way of wastewater disposal is to the sea (direct through outfalls) or to a river (direct through a discharge pipe or indirect through a stream). Reuse is an alternative way of wastewater management, whereas other types reported included disposal to the ground or to forests. It should be noted however, that practically the sewage produced from the cities located in the catchment area of a river, one way or another ends up to the sea. In the analysis, four types of sewage discharge were identified: direct disposal to the **sea**, direct or indirect disposal to **river**, wastewater **reuse** and **other** types of discharge (e.g. ground, forest).
- Accurate reporting on the degree of treatment of wastewater also proved to be difficult. In several cases the information was not available. In the analysis, four degrees of sewage treatment were identified: Pre-treatment, Primary, Secondary and Tertiary Treatment, as described in section 2.4.
- With respect to the quantities of wastewater treated and untreated and the way of disposal, some countries probably experienced difficulties in completing the required information, due to lack of adequate and reliable data.
- The information provided among the reporting periods could not be easily compared in some cases, due to the differences observed on the reporting data of some countries

which were mainly related to differences in the number of cities reported, the respective population etc.

For each individual country the situation is briefly described in section 4, while the analytical information as submitted is presented in Part II. Part III presents tables summarising the data from each country.

3.2 General Considerations on the Contents of the Tables

1. The study examines

- Coastal cities that discharge their municipal wastewater into the sea, thus contributing to the pollution of the marine environment.
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- Cities with population of more than 2,000 that discharge their municipal wastewater (treated or untreated) into major rivers that end up to the Mediterranean Sea, thus indirectly contributing to the pollution of the marine environment.

2. With respect to the quantity of wastewater treated and untreated and the way of disposal, some countries probably experienced difficulties in completing the required information, due to lack of adequate and reliable data. Variations of the sewage production per capita per day were observed between the countries, which in some cases could not be justified.

3. With respect to the quantity of untreated wastewater discharged, the provided information is limited and thus, a concrete conclusion regarding the quantity of sewage discharged untreated cannot be easily drawn.

4. Some countries have reported the capacity of the treatment plant related to population equivalent (PE). This is reflected in the tables under the appropriate column heading, while the column 'population served' does not appear.

3.3 General Tables and Graphs

The summary of results showing the situation in the Mediterranean is presented in the following table. Similar tables are prepared for each country (Part III), while graphical presentation of the results obtained are presented in Parts IV and V.

| | Location | coastal | river | all |
|------------------------|-----------------------|------------|------------|-------------|
| | number of cities | 1822 | 858 | 2680 |
| | permanent population | 75,525,481 | 43,619,375 | 119,144,856 |
| | cities served by WWTP | 1047 | 634 | 1681 |
| Operating WWTPs | TOTAL | 964 | 591 | 1555 |
| | pre-treatment | 21 | 20 | 41 |
| | primary | 237 | 165 | 402 |
| | secondary | 519 | 310 | 829 |
| | tertiary | 143 | 84 | 227 |
| | unknown | 44 | 12 | 56 |
| | out of order | 70 | 2 | 72 |

| | | | | |
|--|--|------------|------------|------------|
| Treated wastewater | Total treated m ³ /d | 11,723,940 | 12,865,215 | 24,589,155 |
| | pre-treatment m ³ /d | 109,135 | 24490 | 133,625 |
| | primary m ³ /d | 2,448,333 | 2,750,832 | 5,199,165 |
| | secondary m ³ /d | 7,555,449 | 9,106,380 | 16,661,828 |
| | tertiary m ³ /d | 920,771 | 935,782 | 1,856,553 |
| | unknown m ³ /d | 690,252 | 47,732 | 737,984 |
| | untreated wastewater m ³ /d | 2,153,553 | 655,547 | 2,809,100 |
| Extension | under construction | 4 | 5 | 9 |
| | design | 21 | 0 | 21 |
| New plant | under construction | 63 | 31 | 94 |
| | design | 50 | 9 | 59 |
| | Average consumption lt/cap/day | 197 | 320 | 243 |
| Disposal treated | No data | 491 | 153 | 644 |
| | Reuse | 52 | 52 | 104 |
| | River | 78 | 306 | 384 |
| | Sea | 292 | 35 | 327 |
| | Other | 51 | 45 | 96 |
| Disposal untreated | No data | 367 | 285 | 652 |
| | Reuse | 0 | 2 | 2 |
| | River | 21 | 31 | 52 |
| | Sea | 125 | 15 | 140 |
| | Other | 152 | 16 | 168 |
| Coastal cities >10.000 & <100.000 | Total | 556 | | |
| | Served by WWTP | 420 | | |
| | Not Served by a WWTP | 136 | | |
| Coastal cities >100.000 | Total | 94 | | |
| | Served by WWTP | 77 | | |
| | Not Served by a WWTP | 17 | | |

4. COUNTRY FACTS

4.1 Albania

In Albania 97 cities were reported, 88 in vicinity to big rivers which flow in the Mediterranean (Buna, Drini, Mati, Semani, Shkumbini and Vijose) and 9 in the Mediterranean coast, with a total population of 2.35 million. The situation remains unchanged since the previous reporting periods and only one coastal city is served by a wastewater treatment plant (Kavaja) while the remaining cities are lacking wastewater treatment facilities, thus sewage is discharged into the sea untreated (directly or indirectly through the rivers). However, one wastewater treatment plant is completed but yet not operational (Vlora), three wastewater treatment plants serving coastal cities are under construction and three in the design phase. Quantities of untreated sewage were provided only for coastal cities, whereas no data have been reported regarding the quantity of untreated wastewater discharged to the rivers.

4.2 Algeria

For Algeria 134 cities were reported with a total resident population of 6.13 million persons. This total includes the large urban agglomerations of Algiers, Anabas, Bejaia, Mostaganem, Oran and Skikda.

With respect to the wastewater treatment facilities, 63 cities are served by 48 wastewater treatment plants. The treatment provided is mainly secondary (56% of the operating wastewater treatment plants) and preliminary treatment (37.5%). However, in Algeria many projects are foreseen since 14 new wastewater treatment plants are in the design phase and three new ones are under construction, while another four existing wastewater treatment plants are being upgraded.

Disposal of treated (510,000 m³/d), as well as untreated sewage (290,000 m³/d) is mainly performed directly or indirectly (through rivers) to the sea. A limited quantity of treated sewage (4.5%) is reused. The average production of wastewater per capita per day is estimated at around 140 l/d.

4.3 Croatia

Croatia reported the status of wastewater facilities for 68 cities corresponding to 1.05 million inhabitants, as opposed to 119 cities in the previous reporting periods, from which less than 50% are served by wastewater treatment plants which provide mainly pretreatment (77% of the treated wastewater) and in a lesser extent secondary treatment (17% of the treated wastewater). With respect to wastewater produced it is noticed that the quantity of treated and untreated wastewater was calculated based on the number of connected population in settlements within the public sewerage system and average water consumption (130 l/cap/d). Considering the above, 46% of the population is connected to a sewerage network and served by wastewater treatment facilities, 14% is connected to a sewerage network but not served by wastewater treatment facilities, thus wastewater untreated is disposed to the sea and the remaining 40% of sewage is not collected or treated to centralised facilities.

The disposal of treated sewage is conducted through submarine outfalls in most cases, while untreated sewage (collected to sewerage networks) is disposed into the aquatic environment by many small submarine outfalls or through streams.

4.4 Cyprus

In Cyprus 34 cities were reported with a total population of 500,000 inhabitants. Four major wastewater treatment facilities are in operation in the major cities of the island i.e. Larnaca, Limassol, Paphos and Agia Nappa, serving 66% of the population reported, all providing for tertiary treatment of the wastewater produced which sums up to 50,800 m³/d. Chrolakas and Kissonegra with a population of 13,500 inhabitants will be connected in 2011 with the Sewage Treatment Plant of Paphos. Additionally, it should be noted that cities with intensive touristic activity hotels and touristic developments are served by the existing wastewater treatment plants or from individual small sewage treatment plants. Irrigation with tertiary treated wastewater is the preferred type of discharge, although during the winter months (December-February) there are possible discharges of final effluents in the Mediterranean Sea. For untreated wastewater, septic tanks and absorption pits are used in most of the cases. The average production of wastewater per capita per day is estimated at 130 l/d.

4.5 Egypt

A total of 281 cities with a resident population of 31.2 million persons was reported. From the total reported population 25.5 million persons are situated in 235 cities along River Nile. Before presenting the facts for Egypt as derived from the respective table it should be noted that these refer to an optimum situation which in many cases is related to projected wastewater treatment facilities, rather than existing ones.

A number of 205 cities are served by 237 wastewater treatment plants, which provide primary (20% of the plants) and secondary (77% of the plants) treatment, while 26 new wastewater treatment plants are under construction. Alexandria with a population of 3.5 million people is served by two wastewater treatment plants which currently provide for primary treatment but are projected to be upgraded to secondary degree and one wastewater treatment plant that treats wastewater in a secondary degree.

With respect to the treated wastewater discharge (a daily quantity of 11.4 million cubic meters is reported), predominant method of discharge is through River Nile to the Mediterranean. Regarding the untreated sewage there is no adequate information on either quantities or way of discharge. The average of wastewater per capita production is about 360 l/day.

4.6 France

The number of cities that were reported is 243 corresponding to a total population of 7.5 million inhabitants. In France, 3 big rivers discharge into the Mediterranean: Aude, Rhone and Var. Ninety six cities were reported in vicinity to these rivers, with permanent population of 1.64 million inhabitants.

A number of 238 out of 243 cities are served by wastewater treatment facilities providing for primary (14% of the plants), secondary (71% of the plants) or tertiary (15% of the plants) treatment while there are only five areas without wastewater treatment facilities, four of which will be served by the Nice wastewater treatment plant in 2011, while one new plant is under construction.

According to the available information about 2.5 million cubic meters is treated daily in 212 wastewater treatment plants, prior to their disposal to the sea or to the rivers. The average production of wastewater per capita per day is estimated in average at 250 l/d. No information was provided concerning the quantities of untreated wastewater and way of disposal, which in any case would be very low.

4.7 Greece

According to the current information, 287 cities in Greece are reported, with a total population of 8 million. From these cities 45 are located in vicinity to big rivers discharging into the Mediterranean (Acheloos, Aliakmon, Axios, Evros, Nestos, Strymon) with a population of 411,281 inhabitants.

About 60% of the population is located to the greatest Athens area (capital of Greece) and Thessaloniki. The former is served by a wastewater treatment plant located at the island of Psyttalia that provides for secondary treatment and the latter by a secondary treatment plant located in the area of Sindos.

With respect to the treatment provided, 154 cities are served with wastewater treatment facilities which provide in most cases secondary treatment (60%) and tertiary treatment (40%). According to the available information about 2 million cubic meters of treated wastewater is daily disposed corresponding to 90% of the total quantity. The disposal of treated wastewater is made through the rivers indirectly to the sea or directly through submarine outfalls, whereas absence of such infrastructure implies the presence of septic tanks, and thus, part of untreated sewage (about 11%) infiltrates to the groundwater. The average of wastewater per capita production is about 250 l/day.

4.8 Israel

In Israel 18 coastal cities were reported with population 3,612,000 inhabitants. According to the information provided all cities are served by respective wastewater treatment plants, which in most cases provide secondary (10 wwtps) and tertiary treatment (6 wwtps) and only in two cases sewage is treated in a primary degree. There is no discharge of untreated wastewater while treated wastewater is either reused or disposed to the sea although specific information is not provided. The average of wastewater per capita production is about 180 l/day.

4.9 Italy

The reported data involve a total of 536 cities with a resident population of about 22.5 million persons. From these cities, 178 are located near 8 major rivers of Italy: Adige, Arno, Brenta, Pescara, Po, Reno, Tevere, Volturno, with respective population around 820,000. With respect to the treatment provided, most of the cities (488 out of 536) are served with wastewater treatment plants. The cities are served by 517 wastewater treatment plants while 27 new plants are either under construction or projected. Treatment of wastewater is distributed as follows: preliminary treatment 4 plants (0.8%); primary treatment 306 plants (59%); secondary treatment 109 plants (21%); tertiary treatment 73 plants (14%), and for the remaining 25 plants (less than 5%), no information on the degree of treatment was available. No information was provided concerning the way of disposal of untreated wastewater.

According to the available information about 4.4 million cubic meters of wastewater is disposed from which 67% of the total quantity is treated and the remaining 33% is disposed untreated. The average production of wastewater per capita per day is estimated at 200 l/d.

4.10 Lebanon

For Lebanon 28 cities were reported with a resident population of 6.8 million inhabitants. In the reported data the population of Bekka region was also included, which however was not considered in the analysis due to its distance from the Mediterranean. Thus, for the analysis 17 cities were considered with a resident population of 6.0 million inhabitants, most of them coming from Beirut greater area.

Three cities are currently served by wastewater treatment plants providing for primary treatment, whereas twelve more plants are under construction (7) or in the design phase (5). The total wastewater produced is to the order of 900,000 cubic meters per day, 50% of which is untreated and discharged raw in the marine environment. The average production of wastewater per capita per day is estimated on average at 150 l/d.

4.11 Libya

Libya reported 75 coastal cities as opposed to 33 cities of the previous reporting periods, however without specific population data. According to the available information 11 wastewater treatment plants are currently in operation providing for secondary treatment, 12 are under construction and 56 are out of order or need to be maintained.

With respect to the wastewater produced, the information is not complete, since there is absence of data regarding the quantity of untreated wastewater and for treated wastewater a daily amount of 82850 m³ is discharged from the operating wastewater treatment plants either to the sea or to the land.

4.12 Malta

For Malta 57 cities were reported with a permanent population of 430,000 people. Three major wastewater treatment plants are in operation serving the areas of Marsa Land (SASTP), Malta North and Gozo, corresponding to a population of 134,000 inhabitants, whereas another new plant is under construction in order to meet the needs of Malta south (excluding Marsa Land). All operating plants treat their sewage in a tertiary degree prior to reuse or sea disposal, while untreated sewage is predominately disposed to the sea through submarine outfalls. With respect to wastewater quantities disposed treated or untreated, data reported was limited. More specifically from the treated quantity of 12,200 m³/d reported, 5,500 m³/d is reused and the remaining 6,700 m³/d is discharged to the sea. The average of wastewater per capita production is estimated about 100 l/day.

4.13 Monaco

In Monaco there is one single locality with a resident population of 35,000 persons that is served by a sewerage network together with a secondary treatment plant. A total amount of 17,500 cubic meters of secondary treated wastewater is produced per day, including the sewage of 40,000 inhabitants of nearby French coastal areas. The plant was constructed in 1987 and the disposal of treated sewage is conducted through a submarine outfall to the marine environment.

4.14 Montenegro

In Montenegro there are 13 coastal cities with a total permanent population of 83,808 inhabitants. According to the information provided there are no wastewater treatment facilities, however, it is noted that part of the sewage is collected and disposed untreated into the sea. The total amount of untreated wastewater discharged mainly to the sea through submarine outfalls is reported to be 27,000 m³/d. It is assumed that this figure also includes the wastewater produced from rural areas with population less than 2000. The average of wastewater per capita production is about 190 l/day.

4.15 Morocco

For Morocco 74 cities have been reported with total permanent population is 2.6 million people from which 15% is served by wastewater treatment facilities. Many new facilities are projected and are in the design phase (18) while 5 new wastewater treatment plants are under construction. With respect to the quantity of treated and untreated wastewater, as well as ways of disposal, no data was reported.

According to the available information about 88,000 cubic meters of wastewater is daily treated in a secondary degree (30% of wastewater treated) and tertiary treatment (70% of wastewater treated). The average of wastewater per capita production is 114 l/day.

4.16 Slovenia

In Slovenia there are seven coastal cities with a population of 52,028 persons, all of which are served by two wastewater treatment plants, namely Koper and Piran. Both plants provide for tertiary treatment. Treated wastewater is either directly discharged into the sea through river Rižana (area of Koper) or through a submarine outfall (area of Piran). The average of wastewater per capita production is about 350 l/day.

4.17 Spain

A total of 273 cities were reported with a total resident population of 7.8 million persons. From these cities, 111 are located in vicinity to big rivers discharging to the Mediterranean (Ebro, Jucar) with population 730,000 inhabitants. It should be noted that for the area of Andalucía the data from the previous reporting periods were incorporated to recent information.

With respect to the treatment provided, 265 cities are served with wastewater treatment facilities which provide in most cases secondary treatment (87% of wastewater treated) and tertiary treatment (11% of wastewater treated) and only a small amount is primarily treated (2% of wastewater treated). According to the available information about 2.32 million cubic meters of wastewater is daily treated and disposed, whereas for untreated wastewater disposal specific information is limited. The disposal practice is mainly related to sea disposal (directly or indirectly through rivers) and reuse (effluent from 42 wastewater treatment plants is reused). The average of wastewater per capita production is about 300 l/day.

4.18 Syria

Sixty Mediterranean coastal cities were reported with a total permanent population of about 800,000 inhabitants, none of which is served by wastewater treatment facilities. According to the information provided, the total amount of untreated wastewater discharged mainly into the sea through submarine outfalls, is to the order of 90,000 m³/d, corresponding in average to 110 litres per capita per day.

4.19 Tunisia

A total of 65 cities were reported with a resident population of 7.4 million persons. All cities are served by 65 wastewater treatment plants, whereas for 27 plants the treatment provided is not specified. For the remaining 38 treatment plants, secondary treatment is the predominant process adopted (30 plants) and 8 wastewater treatment plants provide for tertiary treatment.

According to the available information about 585,000 cubic meters of wastewater is disposed from which 98% of the total quantity is treated and the remaining 2% is disposed untreated. No information was provided concerning the way of disposal of treated or untreated

wastewater. The average production of wastewater per capita per day is estimated at 130 l/d.

4.20 Turkey

A total of 341 cities were reported with a total resident population of 11 million persons. From these cities 32 are located in vicinity to big rivers discharging into the Mediterranean (Buyuk Menderes, Ceyhan, Gediz, Goksu, Lamas, Manavgat, Meric/Evros, Nahrelasi, Seyhan) with a population of 3.1 million inhabitants.

With respect to the treatment provided, 93 cities are served by 75 wastewater treatment plants. According to the available information about 1 million cubic meters of wastewater is daily treated and disposed, based on the information of the capacity of the operating wastewater treatment plants, without specific information of disposal routes, whereas for untreated wastewater quantities and disposal practices specific information is not reported. In most cases secondary treatment (85% of total quantity of treated wastewater reported) and tertiary treatment (12% of total quantity of treated wastewater reported) is applied, and only a small amount of produced sewage is primarily treated (3% of total quantity of treated wastewater reported). The average of wastewater per capita production is about 100 l/day.

5. CONCLUSIONS OF THE PRESENT STUDY

- a) All countries responded to the call to update their information regarding the municipal treatment facilities at the cities with population greater than 2,000 persons either coastal or in vicinity to big rivers.
- b) Acknowledgment has to be made to a number of MED POL Focal points who assisted during the collection and elaboration of data and helped to overcome the constraints encountered. Support was also provided by national consultants who updated the information for countries with significant amount of data. Thanks to their efforts, adequate and accurate data could be gathered during the present study.
- c) With respect to the population reported by each country, some countries included the seasonal population to the figure of permanent population, with respective remarks indicating it, while other countries did not provide any information for the population increase due to touristic activity and few countries did not report any population data for some cities.
- d) The difficulties that may have been encountered by each country are mainly related to the availability of information. Their constraints are also related to those encountered during the elaboration of the available data. The most important constraints identified are:
 - Insufficient data on population for some cities;
 - Incomplete or diffuse information on the quantities of wastewater treated or untreated and respective ways of disposal;
 - Incomplete information concerning the details for the services being provided to the population, (e.g. information on the degree of treatment).
- e) Specific numerical results that derived from the analysis are summarised below:
 1. Around 120 million people are reported as residents in the Mediterranean either in coastal cities (65%) or in cities in vicinity to big rivers (35%).
 2. From the 2680 cities reported, 1681 cities which correspond to more than 60% are served by wastewater treatment plants, whereas 153 new facilities are projected in the region.
 3. From the operating wastewater treatment plants more than 75% provide for a high degree of treatment, i.e. secondary or tertiary treatment, corresponding to 829 and 227 wastewater treatment plants respectively.
 4. The average wastewater production is to the order of 240 liters per capita per day. However, great variation is noticed between countries, with minimum production observed, like in Albania (52 liters per capita per day), and maximum production, like in Egypt (366 liters per capita per day).
 5. Disposal routes of treated and untreated wastewater are not adequately reported and solid conclusions cannot be drawn, since in most cases data are missing. The total amount of untreated wastewater sums to 3 million m³/d and treated wastewater to around 25 million m³/d.

6. Regarding the Genoa Declaration targets the following can be noticed:

- 75% of the coastal cities with population between 10.000 and 100.000 inhabitants are served by wastewater treatment plants
- 81% of the coastal cities with population greater than 100.000 inhabitants are served by wastewater treatment plants

| Coastal cities with population >10.000 & <100.000 | | | Coastal cities with population >100.000 | | |
|--|---------------------------|---------------------------------|---|---------------------------|---------------------------------|
| Total | Served by WWTP | Not Served by a WWTP | Total | Served by WWTP | Not Served by a WWTP |
| 603 | 452 | 151 | 103 | 83 | 20 |
| | 75% | 25% | | 81% | 19% |

Graphical presentation of the current status is included in Part IV of the report.

6. COMPARISON OF THE REPORTING PERIODS

The comparison of the reporting periods is based on the available information. Part V presents in graphs the current situation as compared to the situation during the previous reporting periods.

- a) With respect to the number of the Mediterranean cities reported, an increase in the number of cities from 2560 to 2680 is observed. The population reported for 2010, although practically the same with the inhabitants of the previous reporting periods (120 million people), does not include the population of Libya.
- b) Although the number of areas served by a wastewater treatment plant shows a slight increase in percentage, it should be noted that current data involve 120 new reported cities.
- c) According to the reported information and with reference to the degree of treatment the situation seems to be improved, since the number of units, where secondary and tertiary treatment is provided, has increased. However, there is a gap of data for units for which information regarding the degree of treatment was not reported.

The overall conclusion is that the situation improves along the years, and the effort conducted by all countries should continue in order to achieve the desired result, which in all cases is the protection of the marine environment in the Mediterranean.

The experience gained from the previous reporting periods, is valuable in order to design future reporting. The following points should be stressed:

- Efforts should be made in order to complete the information regarding population (permanent and seasonal), or technical data (quantities of wastewater treated or untreated, ways of discharge etc). In cases where there is lack of data, each country may refer to the constraints in the inadequacy of data and possible proposals to overcome the difficulties.
- In cases where there are no facilities (sewerage networks or wastewater treatment plants), information on possible projection of respective works could be included. This additional information will enable the estimation of further improvement to the situation regarding wastewater facilities in the Mediterranean cities.

PART II

ANALYTICAL TABLES PREPARED AND SUBMITTED BY EACH COUNTRY PRESENTING CURRENT STATUS REGARDING WASTEWATER TREATMENT IN THE MEDITERRANEAN

Legend

| Degree of treatment | |
|----------------------------|--|
| Primary treatment | application of physical and/or chemical treatment procedures for municipal wastewaters with which at least 50% of suspended matter is removed and BOD ₅ values are reduced at least 20% from initial concentrations. |
| Secondary treatment | application of physical, chemical, biological and other procedures, which in municipal wastewaters reduce the concentration of suspended matter and BOD ₅ 70-90%, and COD concentrations at least 75%. |
| Tertiary treatment | application of physical, chemical, biological and other procedures which in municipal wastewaters reduce the concentration of nutrient salts by 80%, and remove other specific wastewater parameters, achieving values unattainable by means of secondary treatment. |
| Pre-treatment | application of operations with which bulky matter, sand and gravel, greases and oils are removed from wastewater. |

Symbols

Discharge

DI = discharge directly into the sea

SO = discharge through a submarine outfall

Ss = discharge through many small submarine outfalls

RE - RB = discharge is re-used

Source of information: Data reported by the MED POL Focal points or consultant assigned for the specific project.

Country: ALBANIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------|-------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Dures | 210,000 (eq. pop. 250,000) | Under construction | Tertiary | - | - | 9,590 | DI |
| Hilmare | 7,000 | - | - | - | - | 420 | 84 |
| Ksamil | 12,000 | Design phase | | | | | |
| Kavaja | 40,000 (eq. pop. 25,000) | Operational | Secondary | | | | Through pipelines to the MED sea |
| Lezhe-Shengjin | 42,000 (eq. pop. 51,000) | Under construction | Secondary | - | - | 1,150 | DI |
| Orikum | 8,000 | Design phase | - | - | - | 342 | 274 |
| Saranda | 40,000 (eq. pop. 60,000) | Under construction | Secondary | - | - | 2,000 | DI |
| Velipoje | 85,000 | Design phase | | | | | |
| Vlora | 125,000 (eq. pop. 150,000) | Completed | Secondary | - | - | 9,000 | DI + Ss |

Country: ALBANIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------|----------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Buna | Shkoder | 10261 | NO | | | | | | |
| Buna | Shiroke | 6583 | NO | | | | | | |
| Buna | Oblike a Madhe | 9776 | NO | | | | | | |
| Buna | Bushat | 6183 | NO | | | | | | |
| Buna | Trush | 11282 | NO | | | | | | |
| Buna | Velipoje | 8026 | NO | | | | | | |
| Drin | Shtiqen | 8628 | NO | | | | | | |
| Drin | Gostil | 8622 | NO | | | | | | |
| Drin | Kukes | 8622 | NO | | | | | | |
| Drin | Kolsh | 8622 | NO | | | | | | |
| Drin | Gjegjan | 8617 | NO | | | | | | |
| Drin | Vranisht | 8604 | NO | | | | | | |
| Drin | Kalimash | 8621 | NO | | | | | | |
| Drin | Shemri | 8312 | NO | | | | | | |
| Drin | Bujan | 4345 | NO | | | | | | |
| Drin | Breg-Lum | 4621 | NO | | | | | | |
| Drin | Fierze | 4621 | NO | | | | | | |
| Drin | Lekbibaj | 4335 | NO | | | | | | |
| Drin | Apripa | 4702 | NO | | | | | | |
| Drin | Krume | 8604 | NO | | | | | | |
| Drin | Qelez | 6183 | NO | | | | | | |
| Drin | Guri I Zi | 11267 | NO | | | | | | |
| Drin | Vau I Dejes | 11277 | NO | | | | | | |
| Drin | Ranxe | 11370 | NO | | | | | | |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|----------------|-------------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Drin | Barbullush | 11679 | NO | | | | | | |
| Drin | Baba | 11679 | NO | | | | | | |
| Drin | Shengjin | 9783 | NO | | | | | | |
| Drin | Lezhe | 12371 | NO | | | | | | |
| Drin | Kallmet I Madh | 13236 | NO | | | | | | |
| Drin | Ishull-Lezhe | 12379 | NO | | | | | | |
| Lana/Tirana | Tirana | 680000 (e.p. 850000) | Design phase | Conventional | Secondary | | | | |
| Mati | Lene | 9212 | NO | | | | | | |
| Mati | Gjon | 13786 | NO | | | | | | |
| Mati | Kraste | 8786 | NO | | | | | | |
| Mati | Guri I Bardhe | 14713 | NO | | | | | | |
| Mati | Klos | 8492 | NO | | | | | | |
| Mati | Bejn | 8488 | NO | | | | | | |
| Mati | Gurre e Madhe | 8780 | NO | | | | | | |
| Mati | Komesi | 8666 | NO | | | | | | |
| Mati | Lis | 8469 | NO | | | | | | |
| Mati | Burrel | 8477 | NO | | | | | | |
| Mati | Ulez | | NO | | | | | | |
| Mati | Beshkashi | 8406 | NO | | | | | | |
| Mati | Milot | 16383 | NO | | | | | | |
| Mati | Lac | 19337 | NO | | | | | | |
| Mati | Zejmen | 15829 | NO | | | | | | |
| Mati | Shenkoll | 14434 | NO | | | | | | |
| Mati | Fushe-Kuqe | 11064 | NO | | | | | | |
| Mati | Shen Ded Gjoni | 9570 | NO | | | | | | |
| Semani | Libofshe | 22948 | NO | | | | | | |
| Semani | Rusaman | 22965 | NO | | | | | | |
| Semani | Seman | 22673 | NO | | | | | | |
| Shkumbini | Perrenjas | 8980 | NO | | | | | | |
| Shkumbini | Qukes | 8001 | NO | | | | | | |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Shkumbini | Librazhd | 7991 | NO | | | | | | |
| Shkumbini | Labinot-Mal | 18718 | NO | | | | | | |
| Shkumbini | Shushice | 18718 | NO | | | | | | |
| Shkumbini | Elbasan | 18740 | NO | | | | | | |
| Shkumbini | Bradashesh | 18740 | NO | | | | | | |
| Shkumbini | Vidhas | 18751 | NO | | | | | | |
| Shkumbini | Cerrik | 18764 | NO | | | | | | |
| Shkumbini | Shtermen | 18740 | NO | | | | | | |
| Shkumbini | Bishqem | 18751 | NO | | | | | | |
| Shkumbini | Peqin | 19134 | NO | | | | | | |
| Shkumbini | Rogozhine | 28758 | NO | | | | | | |
| Shkumbini | Rrogozhine | 28758 | NO | | | | | | |
| Shkumbini | Luz i Madh | 32664 | NO | | | | | | |
| Shkumbini | Gose | 32488 | NO | | | | | | |
| Shkumbini | Bicukas | 26792 | NO | | | | | | |
| Shkumbini | Cerme-Proshke | 30077 | NO | | | | | | |
| Vijose/Aoos | Konitsa (Greece) | 2874 | NO | | | | | | |
| Vijose | Leskovik | 3809 | NO | | | | | | |
| Vijose | Petran | 5309 | NO | | | | | | |
| Vijose | Permet | 5617 | NO | | | | | | |
| Vijose | Kelcyre | 6899 | NO | | | | | | |
| Vijose | Katundishte | 5869 | NO | | | | | | |
| Vijose | Tepelene | 6909 | NO | | | | | | |
| Vijose | Memaliaj | 6903 | NO | | | | | | |
| Vijose | Sinanaj | 7504 | NO | | | | | | |
| Vijose | Sevaster | 13440 | NO | | | | | | |
| Vijose | Selenice | 16204 | NO | | | | | | |
| Vijose | Armen | 15261 | NO | | | | | | |
| Vijose | Hekal | 13172 | NO | | | | | | |
| Vijose | Gorishove | 22608 | NO | | | | | | |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------|------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Vijose | Trevllazer | 14759 | NO | | | | | | |
| Vijose | Novosele | 15219 | NO | | | | | | |
| Vijose | Bishan | 18706 | NO | | | | | | |
| Vijose | Levan | 22229 | NO | | | | | | |
| Remarks: | | | | | | | | | |

Country: ALGERIA
MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000
&
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
AND COASTAL WATERS

| PROVINCE | River * | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|--|-------------|-----------------------|-------------------------------|---|--------------------------------|--|----------------------------------|---------------------------------|--------------------------------|-----------------------------------|--|
| Annaba * (Source RGP2008) **En absence d'instrument métrologique débit, le volume rejeté est estimé sur la base de 80% de la dotation moyenne en eau potable , de l'ordre de 150l/hab/j | O Boudjemaa | Annaba | 232.664 | Geni civil achevé à 100% reste la mise en service (580700eq/hab) | Traitement biologique | Prétraitement T.primaire, T. secondaire, T.tertiaire (2) | En cours d'essais de performance | | 27919.6 | O. Seybouse | (2) :Le rejet subit un prétraitement avant l'évacuation vers la mer. (3) : Les eaux usées de l'ouest de la ville rejoignent l'oued puis la mer par un canal exutoire. |
| | O Seybouse | El Bouni STEP ALLAIAK | 127.492 | STEP / le genie civil achevé à 100% reste la mise en service (580700eq/hab) | Traitement biologique | Prétraitement T.primaire, T. secondaire, T.tertiaire | En cours d'essais de performance | | 15299 | O. Boudjemaa O Seybouse | |
| | | El Hadjar | 27.163 | STEP / le genie civil achevé à 100% reste la mise en service (580700eq/hab) | Traitement biologique | Prétraitement T.primaire, T. secondaire, T.tertiaire | En cours d'essais de performance | | 3259.5 | O Seybouse O. Meboudja | |
| | O. Meboudja | Sidi Amar | 80.186 | STEP / le genie civil achevé à 100% reste la mise en service (580700eq/hab) | Traitement biologique | Prétraitement T.primaire, T. secondaire, T.tertiaire | En cours d'essais de performance | | 9622.3 | O. Meboudja | |

| PROVINCE | River * | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|----------|-------------------------|--------------|-------------------------------|----------------------------|--------------------------------|--|------------------------------|---------------------------------|--------------------------------|--|---|
| | | Chetaibi | 5.216 | Oui | Traitement biologique | T primaire | 625.9 | DI | | | Le module épuratif est à l'arrêt, rejets en mer |
| El Taref | Embouchure oued Mafragh | Ben M'hidi | 38 000 | Néant | Décantation | Méthode inadéquate bassin sous dimensionné | 28.6 | Néant | Néant | Vers oued Bounamoussa qui fait jonction avec oued Kebir pour former l'embouchure de la Mafragh | |
| | O.Bouthmira | Echatt | 39 000 | Néant | Décantation | Méthode inadéquate bassin sous dimensionné | 31.2 | Néant | Néant | Vers Oued Boukhmira qui diverse ses eaux dans la mer. | |
| | Embouchure Oued Mafragh | Sidi M'barek | 4000 | Néant | Décantation | Méthode inadéquate bassin sous dimensionné | 3.2 | Néant | Néant | Vers l'embouchure de oued Mafragh | |
| | Embouchure Oued Mafragh | Berrihane | 8200 | Néant | Décantation | Méthode inadéquate bassin sous dimensionné | 6.5 | Néant | Néant | Vers oued Kebir qui fait jonction avec oued Bounamoussa pour former l'embouchure de la Mafragh | |

| PROVINCE | River* | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater |
|----------|-------------------------|-----------------|-------------------------------|----------------------------|--------------------------------|---|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| El Taref | Embouchure Oued Mafragh | BEN M'HIDI | 32.8 | NEANT | Décantation | Methode de traitement des eaux | 26 | NEANT | 26 | Embouchure Oued Mafragh |
| | Oued Bounamoussa | ASFOUR | 11.4 | STEP ASFOUR | Biologique | 80% | 7 | 7 | NEANT | Oued Bounamoussa |
| | Oued Bounamoussa | ZERIZER | 11 | STEP ZERIZER | Biologique | 80% | 7 | 7 | NEANT | Oued Bounamoussa |
| | Oued Seybouse | CHIHANI | 10 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 6.5 | NEANT | 6.5 | Oued Seybouse |
| | Oued Seybouse | DREAN | 37 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 23.5 | NEANT | 23.5 | Oued Seybouse |
| | Oued Besbes | BESBES | 46 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 36.8 | NEANT | 36.8 | Oued Besbes |
| | Oued Bouricha | AIN ASSEL | 16 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 10 | NEANT | 10 | Oued Bouricha |
| | Oued El Eurg | REMEL SOUK | 4.3 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 3.4 | NEANT | 3.4 | Khanga Aoun |
| | Oued El Eurg | AIOUN | 5.3 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 4.2 | NEANT | 4.2 | Oued El Eurg |
| | Oued Kebir | LAC DES OISEAUX | 10.5 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 6.7 | NEANT | 6.7 | Oued Kebir |
| | Oued Boukhamira | ECHATT | 34 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 27 | NEANT | 27 | Oued Boukhamira |
| | Embouchure Oued Mafragh | SIDI M'BAREK | 3 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 2.4 | NEANT | 2.4 | Embouchure Oued Mafragh |

| PROVINCE | River* | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater |
|----------|--------------|------------------|-------------------------------|----------------------------|--------------------------------|---|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| | Oued Kébir | BERRIHANE | 8.2 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 7.6 | NEANT | 7.6 | Oued Kébir |
| | Oued Kebir | SEBAA | 3 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 2.5 | NEANT | 2.5 | Oued Kebir |
| | Oued Kebir | RIGHIA | 4 | NEANT | Décantation | Méthodes inadéquate bassin sous dimensionné | 3.2 | NEANT | 3.2 | Oued Kebir |
| | Oued Melloul | SOUAREKH | 8.2 | NEANT | Decantation | Méthodes inadéquate bassin sous dimensionné | 6.5 | NEANT | 6.5 | Oued Melloul |
| | Lac Mellah | GUANTRA EL HAMRA | 3 | STEP GUANTRA HAMRA | Biologique | 80%. | 2.5 | 2.5 | NEANT | |

| PROVINCE | River | City | Permanent population | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/day) | Discharge of treated wastewater | Wastewater untreated (m3/day) | Discharge of untreated wastewater | Conservation |
|------------|-----------|------------------|----------------------|----------------------------|--------------------------------|-----------------------------------|-----------------------------|-----------------------------------|-------------------------------|-----------------------------------|--|
| Tizi Ouzou | / | Tigzirt | 15 000 | Oui | Boues activées | 90% | 750 2 250* | A travers un émissaire sous marin | 00 | / | Travaux d'extensions avancés à 50% |
| | / | Azeffoun | 20 000 | Oui | Boues activées | 90% | 1 125 3 375* | Direct en mer | 00 | / | Travaux d'extensions avancés à 50% |
| | Bougdoura | Boghni | 23 000 | Oui | Boues activées | 80% | 1 950 | Oued | 1 500 | Oued Bougdoura | / |
| | Bougdoura | Draa El Mizan | 50 000 | Oui | Boues activées | 80% | 4 500 7 500* | Oued | 00 | / | Travaux d'extensions avancés à 30% |
| | Sébaou | Tizi-Ouzou Est | 120 000 | Oui | Boues activées | 90% | 18 000 | Oued | 00 | Oued Sébaou | / |
| | Sébaou | Tizi-Ouzou Ouest | 25 000 | Oui | Boues activées | 90% | 3 750 | Oued | 00 | Oued Sébaou | / |
| | Sébaou | Tadmait | 20 000 | Oui | Boues activées | 80% | 1 950 | Oued | 700 | Oued Sébaou | / |
| | Sébaou | Draa-Ben-Khedda | 25 000 50 000 | Oui | Boues activées | 90% | 2 175 | Oued | 3 750 7 500* | Oued Sébaou | Travaux d'extensions avancés à 30% |
| | Diss | Azazga | 60 000 | Oui | Boues activées | 90% | / | Oued | 10 800 | Oued Diss | Appel d'offre pour la réalisation en cours |

le signe * signifie que la station d'épuration est actuellement en phase d'extension à cette capacité.

| PROVINCE | River * | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. | |
|--|--|---------------|-------------------------------|---|--------------------------------|-----------------------------------|------------------------------|---------------------------------|--------------------------------|------------------------------------|------|--|
| TLEMCEM | | Tlemcen | Environ 74 580 hab | Ain El Houtz (eaux usées domestiques 150000 eq/hab) | Boues activées | 96% | 31018 | | | Irrigation du perimetre de Hennaya | | |
| | | Maghnia | 113919 hab | Maghnia (eaux usées domestiques 150 000 eq/hab) | Boues activées | 96% | 30000 | | | Irrigation du périmetre de Maghnia | | |
| | | Sidi Abdelli | 17960 hab | Station de lagunage de Sidi Senoussi 12000 eq/hab | Lagunage aéré | 90% | 1440 | | | Pas d'Utilisation | | |
| Chlef Les oueds cités sont les affluents de Oued Chélif | Fodda | Oued El Fodda | 43030 | Non | Néant | Néant | Néant | Néant | 3843 | 3843 | | |
| | Cheliff | Ouled Abbes | 8851 | Non | Néant | Néant | Néant | Néant | 483 | 483 | | |
| | Chélif | Oum Drou | 22003 | Non | Néant | Néant | Néant | Néant | 2006 | 2006 | | |
| | Chélif | Chlef | 184253 | Oui | Boues activées | = 90% | 7684 | 7684 | 17221 | 17221 | | |
| | Cheliff | Chétia | 73668 | Non | Néant | Néant | Néant | Néant | 5952 | 5952 | | |
| | wahrane | Ouled Fares | 35998 | Non | Néant | Néant | Néant | Néant | 4155 | 4155 | | |
| | Cheliff +oued Sly | Oued Sly | 48743 | Non | Néant | Néant | Néant | Néant | 4690 | 4690 | | |
| | Cheliff | Boukadir | 52963 | Non | Néant | Néant | Néant | Néant | 3409 | 3409 | | |
| | Cheliff | Sobha | 35547 | Non | Néant | Néant | Néant | Néant | 1428 | 1428 | | |
| | Ghazlia | Heranfa | 18364 | Non | Néant | Néant | Néant | Néant | 464 | 464 | | |
| | Lzs agglomération situées dans le sous bassin versant cotier de Dahra. | | | | | | | | | | | |
| | Mer + oued Souakhi + oued Baadaoud | Beni Haoua | 21514 | Non | Néant | Néant | Néant | Néant | Néant | 838 | 838 | |
| | Mer | Oued Goussine | 6658 | Non | Néant | Néant | Néant | Néant | Néant | 108 | 108 | |
| Allala +mer | Ténès | 36583 | Non | Néant | Néant | Néant | Néant | Néant | 3264 | 3264 | | |
| Mer +oued KHERICHFA | Sidi Abderahmane | 4487 | Non | Néant | Néant | Néant | Néant | Néant | 598 | 598 | | |
| Mer | El Marsa | 11149 | Non | Néant | Néant | Néant | Néant | Néant | 1439 | 1493 | | |

| PROVINCE | River * | City** | Permanent population (in 000) 31/12/2009 | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Waste-water untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|----------|---------|--------|--|--|--------------------------------|-----------------------------------|------------------------------|---------------------------------|---------------------------------|-----------------------------------|---|
| Tipaza | | Tipaza | 7000 eq/hab | Station Chenoua Mise en service en 2008 | Boues actives à faible charge | | 11200 | | | Oued Nador | La collecte des eaux usées vers la STEP est assurée par un réseau principal qui développe une longueur de 11150 MI dont 8000ML gravitaire et sept stations de relevage. Ce type de station a été certifié selon la norme internationale iso 140001 version 2004. ce certificat a été décerné par le Bureau international Allemand accrédité « TUV RHEINLAND » |

| PROVINCE | River * | City** | Permanant Population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/day) | Discharge of treated wastewater+ type of discharge | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|----------------|--|---|-------------------------------|---|--------------------------------|-----------------------------------|-----------------------------|--|--|-----------------------------------|--|
| Ain Temouchent | Sennane | Sidi Ben Adda | 14005 | EXISTE | Biologique à boues activées | / | | Urbain | 2137 | | STEP en cours de létude |
| | Oued Tayeb | Terga | 8221 | Non | Neant | / | | DI Urbain + industriel | 247 | DI | |
| | Oued Feraraa | Bouzedjar | 4851 | Oui | Oxydation alternée | 95% | 1920 | DI Urbain | 529 | DI | STEP en cours d'etude (manque l'arrêt d'exploitation) |
| | Oued Tafna | Beni Saf | 44922 | Oui | Biologie à boue activée | | | DI Urbain | 5000 | DI | La STEP en cours d'etude |
| | Oued Tafna | Oulhaca | 17184 | Non | Neant | | | DI Urbain | 1725 | | |
| | Oued el Hallouf | Ould el Kihal | 3499 | Non | Neant | | | DI Urbain | 260 | | |
| | Oued Bouzedjar | M'said | 4542 | Les eaux usées deverseront dans la station de Bouzedjar | Neant | | | urbain | 495 | | |
| | Oued Ouzert | Ouled Boudjema | 6212 | Non | / | | | Urbain | 678 | | |
| | Oued Mekhaissia | Sidi Safi | 7254 | Station de lagunage | Lagunage naturel | 95% | 1168 | RB | 970 | DI | La STEP est suivie par l'ONA |
| Jijel | Kantara-Moutasse et Chaabat Ben Achour | JJEL | 138295 | OUI | Boues activées à faible charge | Secondaire | 30 000 | Rejet vers la mer | Une partie de la collection en eaux usées est en cours de projet | Oueds cotiers | Une étude de diagnostic du réseau d'eaux usées est en cours par un Bureau d'Etude francais |
| | El Kébir | EL MILIA | 80094 | STEP d'El Milia en cours de réalisation | Boues activées à faible charge | Secondaire | 20 600 | | | | Mise en service de la STEP programmée pour le 2eme trimestre 2011. |
| | Nil, DjenDjen et Saioud | Taher-Emir Abdelkader – Chakfa –Sidi Abdelaziz et Khannar | 172789 pour les 05 communes | STEP d'El Kannar en cours d'Etude | / | | | | | | L'Etude est en cours de finalisation. |

| PROVINCE | River * | City** | Permanant Population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/day) | Discharge of treated wastewater+ type of discharge | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. | |
|-----------|----------------------------|------------------------------|-------------------------------|----------------------------|---------------------------------------|-----------------------------------|-----------------------------|--|--------------------------------|-----------------------------------|-------------------------|--|
| BOUMERDES | Tatareg | Boumerdes Corso Tidjellabine | 69 954 | STEP Boumerdes | Traitement biologique à boues actives | 88% | 15 000 | OUED Tatareg vers la mer | Néant | Néant | | |
| | Boufrou | Thénia | 21 614 | STEP Thénia | Traitement biologique à boues actives | 88% | 6000 | Oued Boufrou | Néant | Néant | | |
| | Arrara | Zemouri | 25 000 | STEP Zemouri | Traitement biologique à boues actives | 88% | 5000 | Oued Arrara | Néant | Néant | | |
| Skikda | Embouchure de Oued Saf Saf | Skikda | 167458 | En cours d'achevement | Traitement Biologique | 95% | 36260.96 | 3460.96 | | | | |
| | | Hamrouche Hamoudi | 13132 | | | | | | | | | |
| | | Hamadi Krouma | 31114 | | | | | | | | | |
| | | El Hadaiek | 18424 | | | | | | | | | |
| | | Zerdezas | | 12852 | Non | | | | | 1233.79 | Rejet en mer via l'oued | |
| | | Said Bousbaa | | 8054 | Non | | | | | 966.48 | Rejet en mer via l'oued | |
| | | El Harrouch | | 50142 | Non | | | | | 7019.88 | Rejet en mer via l'oued | |
| | | Salah Bouchaour | | 30465 | Non | | | | | 2680.92 | Rejet en mer via l'oued | |
| | | Ramdane Djamel | | 30146 | Non | | | | | 3617.52 | Rejet en mer via l'oued | |
| | | Beni Béchir | | 9864 | Non | | | | | 1104.76 | Rejet en mer via l'oued | |
| | | Tamous | | 52466 | Non | | | | | 1552.99 | Rejet en mer via l'oued | |
| | | Kerkera | | 27817 | Non | | | | | 2826.20 | Rejet en mer via l'oued | |
| | | Ahmed Salem | | 3352 | Non | | | | | 402.24 | Rejet en mer via l'oued | |
| | Hadjiria | | 4552 | Non | | | | | 546.24 | Rejet en mer via l'oued | | |
| | Bin El Ouidene | | 22135 | Non | | | | | 424.99 | Rejet en mer via l'oued | | |

| PROVINCE | River * | City** | Permanant Population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/day) | Discharge of treated wastewater+ type of discharge | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|----------|--|-------------------|-------------------------------|----------------------------|--------------------------------|-----------------------------------|-----------------------------|--|--------------------------------|-----------------------------------|------|
| | Embouchure de Oued Siel | Collo | 36522 | Non | | | | | 4674.81 | Rejet en mer via l'oued | |
| | Embouchure de Oued Cherka | Ouled Mazzouz | 2755 | Non | | | | | 330.60 | Rejet en mer via l'oued | |
| | | Beni Zid | 21181 | Non | | | | | 2541.72 | Rejet en mer via l'oued | |
| | Embouchure de Oued Kebir | Boumaiza | 3952 | Non | | | | | 474.24 | Rejet en mer via l'oued | |
| | | Bekkouche Lakhdar | 15534 | Non | | | | | 1888.93 | Rejet en mer via l'oued | |
| | | Ain Chatchar | 16091 | Non | | | | | 2317.10 | Rejet en mer via l'oued | |
| | | Azzaba | 558254 | Non | | | | | 6524.44 | Rejet en mer via l'oued | |
| | | Djendel | 8867 | Non | | | | | 1417.12 | Rejet en mer via l'oued | |
| | Embouchure de Oued Righa | Filfila | 29678 | Non | | | | | 3157.73 | Rejet en mer via l'oued | |
| | Emissaire en mer plage de Larbi Ben M'Hidi | Larbi Ben M'Hidi | 7904 | Non | | | | | 948.48 | SO | |

La quantité des eaux usées non traitées Q en M³/J a été calculée en se basant sur la formule suivante : $Q = PXDX0.80$
P c'est la population, D c'est la dotation en litre /habitant/ jour estimé par la direction de l'Hydraulique de la wilaya de Skikda 150,
0.80 est pour les 80% de l'eau consommée qui est rejetée, la formule précédente deviendra :
 $Q = PX150X0.80X 10^{-3}$ en M³
 $Q = PX 0.12$ en M³

| PROVICE | River * | City** | Permanent Population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge fo treated wastewater | Wastewater untreated (m3/ day) | Discharge of untreated wastewater | Obs. |
|---------|--------------|--|-------------------------------|----------------------------|---|-----------------------------------|--|---------------------------------|--------------------------------|-----------------------------------|-----------|
| Alger | Mazzafran | | | Zéralda | Intensif Boue activée à moyenne charge À moyenne charge | Secondaire | | Urbain | | | En Projet |
| | Mahelma | | | Mahelma | | Secondaire | | Urbain | | | |
| | | | | VNSA | | Secondaire | | Urbain | | | |
| | El Harrach | 3 | 1.017.897 | Baraki | | Secondaire | 150.000m3/j | Urbain | | | |
| | Réghaia | Réghaia Rouiba Heuraoua Ain Taya Bordj El Bahri El Marsa Bordj El Kiffan Dar El Beida | 450.030 | Réghaia | | Secondaire | 80.000 m3/j actuellement elle assure 40.000 -50.000 m3/j | Mixte | | | |
| | | | | | | | | | | | |
| | Beni Messous | Chéraga Beni Messous O.Fayet Staouali Ain Benian Delly Brahim Bouzéreah Soudania Rahmania Zéralda | 337.405 | Beni Messous | | Secondaire | 50.000m3/j | Urbain | | | |

Une partie des communes est accordée à la STEP

Une partie des communes est accordée à la STEP

Le nombre de population est donné selon le RGPH

Les communes raccordées à la STEP sont : Barraki , Bach Djerrah, El Harrach, Bourouba, O.Smar, H, Dey, Kouba, El Magharia, B.M.Rais, S.M'Hamed , El Madania, El Mouradia, Hydra, les Eucalyptus, Bab Zouar, une partie d'Alger CENTRE , D.E.Beida.,

Les communes non encore raccordées (travaux de réalisation des collecteurs, raccordement en cours) sont : Hammamet, Rais Hamidou, Bab El Oued , Alger centre , El Biar , Ben Akknoun ,Belouizded , Draria , El Achour.

| PROVINCE | River * | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/day) | Discharge of untreated wastewater | Obs. |
|------------|---------|------------------------------|-------------------------------|---|-------------------------------------|-----------------------------------|------------------------------|---|-------------------------------|-----------------------------------|--|
| Oran | | Oran | | STEP de Kerma pour le groupement d'Oran (Kerma, Sénia, Bir El Djir, Sid Charhmi , Oran) | À boues activées À faible charge | 95% | 60.000 | Une partie au niveau de la grande sebkha, une partie utilisée pour l'irrigation au niveau de la plaine de Mleta | 65.000 | SS | En phase d' exploitation |
| | | Ain El Turk | | STEP Ain Turk | A boues activées à faible charge | 75% | 3262 | Mer | 575 | DI | Essays en cours |
| | | Bousfer | | IL n'existe pas de STEP, la meme chose pour la commune de El Ansor | | | | | | | C'est la STEP de Ain Turck qui prend en charge les eaux usées de la commune de Bousfer et Ançor. |
| | | Bethioua | | | Mécanique et Biologique | 75% | | Réutilisé dans l'industrie | 1707 | SS | En projet pour 2012 |
| Mostaganem | | *Fornaka | 17171 | Travaux achévés | | | Aucun | Néant | 1095 | | Les stations Fornaka –Beni Yahi Kedadra-Ain Nouissy ne sont pas opérationnelles |
| | | Groupement urbain Mostaganem | 150058 | Projet de STEP en cours de lancement | | | Aucun | Néant | 16800 | | La station d'épuration est projetée uniquement pour la partie Ouest de la commune de Mostaganem |
| | | mazagran | 24334 | | | | | | | | |
| | | Sayada | 30820 | Aucune station de traitement | | | Aucun | Néant | 2488.32 | | Le rejet vers l'Oued Ain Sefra |
| | | Hadjadj | 17749 | opérationnelle | | | Aucun | Néant | 1240 | | Systeme de lagunage aéré |
| | | Khadra | 14560 | Projet lance | | | Aucun | Néant | 580 | | 03 projets à lancer (Khadra-Sidi Lakhder et Sidi Ali) |

| PROVINCE | River * | City** | Permanent population (in 000) | Wastewater Treatment Plant | Method of wastewater treatment | Degree of treatment of wastewater | Wastewater treated (m3/ day) | Discharge of treated wastewater | Wastewater untreated (m3/day) | Discharge of untreated wastewater | Obs. |
|----------|---------|-------------------------------|---|------------------------------------|------------------------------------|------------------------------------|--------------------------------|---------------------------------|------------------------------------|-----------------------------------|--|
| | Oued * | Ville** Commune interieure | Population permanente (en milliers) Estimation 2010 | Station d'épuration des eaux usées | Méthode d'épuration des eaux usées | Degré de traitement des eaux usées | Eaux usées traitées (m3/ jour) | Rejet d'eaux usées traitées | Eaux usées non traitées (m3/ jour) | Rejet d'eaux usées non traitées | OBS |
| | | Mesra | 26794 | À l'arrêt | | | Aucun | | 1410 | | Actuellement à l'arrêt pour le renouvellement de ses équipements |
| | | Bouguirat | 32805 | En cours | | | Aucun | | 1640 | | Travaux d'étanchié en cours |
| | | Sirat | 22784 | À l'arrêt | | | aucun | | 584.64 | | Le projet est à l'arrêt le probleme est avec les proprietaires privés. |

* pour la commune de Fornaka le rejet actuel se fait vers la mer à travers l'Oued Tine ou Oued El Macta

N.B : il y'a lieu de preciser que les (07) sept stations de lagunage déjà réalisées ne sont pas toutes opérationnelles et ceci par manque d'organisme de gestion. Cernant les communes de Sidi Ali , Sidi Lakhder et Khadra, des stations de lagunage ont été retenues pour la réalisation en 2011.

Country: CROATIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| Agglomeration | *Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|------------------------------|-----------------------------------|--|------------------------------------|--|--------------------------------------|--|
| Baška Voda | 2.045 | no | - | - | - | 186 | SS |
| Betina-Murter | 2.842 | no | - | - | - | 0 | - |
| Bibinje-Sukošan | 6.526 | yes | Pre-treatment | 169 | SO | 0 | - |
| Biograd | 11.331 | yes | Primary | 814 | SO | 0 | - |
| Blato | 3.659 | no | - | - | - | 0 | - |
| Cavtat | 2.015 | yes | Pre-treatment | 104 | SO | 0 | - |
| Cres | 2.333 | no | - | - | - | 273 | SS |
| Crikvenica | 8.577 | no | - | - | - | 793 | DI |
| Dubrovnik | 39.850 | yes | Pre-treatment | 3.640 | SO | 0 | - |
| Dugi rat | 3.507 | no | - | - | - | 0 | - |
| Gradac | 2.743 | no | - | - | - | 91 | SS |
| Hvar | 3.672 | no | - | - | - | 477 | DI |
| Jelsa-Vrboska | 4.719 | no | - | - | - | 0 | - |
| Kaštela-Trogir | 54.509 | no | - | - | - | 2.749 | SS |
| Korčula | 4.422 | no | - | - | - | 0 | - |
| Kostrena | 11.279 | no | - | - | - | 265 | SS |
| Kraljevica | 4.197 | no | - | - | - | 263 | SS |
| Krk | 3.364 | no | - | - | - | 325 | SS |
| Makarska | 13.381 | yes | Pre-treatment | 1.635 | SO | 0 | - |
| Mali Lošinj | 6.296 | no | - | - | - | 585 | SS |
| Malinska-Njivice | 3.911 | no | - | - | - | 163 | SS |
| Medulin | 4.192 | no | - | - | - | 39 | SS |

| Agglomeration | *Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|-----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Nin | 5.857 | no | - | - | - | 0 | - |
| Novalja | 2.372 | yes | Primary | 150 | SO | 0 | - |
| Novi Vinodolski | 4.330 | no | - | - | - | 284 | SS |
| Novigrad Istarski | 4.135 | no | - | - | - | 364 | SS |
| Omis | 8.350 | yes | Pre-treatment | 546 | SO | 0 | - |
| Opatija-Lovran | 18.333 | no | - | - | - | 1.420 | SS |
| Orebić | 2.150 | no | - | - | - | 0 | - |
| Pag | 2.701 | yes | Pre-treatment | 221 | SO | 0 | - |
| Pirovac-Tisno-Jezera | 4.011 | no | - | - | - | 0 | - |
| Ploče | 8.390 | no | - | - | - | 130 | DI |
| Podstrana | 9499 | no | - | - | - | 390 | SO |
| Poreč-Jug | 6.230 | yes | Pre-treatment | 506 | SO | 0 | - |
| Poreč-Sjever | 9.006 | no | - | - | - | 687 | SS |
| Preko | 2.467 | no | - | - | - | 104 | SS |
| Pula-Centar | 59.927 | yes | Pre-treatment | 1.962 | SO | 4.577 | SS |
| Pula-Sjever | 8.557 | yes | Pre-treatment | 522 | DI | 0 | - |
| Punat | 2.109 | yes | Pre-treatment | 143 | SO | 0 | - |
| Rab | 5.323 | no | - | - | - | 430 | SS |
| Rijeka | 175.813 | yes | Pre-treatment | 14.508 | SO | 764 | SS |
| Rovinj | 14.234 | yes | Pre-treatment | 1.170 | SO | 0 | - |
| Senj | 5.491 | yes | Secondary | 325 | SO | 0 | - |
| Split-Solin | 211.281 | yes | Pre-treatment | 21.448 | SO | 0 | - |
| Supetar | 3.322 | no | - | - | - | 324 | SS |
| Supetarska Draga | 2.966 | no | - | - | - | 64 | SS |
| Šibenik | 39.648 | yes | Primary | 2.990 | SO | 0 | - |
| Umag | 10.082 | yes | Pre-treatment | 1.095 | DI | 0 | SS |

| Agglomeration | *Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|------------------------------|-----------------------------------|--|------------------------------------|--|--------------------------------------|--|
| Vela Luka | 4.380 | no | - | - | - | 0 | - |
| Vodice | 8.558 | no | - | - | - | 390 | SO |
| Zadar | 69.556 | yes | Secondary | 6.500 | SO | 0 | - |
| Župa Dubrovačka | 5.686 | no | - | - | - | 219 | SO |

Country: CROATIA

MUNICIPAL WASTEWATER TRETMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | Agglomeration | Permanent Population* | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day)** | Discharge of Treated Wastewater | Wastewater Untreated (m3/day)** | Discharge of Untreated Wastewater |
|--|---------------|-----------------------|----------------------------|-----------------------------|-----------------------------------|-------------------------------|---------------------------------|---------------------------------|-----------------------------------|
| Cetina | Otok | 4.154 | no | - | - | - | - | 0 | - |
| Cetina | Sinj | 20.210 | yes | Mechanical | Pre-treatment | 780 | DI | 0 | - |
| Cetina | Trilj | 5.253 | yes | Biological | Secondary | 130 | DI | 0 | - |
| Čikola | Drniš | 3.332 | no | - | - | - | - | 325 | DI |
| Dragonja | Buje | 3.080 | yes | Biological | Secondary | 302 | DI | 0 | - |
| Krka | Knin | 12.579 | no | - | - | - | - | 520 | DI |
| Mirna | Buzet | 3.572 | yes | Biological | Secondary | 316 | DI | 0 | - |
| Neretva | Metković | 13.873 | no | - | - | - | - | 780 | DI |
| Neretva | Opuzen | 3.858 | yes | Mechanical | Pre-treatment | 130 | DI | 0 | - |
| Underground rivers ending to the Adriatic sea | | | | | | | | | |
| creek (Benkovac) | Benkovac | 2.622 | yes | Biological reactor | Secondary | 170 | DI | 0 | - |
| Gacka | Otočac | 5.990 | yes | Biological | Secondary | 390 | DI | 0 | - |
| creek Glavina | Imotski | 23.329 | yes | Biological | Secondary | 516 | DI | 0 | - |
| Lika | Gospić | 7.044 | yes | Biological | Secondary | 0 | DI | 455 | DI |
| Ričica | Gračac | 2.689 | no | - | - | - | - | 0 | - |
| Raša | Labin | 11.632 | yes | Biological | Secondary | 1.228 | DI | 0 | - |

| River | Agglomeration | Permanent Population* | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day)** | Discharge of Treated Wastewater | Wastewater Untreated (m3/day)** | Discharge of Untreated Wastewater |
|------------------------------------|---------------|-----------------------|----------------------------|-----------------------------|-----------------------------------|-------------------------------|---------------------------------|---------------------------------|-----------------------------------|
| Šaltarija - tributary of Pazinčica | Pazin | 5.736 | yes | Biological | Secondary | 585 | DI | 0 | - |

* Permanent population - number of permanent inhabitants (both connected and not connected to the public sewerage system) according to the 2001 Census

** Quantity of treated and untreated wastewater was calculated based on the number of connected population in settlements within the public sewerage system and average water consumption (130 l/inh/d)

*** **SO**: Discharge through a **S**ubmarine **O**utfall
DI: Discharge **D**irectly into the sea
SS: Discharge through many **S**mall **S**ubmarine outfalls

Country: CYPRUS

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Total Population Equivalent 2007 | Population Equivalent connected to the main Sewage Treatment Plant | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharged of Treated Wastewater | Wastewater Untreated (m3/day) | Discharged of Untreated Wastewater |
|-------------------|----------------------------------|--|----------------------------|-----------------------------------|-----------------------------|---|-------------------------------|------------------------------------|
| Pyla | 2800 | | No (Note 1) | | | | 280 | * |
| Meneou | 2300 | | No | | | | 230 | * |
| Voroklini | 11000 | | No (Note 1) | | | | 1100 | * |
| Larnaca | 70000 | 65964 | Yes | Tertiary | 8500 | a) Irrigation b) Sea *** | – | ** |
| Ypsonas | 7800 | | No | | | | 780 | * |
| Kolossi | 4500 | | No | | | | 450 | * |
| Episkopi | 3500 | | No | | | | 350 | * |
| Trachoni | 3500 | | No | | | | 350 | * |
| Pissouri | 3000 | | No | | | | 300 | * |
| Pano Polemedia | 3500 | | No | | | | 350 | * |
| Agios Tychonas | 7000 | | No (Note 2) | | | | 700 | * |
| Mouttagiaka | 3800 | | No (Note 2) | | | | 380 | * |
| Pareklisia | 2500 | | No (Note 2) | | | | 250 | * |
| Pyrgos | 2300 | | No (Note 2) | | | | 230 | * |
| Limassol | 145000 | 133000 | Yes | Tertiary | 19000 | a) Irrigation b) Polemidia Dam c) Sea *** | – | ** |
| Polis Chrysochous | 5500 | | No | | | | 550 | * |
| Pegeia | 7000 | | No | | | | 700 | * |
| Emba | 5800 | | No | | | | 580 | * |

| City | Total Population Equivalent 2007 | Population Equivalent connected to the main Sewage Treatment Plant | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharged of Treated Wastewater | Wastewater Untreated (m3/day) | Discharged of Untreated Wastewater |
|---------------|----------------------------------|--|----------------------------|-----------------------------------|-----------------------------|----------------------------------|-------------------------------|------------------------------------|
| Chlorakas | 10000 | | No (Note 4) | | | | 1000 | * |
| Kissonerga | 3500 | | No (Note 4) | | | | 350 | * |
| Tala | 4500 | | No | | | | 450 | * |
| Paphos | 67000 | 59547 | Yes | Tertiary | 8800 | a) Aquifer | – | ** |
| Liopetri | 4500 | | No | | | | 450 | * |
| Derynia | 6000 | | No | | | | 600 | * |
| Ayia Napa**** | 27500 | 73000 | Yes | Tertiary | 14500 | a) Irrigation | – | ** |
| Paralimni | 45500 | | Yes | | | | | |
| Kiti | 3800 | | No | | | | 380 | * |
| Perivolia | 5000 | | No (Note 3) | | | | 500 | * |
| Dromolaxia | 5200 | | No | | | | 520 | * |
| Livadhia | 5500 | | No (Note 1) | | | | 550 | * |
| Ormideia | 4200 | | No | | | | 420 | * |
| Xylyotymvou | 3500 | | No | | | | 350 | * |
| Avgorou | 4500 | | No | | | | 450 | * |
| Sotira | 5400 | | No | | | | 540 | * |
| Xylofagou | 5300 | | No | | | | 530 | * |

Note 1: Hotels and touristic developments are served by the Sewage Treatment Plant of sewerage and Drainage Board of Larnaka

Note 2: Hotels and touristic developments are connected to the Sewage Treatment Plant of Limassol Sewerage board

Note 3: Touristic complexes may have individual small sewage treatment plants

Note 4: These cities will be connected 100% on 2011 with the Sewage Treatment Plant of Sewerage Board of Paphos which is a biological treatment with Tertiary degree of treatment

* Septic tanks and absorption pits are used in most of the cases.

** Population which is not served by plant and network (hotels, touristic developments etc) is served by private WWTP units and so there is no discharge of untreated wastewater into the sea, even during high touristic period

*** There are possible discharges of final effluents in the Mediterranean sea only during the winter months (December-February) under special conditions (related to TN and TP) that are defined in the Waste Discharged Permits

**** Ayia Napa and Paralimni are served by the same Plant

Country: EGYPT

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000
(Discharge directly in the Mediterranean or to drains within 20 km from the sea)

| City | Permanent Population (1) (Est 2009) | Wastewater Treatment Plant (2) | Degree of Treatment of Wastewater (2) | Wastewater Treated (m ³ /day) (2) | Discharge of Treated Wastewater (2) | Discharge of Untreated Wastewater | Wastewater Untreated (m ³ /day) (3) |
|-------------------------------------|--|--------------------------------|---------------------------------------|--|-------------------------------------|-----------------------------------|--|
| Abu Qir East (Alexandria) ** | 8,915 | No | - | - | - | Soil | 1400 |
| Abu Qir West (Alexandria) ** | 29,802 | Yes | Primary | 5,500 | Maruit to Med | | |
| Alexandria East | 3,800,000 | Yes | Pri (sec 2013) | 607000 | Lake Maruit | | |
| Alexandria West | | | Pri Sec 2014) | 462000 | Lake Maruit | | |
| Alexandria Mubarak | | | | 15000 | Amriah Drainage to Med | | |
| Alexandria Ard- Elheish | | | | 50000 | Amriah Drainage to Med | | |
| Alexandria Kilo26 | | | | 4000 | Lake Maruit | | |
| Alexandria New Bourg Elarab | | | | 36000 | Tree Plantation | | |
| Alexandria Siuof | | | | 7000 | Amiya Drain | | |
| Amriah East (Alexandria) ** | | | 30,688 | Yes | Secondary | 20,000 | Amriah Drainage to Med |
| Amriah West (Alexandria) ** | 12,635 | | | | | | |
| Ashshaykh Mubark (Kafr Ashshaykh) # | 8,320 | No | - | - | - | Soil | 660 |
| Baltim (Kafr Ashshaykh) | 39,000 | | Secondary | 10,000 | Med | - | - |
| Sahaka (Kafr Ashshaykh) | 156000 | | | 18500 | Drain No7 | | |
| Kallien (Kafr Ashshaykh) | 37300 | | | 25000 | Drain to Med | | |
| Billa (Kafr Ashshaykh) | 86400 | | | 20000 | Drain to Med | | |
| Baheeg (Alexandria) # | 15,790 | No | - | - | - | Soil | 190 |
| Dumya (Damietta) | 125,000 | Yes | Secondary | 60,000 | Lake | - | - |
| Al-Nassima (Daqahliyah) # | | Yes | Secondary | 1,500 | Drain to Med | - | - |
| Dumya (Damietta) new city | 95,000 | Yes | Secondary | 1,900 | Lake | - | - |

| City | Permanent Population (1) (Est 2009) | Wastewater Treatment Plant (2) | Degree of Treatment of Wastewater (2) | Wastewater Treated (m ³ /day) (2) | Discharge of Treated Wastewater (2) | Discharge of Untreated Wastewater | Wastewater Untreated (m ³ /day) (3) |
|------------------------------------|--|--------------------------------|---------------------------------------|--|-------------------------------------|-----------------------------------|--|
| Kafer Al-Battiek (Damietta) # | 29,163 | Yes | Secondary | 4,000 | Drain to Med | - | - |
| Annania (Damietta) | | | | 60000 | Lake Manzala | | |
| Ezbit Elbourg (Damietta) | | | | 20000 | Med | | |
| Awlad Kalaf (Damietta) | | | | 10000 | Lake Manzala | | |
| Elhorrani (Damietta) | | | | 2600 | Drain to Med | | |
| Kafr Elarab (Damietta) | | | | 2100 | Drain to Med | | |
| Dakkahla (Damietta) | | | | 2700 | Drain to Med | | |
| Abo Galb (Damietta) | | | | 1600 | Drain to Med | | |
| Elwastani (Damietta) | | | | 2000 | Drain to Med | | |
| Ras El-bar (Damietta) | 8,635 | Yes | Secondary | 45,000 summer 15,000 winter | Naviga, Canal to Med. | - | - |
| Edfina (Buhayrah) # | 14,763 | No | - | - | - | Soil | 980 |
| El Arish | 150,000 | Yes | Secondary | 12,000 | Desert | - | - |
| El Arish | 20,000 | No | - | - | Desert | - | 5000 |
| El Daba | 44,000 | No | - | - | - | - | - |
| Fouka (Matruh) ** | 2,289 | No | - | - | - | Soil | 210 |
| Hummam | 38,000 | No | - | - | - | - | - |
| Marsa Matruh | 92,000 | Yes | Secondary | 50,000 | RE | - | - |
| Mhahlla Al-Amhar (Buhayrah) # | 8,423 | No | - | - | - | Soil | 760 |
| Port Said | 500,000 | Yes | Secondary | 190,000 | Lake Manzala | - | - |
| Port Fouad | | | | 37000 | Canal Suez Branch | | |
| Industrial Zone Port Said | | | | 4000 | Lake Manzala | | |
| Elradwan Village (Prt Said) | | | | 1000 | | | |
| UMKalaf (Port Said) | | | | 1000 | | | |
| Ras Al-Hekma (Matruh) # | 3,939 | No | - | - | - | Soil | 350 |

| City | Permanent Population (1) (Est 2009) | Wastewater Treatment Plant (2) | Degree of Treatment of Wastewater (2) | Wastewater Treated (m ³ /day) (2) | Discharge of Treated Wastewater (2) | Discharge of Untreated Wastewater | Wastewater Untreated (m ³ /day) (3) |
|--------------------------------|--|--------------------------------|---------------------------------------|--|-------------------------------------|-----------------------------------|--|
| Rashid (Rosetta) | 185,000 | | Secondary | 20,000 | | - | - |
| Sallum (Matruh) ** | 8,445 | No | - | - | - | Soil | 850 |
| Shribin (Daqahliyah) ** | 56,631 | | | | | | |
| Sidi Abd El-Rahman (Matruh) ** | 3,971 | No | - | - | - | Soil | 360 |
| Sidi Barrani | 24,000 | No | - | - | - | - | - |
| Sidi Barrani (Matruh) # | 7,519 | No | - | - | - | Soil | 680 |
| Sidi Omar (Buhayrah) # | 2,611 | No | - | - | - | Soil | 230 |
| Zawiyat Al-Shaik (Matruh) # | 2,391 | No | - | - | - | Soil | 215 |

(Bold) New information provided by HCPWSD in October 2010.

Remarks: ** Coastal towns and Cities identified by MAP
Additional towns and small communities identified in the survey
(1) Data of National Census of March 2007
(2) Information of Egyptian Holding Company of Potable Water and Sanitary Drainage HCPWSD
(3) Estimates of Local Municipalities

Country: EGYPT

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF NILE BASIN
ENDING UP IN THE MEDITERRANEAN SEA

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----|-------|--|---|----------------------------|--|-----------------------------------|---|--|-------------------------------|-----------------------------------|
| 1. | Nile | Abu Simbel | 6480 | Yes | Lagoons | Primary | 5 | Green Belt | - | - |
| 2. | Nile | Kalabsha | 2740 | No | Lagoons | Primary | 1 | Land | | |
| 3. | Nile | Aswan Kima (Aswan Governorate) | 202400 | Yes | Lagoons | Primary | 56 | Forest | | |
| 4. | Nile | Aswan (Balana) | 95000 | Yes | Lagoons | Primary | 26 | Forest | | |
| 5. | Nile | Aswan (ElHagger) | 85300 | Yes | Lagoons | Primary | 17 | Forest | | |
| 6. | Nile | Aswan (Allaki) | | Yes | Extended Aeration | Secondary | 40 | Forest | | |
| 7. | Nile | Kom Ombo | 74260 | Yes | Oxidation Ponds | Primary | 32 | Forest | | |
| 8. | Nile | Edfu | 65900 | Yes | Oxidation Ponds | Primary | 20 | F & Drain # | | |
| 9. | Nile | Nasr | 6250 | Yes | Oxidation Ponds | Primary | 2 | Drain # | | |
| 10. | Nile | Qena (Qena Governorate) | 185300 | Yes | Extended Aeration & Trick Filters* | Secondary | 76 | F & Drain # | | |
| 11. | Nile | Dishna | 55600 | Yes | Oxidation Ponds | Primary | 22 | Drain # | | |
| 12. | Nile | Abo Tashet | 13160 | Yes | Oxidation Ponds | Primary | 15 | Drain # | | |
| 13. | Nile | Arment | 80400 | Yes | Oxidation Ponds | Primary | 20 | Drain # | | |
| 14. | Nile | Asta** | 67800 | Yes | Oxidation Ponds | Primary | 20 | Drain# | | |
| 15. | Nile | Qous | 60700 | Yes | Oxidation Ponds | Primary | 16 | Drain # | | |
| 16. | Nile | Nag Hammadi | 40700 | Yes | Oxidation Ponds | Primary | 20 | Drain # | | |
| 17. | Nile | Naqada | 23200 | Yes | Oxidation Ponds | Primary | 10 | Drain # | | |
| 18. | Nile | Farshot | 54200 | Yes | Oxidation Ponds | Primary | 20 | Drain # | | |
| 19. | Nile | Qift | 22100 | Yes | Oxidation Ponds | Primary | 10 | Drain # | | |
| 20. | Nile | Esna | 80500 | Yes | Oxidation Ponds | Primary | 25 | Drain # | | |
| 21. | Nile | Luxor (Luxor City Council) | 95300 | Yes | Trick Filters & Ext ended Aerat | Secondary | 23 | Forest | | |
| 22. | Nile | Sohag East (Sohage Governorate) | 137500 | Yes | Surface Aeration | Secondary | 55 | Drain # | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----|-------|--|---|----------------------------|--|-----------------------------------|---|--|-------------------------------|-----------------------------------|
| 23. | Nile | Sohag West | 180000 | Yes | Surface Aeration & Trick Filters | Secondary | 60 | Drain # | | |
| 24. | Nile | Balyana | 49300 | Yes | Oxidation Ponds | Primary | 38 | Drain # | | |
| 25. | Nile | Maragha | 36800 | Yes | Oxidation Ponds | Primary | 30 | Drain # | | |
| 26. | Nile | El Monsha | 62200 | Yes | Surface Aeration | Secondary | 24 | Drain # | | |
| 27. | Nile | Gerga | 109000 | Yes | Surface Aeration | Secondary | 65 | Drain # | | |
| 28. | Nile | Temma | 40700 | Yes | Oxidation Ponds | Primary | 25 | Drain # | | |
| 29. | Nile | Tahta | 38300 | Yes | Oxidation Ponds | Primary | 32 | Drain # | | |
| 30. | Nile | Asyut (Asyut Governorate) | 400500 | Yes | Surface Aeration | Secondary | 130 | Drain # | | |
| 31. | Nile | Al Qosia | 71400 | Yes | Oxidation Ponds | Primary | 25 | Drain # | | |
| 32. | Nile | Dairut | 71600 | Yes | Oxidation Ponds | Primary | 33 | Drain # | | |
| 33. | Nile | Manfalut | 84300 | Yes | Oxidation Ponds | Primary | 16 | Drain # | | |
| 34. | Nile | Sahel Saleem & Badary | 75200 | Yes | Oxidation Ponds | Primary | 23 | Drain # | | |
| 35. | Nile | Abo Tig | 75000 | Yes | Oxidation Ponds | Primary | 17 | Drain # | | |
| 36. | Nile | Abnoub & Elfath | 102000 | Yes | Oxidation Ponds | Primary | 70 | Drain # | | |
| 37. | Nile | Arab Elmadabgh | | Yes | Surface Aeration | Secondary | 70 | Drain | | |
| 38. | Nile | El Menyia (Menyia Governorate) | 235700 | Yes | | Secondary | 96 | Drain # | | |
| 39. | Nile | Mattayi | 47300 | Yes | Extended Aerat | Secondary | 10 | Drain # | | |
| 40. | Nile | Dair Mouas | 42700 | Yes | Extended Aerat | Secondary | 10 | Drain # | | |
| 41. | Nile | El Adoaa | 17600 | Yes | Extende Aerat | Secondary | 5 | Drain # | | |
| 42. | Nile | Bani Mazar | 76000 | Yes | Trick Filters | Secondary | 20 | Drain # | | |
| 43. | Nile | Malawi | 143000 | Yes | Trick Filters | Secondary | 40 | Drain # | | |
| 44. | Nile | Samaluit | 96100 | Yes | Trick Filters | Secondary | 25 | Drain # | | |
| 45. | Nile | Maghagha | 27400 | Yes | Trick Filters | Secondary | 10 | Drain # | | |
| 46. | Nile | Abo Qurkas | 98500 | Yes | Trick Filters | Secondary | 40 | Drain # | | |
| 47. | Nile | Beni Suef (Beni Suef Governorate) | 265000 | Yes | Trick Filters | secondary | 50 | Drain # | | |
| 48. | Nile | El Wastta | 38700 | Yes | Trick Filters | Secondary | 20 | Drain # | | |
| 49. | Nile | Beba | 62100 | Yes | Trick Filters | Secondary | 20 | Drain # | | |
| 50. | Nile | El Fashin | 66300 | Yes | Trick Filters | Secondary | 20 | Drain # | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------|-------------|---|---|----------------------------|--|-----------------------------------|--|--|-------------------------------|-----------------------------------|
| 51. | Nile | Samastta | 38500 | Yes | Extended Aeration | Secondary | 10 | Drain # | | |
| 52. | Nile | Nasser | 46400 | Yes | Extended Aeration | Secondary | 20 | Drain # | | |
| 53. | Nile | Ahnasia | 35200 | Yes | Extended Aeration | Secondary | 10 | Drain # | | |
| 54. | Nile | El Saff | 18000 | Yes | Oxidation Ponds | Primary | 5 | Drain # | | |
| 55. | Nile | Atffieh | 22600 | Yes | Oxidation Ponds | Primary | 5 | Drain # | | |
| 56. | Nile | Shubra Mant | 30400 | Yes | Extended Aeration | Secondary | 10 | Drain # | | |
| 57. | Nile | Dohormus | 27700 | Yes | Extended Aeration | Secondary | 10 | Drain # | | |
| 58. | Nile | Haumadia | 122300 | Yes | Trick Filters | Secondary | 20 | Drain # | | |
| 59. | Nile | El Ayat | 115200 | Yes | Trick Filters | Secondary | 28 | Drain # | | |
| 60. | Nile | El Badrashin | 98000 | Yes | Trick Filters | Secondary | 20 | Drain # | | |
| 61. | Nile | Greater Cairo (Zenin) | 1320000 | Yes | Activated Sludge | Secondary | 330 | Al Mouhiet Drain to Nile | | |
| 62. | Nile | Greater Cairo (Abo Rawsh) | 1600000 | Yes | Lagoons | Primary (Secondary 2015) | 1200 | Al Rahawy Drain to Nile | | |
| 63. | Nile | Greater Cairo Shubra El Kama (Balkas) | 1200000 | Yes | Lagoons and Activated Sludge | Primary & Secondary | 600 | Shbien El Kanater Drain to Nile | | |
| 64. | Nile | Greater Cairo (El Berka) | 2200000 | Yes | Activated Sludge | Secondary | 550 | Belbas Drain | | |
| 65. | Nile | Greater Cairo (Hellwan) | 1800000 | Yes | Surface Aeration | Secondary | 450 | El Saff Canal | | |
| 66. | Nile | Greater Cairo (Gabal El Asfar) Phase I | 2000000 | Yes | Surface Aeration | Secondary | 1200 | Belbas Drain | | |
| 67. | Nile | Greater Cairo (Gabal El Asfr) Phase II | 4800000 | Yes | Surface Aeration | Secondary | 1200 | Belbas Drain | | |
| 68. | Nile | Benha (Qlubia Governorate) | 163000 | Yes | Surface Aeration | Secondary | 70 | Drain ⁽⁶⁾ | | |
| 69. | Nile | Kaha | 37900 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 70. | Nile | Sariyqos | 23000 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 71. | Nile | Kafr Showuqr | 24200 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 72. t | Nile | Shbien El Kanater | 63500 | Yes | Oxidation Ponds | Primary | 20 | Drain ⁽⁶⁾ | | |
| 73. | Nile | Towah | 44500 | Yes | Surface Aeration | Secondary | 15 | Drain ⁽⁶⁾ | | |
| 74. | Nile | Kaliob | 117000 | Yes | Surface Aeration | Secondary | 90 | Drain ⁽⁶⁾ | | |
| 75. | Nile | Aghour | | Yes | Surface Aeration | Secondary | 6 | Drain | | |
| 76. | Nile | Kafr Mouse | | Yes | Surface Aeration | Secondary | 1.5 | Drain | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|-------------|-------------------------------------|---|----------------------------|--|-----------------------------------|---|--|-------------------------------|-----------------------------------|
| 77. | Nile | Shbien El Kom (Monofia Governorate) | 188300 | Yes | Surface Aeration | Secondary | 80 | Drain ⁽⁵⁾ | | |
| 78. | Nile | Monof | 94000 | Yes | Surface Aeration | Secondary | 30 | Drain ⁽⁵⁾ | | |
| 79. | Nile | El Bagour | 38800 | Yes | Surface Aeration | Secondary | 15 | Drain ⁽⁵⁾ | | |
| 80. | Nile | Beket El Sabaa | 54000 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 81. | Nile | El Sohadda | 50900 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 82. | Nile | Ashmoun | 120600 | Yes | Ext Aerat & T F | Secondary | 40 | Drain ⁽⁵⁾ | | |
| 83. | Nile | Tala | 32000 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 84. | Nile | Elbatanon | | Yes | Ext Aerat & T F | Secondary | 10 | Drain | | |
| 85. | Nile | Zagazek (Sharkia Governorate) | 231000 | Yes | Surface Aeration | Secondary | 100 | Drain ⁽⁶⁾ | | |
| 86. | Nile | Abo Keber | 104100 | Yes | Surface Aeration | Secondary | 30 | Drain ⁽⁶⁾ | | |
| 87. | Nile | Menia ElKameh | 62500 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 88. | Nile | Al Ebrahimia | 45200 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 89. | Nile | Abo Hammad & Korain | 56100 | Yes | S Aerat, TF | Pri & Sec | 30 | Drain ⁽⁶⁾ | | |
| 90. | Nile | El Koniati | 59200 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 91. | Nile | El Hosania | 29500 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 92. | Nile | Mashtol El Souk | 47100 | Yes | Extended Aeration | Secondary | 15 | Drain ⁽⁶⁾ | | |
| 93. | Nile | Deiarb Negim | 42100 | Yes | Extended Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 94. | Nile | Kafr Saker | 30000 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 95. | Nile | Awlad Saker | 19500 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 96. | Nile | Anshas | 60000 | Yes | Extended Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 97. | Nile | Fakkos | 73000 | Yes | Extended Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 98. | Nile | Hehia | 45000 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 99. | Nile | Kofour Negim | 40600 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 100. | Nile | Gazarh Soud | | Yes | Surface Aeration | Secondary | 10 | Drain | | |
| 101. | Nile | San Elhagar | | Yes | Surface Aeration | Secondary | 10 | Drain | | |
| 102. | Nile | Elkorien | | Yes | Trickling Filter | Secondary | 20 | Drain | | |
| 103. | Nile | Elsahia | | Yes | Surface Aeration | Secondary | 13.5 | Drain | | |
| 104. | Nile | Dahmehia | | Yes | Surface Aeration | Secondary | 3 | Drain | | |
| 105. | Nile | Abo Metmia | | Yes | Surface Aeration | Secondary | 10 | Drain | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------|-------|---------------------------------|---|----------------------------|--|-----------------------------------|--|--|-------------------------------|-----------------------------------|
| 106. | Nile | Borden | | Yes | Surface Aeration | Secondary | 3 | Drain | | |
| 107. | Nile | Mansoura (Dakahlia Governorate) | 429300 | Yes | Surface Aeration | Secondary | 165 | Drain ⁽⁶⁾ | | |
| 108. | Nile | El Mattaria | 106700 | Yes | Surface Aeration | Secondary | 40 | Drain ⁽⁶⁾ | | |
| 109. | Nile | Gamallia | 71700 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 110. | Nile | Meniat El Nasr | 58500 | Yes | Trick Filters | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 111. | Nile | El Senbilawan | 87700 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 112. | Nile | Belkas | 105500 | Yes | Trick Filters | Secondary | 40 | Drain ⁽⁶⁾ | | |
| 113. | Nile | Dekrins | 69400 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 114. | Nile | Shirbin | 56600 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 115. | Nile | Elmanzalla | 72500 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 116. | Nile | Aga/Zifta | 53000 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 117. | Nile | Meat Salseel | 31200 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 118. | Nile | Meet Gamr | 131000 | Yes | Surface Aeration | Secondary | 40 | Drain ⁽⁶⁾ | | |
| 119. | Nile | Talkha | 76700 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 120. | Nile | Temia El Amadded | 13900 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 121. | Nile | Meniat Smanouood | | Yes | Surface Aeration | Secondary | 10 | Drain | | |
| 122. | | Mehalet Demna | | | | | 2 | | | |
| 123. | | Dohar & Awlad Sbor | | | | | 1 | | | |
| 124. | | Milila | | | | | 10 | | | |
| 125. | | Pen Ebed | | | | | 10 | | | |
| 126. | Nile | Tanta (Garbia Governorate) | 437000 | Yes | Surface Aeration | Secondary | 160 | Drain ⁽⁵⁾ | | |
| 127. | Nile | El Mehalla ElKobra | 466100 | Yes | Surface Aeration | Secondary | 100 | Drain ⁽⁶⁾ | | |
| 128. | Nile | El Santa | 36200 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 129. | Nile | Samanoud | 57900 | Yes | Trick Filters & AL | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 130. | Nile | Kafr El Zayat | 79700 | Yes | Surface Aeration | Secondary | 70 | Drain ⁽⁵⁾ | | |
| 131. | Nile | Fesha Seleem | 9700 | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 132. | Nile | Nahtaie | 8400 | Yes | UASB | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 133. | Nile | Qutor | 25200 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|-------------|---|---|----------------------------|--|-----------------------------------|---|--|-------------------------------|-----------------------------------|
| 134. | Nile | Bashbiesh | 26200 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 135. | Nile | Shtrak | 9200 | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 136. | Nile | Meit yazd | | Yes | Surface Aeration | Secondary | 10 10 3 | Drain | | |
| 137. | | Ehallet zead | | | | | | Drain | | |
| 138. | | Pashyl | | | | | | Drain | | |
| 139. | Nile | Damnhour (Behara Governorate) | 244300 | Yes | Extended Aeration | Secondary | 80 | Drain ⁽⁵⁾ | | |
| 140. | Nile | Abo Homos | 36800 | yes | Extended Aeration | Secondary | 30 | Drain ⁽⁵⁾ | | |
| 141. | Nile | Housh Esa | 47200 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 142. | Nile | Etia El Baroud | 44800 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 143. | Nile | Kom Hamada | 41200 | Yes | Extended Aeration | secondary | 10 | Drain ⁽⁵⁾ | | |
| 144. | Nile | Al Mahmoudia | 27700 | Yes | Extended Aeration | Secondary | 14 | Drain ⁽⁵⁾ | | |
| 145. | Nile | Kafr El Dawar | 121000 | Yes | Extended Aeration | Secondary | 40 | Drain ⁽⁵⁾ | | |
| 146. | Nile | Shubrakehet | | Yes | Surface Aeration | Secondary | 16 | Drain | | |
| 147. | Nile | Kafr Shaik (Kafr El Shaik Governorate) | 162000 | Yes | Extended Aeration | Secondary | 60 | Drain ⁽⁵⁾ | | |
| 148. | Nile | Dosuik | 106300 | Yes | Surface Aeration | Secondary | 40 | Drain ⁽⁵⁾ | | |
| 149. | Nile | Fowaa | 64200 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 150. | Nile | Al Hamoul | 48300 | Yes | Surface Aeration | Secondary | 20 | Drain ⁽⁶⁾ | | |
| 151. | Nile | Sedi Salem | 52000 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 152. | Nile | Qlien | 36700 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 153. | Nile | Moutobas | 31200 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 154. | Nile | El Riyad | 17900 | Yes | Extended Aeration | Secondary | 10 | Drain ⁽⁵⁾ | | |
| 155. | Nile | Damietta (Damietta Governorate) | 134900 | Yes | Surface Aeration | Secondary | 40 | Drain ⁽⁶⁾ | | |
| 156. | Nile | Kafr El Battiek | 28300 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |
| 157. | Nile | Kafr Saad | 30100 | Yes | Surface Aeration | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 158. | Nile | Kafr El Arab | 18300 | Yes | Surface Aeration | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 159. | Nile | El Rowda | 17800 | Yes | Surface Aeration | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 160. | Nile | Kafr El Galab | 22100 | Yes | Surface Aeration | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 161. | Nile | El Zarka | 27400 | Yes | Surface Aeration | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 162. | Nile | Ras El Bar | 53900 | Yes | Surface Aeration | Secondary | 10 | Drain ⁽⁶⁾ | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m ³ /day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m ³ /day) | Discharge of Untreated Wastewater |
|---|-------|---|---|----------------------------|--|-----------------------------------|---|--|--|-----------------------------------|
| 163. | Nile | El Wastany | 12300 | Yes | RBC | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 164. | Nile | Asro | 19200 | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 145 | Nile | Meat El Koly | 20600 | Yes | Surface Aeration | Secondary | 3 | Drain ⁽⁶⁾ | | |
| Rural WWTPs Discharging to Drains in the Delta | | | | | | | | | | |
| 146 | Nile | Meat Damses (Dakahlia Governorate) | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 147 | Nile | Samaha | | Yes | Surface Aeration | Secondary | 1 | Drain ⁽⁶⁾ | | |
| 148 | Nile | El Mokata | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 149 | Nile | Damas | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 150 | Nile | El Nasima | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 151 | Nile | Salmon | | Yes | Surface Aeration | Secondary | 1 | Drain ⁽⁶⁾ | | |
| 152 | Nile | Meat Fatak | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 153 | Nile | El Azz | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 154 | Nile | El Baramon | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 155 | Nile | Badawi | | Yes | Surface Aeration | Secondary | 4.5 | Drain ⁽⁶⁾ | | |
| 156 | Nile | Damoh | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 157 | Nile | New Bremal | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 158 | Nile | Batra | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 159 | Nile | Meat Elkarma | | Yes | Surface Aeration | Secondary | 2 | Drain ⁽⁶⁾ | | |
| 160 | Nile | Berkat Gatas (Behara Governorate) | | Yes | Oxidation Pond | Primary | 1 | Drain ⁽⁵⁾ | | |
| 161 | Nile | Besentwai | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 162 | Nile | Elseien | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 163 | Nile | Kazara | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 164 | Nile | Ledia | | Yes | Trick Filters | Secondary | 2 | Drain ⁽⁵⁾ | | |
| 165 | Nile | Arimon | | Yes | Oxidation Pond | Primary | 3 | Drain ⁽⁵⁾ | | |
| 166 | Nile | Nikla El Enab | | Yes | Oxidation Pond | Primary | 3 | Drain ⁽⁵⁾ | | |
| 167 | Nile | Elkom ElAkadar | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 168 | Nile | Sanhour | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 170 | Nile | Kom Eltrafia | | Yes | Oxidation Pond | Primary | 1 | Drain ⁽⁵⁾ | | |
| 171 | Nile | Waked | | Yes | Oxidation Pond | Primary | 3 | Drain ⁽⁵⁾ | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|-------|--------------------------------------|---|----------------------------|--|-----------------------------------|---|--|-------------------------------|-----------------------------------|
| 172 | Nile | Babian | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁵⁾ | | |
| 173 | Nile | El Adllia (Demietta Governorate) | | Yes | Oxidation Pond | Primary | 2 | Drain ⁽⁶⁾ | | |
| 174 | Nile | El Kahiata | | Yes | Oxidation Pond | Primary | 1 | Drain ⁽⁶⁾ | | |
| 175 | Nile | Awlad Khalf | | Yes | Oxidation Pond | Primary | 1.2 | Drain ⁽⁶⁾ | | |
| 176 | Nile | El Rahamna | | Yes | Oxidation Pond | Primary | 1.6 | Drain ⁽⁶⁾ | | |
| 177 | Nile | Sharbas | | Yes | Extended Aerat | Secondary | 1.7 | Drain ⁽⁶⁾ | | |
| 178 | Nile | El Rowda | | Yes | Extended Aerat | Secondary | 1.7 | Drain ⁽⁶⁾ | | |
| 179 | Nile | El Wastani | | Yes | Extended Aerat | Secondary | 1.5 | Drain ⁽⁶⁾ | | |
| 180 | Nile | Kafr Saad ElBalad | | Yes | Extended Aerat | Secondary | 1.5 | Drain ⁽⁶⁾ | | |
| 181 | Nile | Kafr Selman | | Yes | Extended Aerat | Secondary | 1.7 | Drain ⁽⁶⁾ | | |
| 182 | Nile | Kafer El Galab | | Yes | Extended Aerat | Secondary | 2.7 | Drain ⁽⁶⁾ | | |
| 183 | Nile | Meat Abo Talab | | Yes | Extended Aerat | Secondary | 1.7 | Drain ⁽⁶⁾ | | |
| 184 | Nile | El Serw | | Yes | Extended Aerat | Secondary | 2.7 | Drain ⁽⁶⁾ | | |
| 186 | Nile | Danahla | | Yes | Surface Aerat | Secondary | 2.7 | Drain ⁽⁶⁾ | | |
| 187 | Nile | Znkalon (Sharkia Governorate) | | Yes | Surface Aerat | Secondary | 2 | Drain ⁽⁵⁾ | | |
| 188 | Nile | El Blashon | | Yes | Surface Aerat | Secondary | 2 | Drain ⁽⁵⁾ | | |
| 189 | Nile | Nowag | | Yes | Surface Aerat | Secondary | 2.4 | Drain ⁽⁵⁾ | | |
| 190 | Nile | Mehalet Zayad | | Yes | Surface Aerat | Secondary | 2 | Drain ⁽⁵⁾ | | |
| 191 | Nile | Mehalet Badr Hallawa | | Yes | Surface Aerat | Secondary | 2 | Drain ⁽⁵⁾ | | |
| WWTPs (Construction Completed, Currently undr testing , Anticipated normal operation in 2011/2012) | | | | | | | | | | |
| 192 | Nile | Nemert Al Basal (Garbia Governorate) | | Yes | UASB | Secondary | 3 | Drain ⁽⁶⁾ | | |
| 193 | Nile | Shoni | | Yes | RBC | Secondary | 6 | Drain ⁽⁶⁾ | | |
| 194 | Nile | Abswy | | Yes | RBC | Secondary | 5 | Drain ⁽⁶⁾ | | |
| 195 | Nile | Bashtel | | Yes | RBC | Secondary | 3 | Drain ⁽⁶⁾ | | |
| 196 | Nile | Kfana El Asab | | Yes | RBC | Secondary | 8 | Drain ⁽⁶⁾ | | |
| 197 | Nile | Harbiet | | Yes | UASB | Secondary | 5 | Drain ⁽⁵⁾ | | |
| 198 | Nile | Dahshama | | Yes | UASB | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 199 | Nile | Al Azizia | | Yes | UASB | Secondary | 5 | Drain ⁽⁵⁾ | | |
| 200 | Nile | Berwin | | Yes | UASB | Secondary | 3 | Drain ⁽⁵⁾ | | |

| | River | City | Served Population ⁽¹⁾ (Rounded) | Wastewater Treatment Plant | Wastewater Treatment Method ⁽²⁾ | Degree of Treatment of Wastewater | Wastewater Treated (10 ³ m3/day) Design Capacity ⁽²⁾ | Discharge of Treated Wastewater ⁽³⁾ | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----|-------|--|---|----------------------------|--|-----------------------------------|--|--|-------------------------------|-----------------------------------|
| 201 | Nile | Al Sanafier | | Yes | UASB | Secondary | 6 | Drain ⁽⁵⁾ | | |
| 202 | Nile | Srinbay (Behara Governorate) | | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 203 | Nile | El Makaria | | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 204 | Nile | El Dahria | | Yes | RBC | Secondary | 6 | Drain ⁽⁵⁾ | | |
| 205 | Nile | Kafr Abo Naser (Dakahlia Governorate) | | Yes | RBC | Secondary | 8 | Drain ⁽⁶⁾ | | |
| 206 | Nile | Borg Nour Al Homos | | Yes | RBC | Secondary | 8 | Drain ⁽⁶⁾ | | |
| 207 | Nile | Abo Dawouid | | Yes | RBC | Secondary | 6 | Drain ⁽⁶⁾ | | |
| 208 | Nile | Darien | | Yes | RBC | Secondary | 8 | Drain ⁽⁶⁾ | | |
| 209 | Nile | Daheer & Awlad Sabri | | Yes | RBC | Secondary | 1 | Drain ⁽⁶⁾ | | |
| 210 | Nile | Sahragt El Swagra | | Yes | Trick Filters | Secondary | 8 | Drain ⁽⁶⁾ | | |
| 211 | Nile | Aghour El Kobra (Qulobia Governorate) | | Yes | UASB | Secondary | 6 | Drain ⁽⁵⁾ | | |
| 212 | Nile | Zawiet Balkan | | Yes | RBC | Secondary | 5 | Drain ⁽⁵⁾ | | |
| 213 | Nile | Kafr Mouas (Monofia Governorate) | | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 214 | Nile | Sabac El Sahak | | Yes | RBC | Secondary | 3 | Drain ⁽⁵⁾ | | |
| 215 | Nile | Umm Kanan | | Yes | RBC | Secondary | 8 | Drain ⁽⁵⁾ | | |
| 216 | Nile | Zawiet Razin | | Yes | SBR | Secondary | 20 | Drain ⁽⁵⁾ | | |
| 217 | Nile | Sakalta (Sohag Governorate) | | Yes | Extended Aerat | Secondary | 15 | Drain ⁽⁵⁾ | | |

(BOLD) New information Provided by HPWSD and NAPWASD in October 2010.

*) WWTPs No. 8-59 discharge in the Nile Main Course in Upper Egypt. No Separate Drainage system in Upper Egypt.

(1) Statistics of the population for the year 2006, National Bureau of Mobilization and Statistics.

(2) Information provided by the Egyptian Holding Company of Potable Water and Wastewater Sanitary Drainage HCPWSW, the National Authority of Potable Water and Sanitary Drainage NAPWSD, and The Executive Authority of Potable Water and Wastewater (EEPWW). **EEPWW has been merged as a branch of NAPWSD since May 2010**

(3) Information of Ministry of Water Resources and Irrigation.

(4) Shaded row represent Governorates' Capital.

(5) Drains in Rosetta Basin. Two GC WWTPs No. 60-61 discharge in El Mohuit to El Rahawy and other WWTPs discharge in the main drains of Sabal, El-Tahrer, Zawiet El-Baher, El Garbia Main, El Qlubia Main, Farskour, El-Serw El Asfal.

(6) Drains in Damietta Basin.

Detailed information on management of domestic wastewater in Egypt is found in World Bank Report #32230-EG, issued in March 2005. The report gives ample information and statistics on wastewater generation in all governorates, cities and rural settlements in Egypt. It describes various wastewater treatment systems in rural Egypt and presents the total treatment capacity at a reference year of 2017. Domestic wastewater in Egypt is 5.1 BCM/year, 37% presently treated, expected to reach 66% in 2017.

Country: FRANCE

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Population | | Wastewater Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Waste-water Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks | | |
|-------------------|------------|--|--|---|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|--------------------------------|-----------------------------------|---|----|--|
| | permanent | tourist | | | | | | | | | | | |
| Afa | 2,510 | — | Yes | 600 | Trickling filter | Primary | 180 * | River | | | Plant overloaded Plan under way to collect Afa's wastewaters to Ajaccio Campo dell'Oro new plant | | |
| Alata | 2,800 | 1,000 | Yes | 600 | Biofilters | Secondary | 90 | Infiltration | | | Plan under way to collect Alata's wastewaters to Ajaccio Campo dell'Oro new plant | | |
| | | | | 90 | Imhoff tank | | 13 * | | | | | | |
| Alénya | 2,340 | Collected to St-Cyprien (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | | |
| Aléria | 2,010 | 2,000 | Yes | 1,000 | Activated sludge | Secondary | 600 | River | | | Plant overloaded Plan under way (4,000 PE) | | |
| | | | | 150 | Grit removal | Primary | 20 * | River | | | | | |
| Balaruc-le-Vieux | 2,020 | Collected to Sète (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | | |
| Balaruc-les-Bains | 6,180 | Collected to Sète (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | | |
| Banyuls-sur-Mer | 4,900 | 9,000 | Yes | cf. MAP Technical Reports Series no. 157 | | | | | | | | | |
| | | | | 150 | Biofilters | Secondary | 23 | Brook | | | | | |
| Bastelicaccia | 3,060 | 2,000 | Yes | 2,000 | Activated sludge | Secondary | 400 | NC** | | | | | |
| Beaulieu-sur-Mer | 3,800 | 9,000 | No | Connecting networks are under way to be collected to Nice (cf. MAP Technical Reports Series no. 157) End of the construction: 2011 | | | | | | | | | |
| Beausoleil | 12,880 | Collected to MONACO | | | | | | | | | | | |
| Belgodère | 380 | 2,000 | Yes | 6,000 | Physical + Chemical | Primary | 900 | SO | | | The plant treats other cities wastewater | | |
| Biguglia | 5,150 | Collected to Borgo (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | | |
| Cabestany | 8,230 | — | Yes | 15,000 | Activated sludge | Tertiary | 2,700 | Ditch ending in a lagoon | | | | | |
| Cap d'Ail | 4,570 | 10,000 | Collected to MONACO (cf. MAP Technical Reports Series no. 157) | | | | | | | | 62 * | SO | |
| Cargèse | 1,000 | 5,000 | Yes | 10,000 | Activated sludge | Secondary | 1,600 | SO | | | | | |

| City | Population | | Wastewater Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Waste-water Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks | |
|------------------------------|------------|---------|----------------------------|---|--------------------------------------|-----------------------------------|-----------------------------|---------------------------------|--------------------------------|-----------------------------------|---|--|
| | permanent | tourist | | | | | | | | | | |
| Carnoux en Provence | 6,900 | | | | | | | | | | Collected to Marseille (cf. MAP Technical Reports Series no. 157) | |
| Carqueiranne | 8,560 | | | | | | | | | | Collected to Hyères (cf. MAP Technical Reports Series no. 157) | |
| Carry-le-Rouet | 6,360 | | | | | | | | | | Collected to Sausset-les-Pins (cf. MAP Technical Reports Series no. 157) | |
| Castellare-di-Casinca | 550 | 1,000 | Yes | 16,000 | Activated sludge | Secondary | 2,400 | SO | | | The plant treats other cities wastewater | |
| Cerbère | 1,550 | 4,500 | Yes | 6,800 | Biofilters | Tertiary | 1,125 | RB | | | | |
| Ceyreste | 4,030 | | | | | | | | | | Collected to La Ciotat (cf. MAP Technical Reports Series no. 157) | |
| Coggia (chef-lieu et Sagone) | 830 | 2,000 | Yes | 500 | Activated sludge | Secondary | 75 | River | | | Plan to raise the discharge upstream | |
| | | | | 10,000 | Biofilters | Tertiary | 2,250 | River mouth | | | | |
| Cogolin | 10,980 | 16,000 | Yes | 9,000 | Activated sludge | Secondary | 1,500 | River | | | | |
| | | | | 36,000 | Activated sludge + Biofilters | Secondary | 8,035 | River | | | | |
| Collioure | 2,930 | 12,000 | Yes | cf. MAP Technical Reports Series no. 157 | | | | | | | | |
| | | | | 150 | Primary sedimentation + Filtration | Primary | 18 | Brook | | | | |
| Conca | 1,000 | 3,500 | Yes | 2,500 | Trickling filter | Secondary | 375 | River | | | | |
| Elne | 6,470 | 2,000 | Yes | 15,000 | Activated sludge + Sand filter | Tertiary | 3,345 | Brook ending in a lagoon | | | | |
| Ensuès-la-Redonne | 5,100 | — | Yes | 5,800 | Membrane treatment | Tertiary | 870 | Infiltration | | | | |
| Eze | 3,100 | 3,000 | No | Connecting networks are under way to be collected to Nice (cf. MAP Technical Reports Series no. 157) End of the construction: 2011 | | | | | | | | |
| Furiani | 4,020 | | | | | | | | | | Collected to Bastia Sud (cf. MAP Technical Reports Series no. 157) | |
| Galéria | 330 | 3,000 | Yes | 3,000 | Activated sludge + Infiltration beds | Secondary | 30 (winter) 450 (summer) | River | | | | |
| Gassin | 2,800 | | | | | | | | | | Collected to Cogolin | |
| Grimaud | 3,850 | 40,000 | Yes | 60,000 | Biofilters | Secondary | 9,000 | River | | | | |
| La Croix-Valmer | 3,140 | | | | | | | | | | Collected to Cavalaire-sur-Mer (cf. MAP Technical Reports Series no. 157) | |
| La Londe-Les-Maures | 10,030 | 31,000 | Yes | cf. MAP Technical Reports Series no. 157 | | | | | | | | Ultraviolet treatment to be considered |
| | | | | 600 | Physical + Chemical | Primary | 200 | RB | | | | |

| City | Population | | Wastewater Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Waste-water Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|--|------------|---|---|--|-----------------------------|-----------------------------------|----------------------------------|---------------------------------|--------------------------------|-----------------------------------|---|
| | permanent | tourist | | | | | | | | | |
| Lapalme | 1,410 | 3,000 | Yes | 2,500 | Activated sludge | Secondary | 285 | Brook ending in a lagoon | | | |
| La Turbie | 3,160 | — | 80% of wastewaters collected to MONACO (cf. MAP Technical Reports Series no. 157) | | | | | 200 | SO | | Plan under way to treat the 20% of untreated wastewaters to Nice |
| Le Rove (Niolon et Chef-Lieu) | 4,070 | — | Yes | 1,500 | Physical + Chemical | Primary | 300 | DI | | | The plant stopping is planned, wastewaters will be collected to Marseille plant |
| | | | | 3,600 | Trickling filter | Secondary | 720 | Infiltration | | | |
| Leucate (Port. Village et La Franqui) | 3,390 | 60,000 | Yes | cf. MAP Technical Reports Series no. 157 | | | | | | | |
| | | | | 12,500 | Activated sludge | Secondary | 1,875 | Infiltration | | | |
| | | | | 1,800 | Non aerated lagoons | Primary | 270 | Infiltration | | | |
| L'île-Rousse | 2,800 | 7,000 | Yes | 30,000 | Biofilters | Secondary | 5,250 | DI | | | The plant treats other cities |
| Linguizzetta | 1,040 | 8,000 | Yes | 250 | Trickling filter | Primary | 37 | River | | | Bad working |
| | | | | 8,000 | Activated sludge | Primary | 1,200 | SO | | | |
| Lucciana | 3,720 | Collected to Borgo (cf. MAP Technical Reports Series no. 157) | | | | | | | | | |
| Marseillan (Les Pradels et Plage Onglou) | 6,280 | 55,000 | Yes | 76,667 | Aerated lagoons | Secondary | 7,700 | RB or lagoon | | | |
| Mèze | 7,700 | 15,000 | Yes | 18,817 | Non aerated lagoons | Secondary | 2,470 (winter) 3,750 (summer) | Lagoon | | | The plant treats another city |
| Mireval | 3,070 | — | Yes | 4 000 | Activated sludge | Secondary | 950 | River | | | |
| Olmeto | 1,140 | 9,000 | Yes | 1,500 | Activated sludge | Secondary | 240 | Brook | | | |
| | | | | 7,500 | Activated sludge | Secondary | 1,125 | River | | | |
| Ota (dont Porto) | 540 | 10,000 | Yes | 7,000 | Physical + Chemical | Primary | 1,050 | DI | | | Plan under way for 2012 (1 st block 10,000 PE, biological treatment, then 5,000 PE more) + replacement of the submarine outfall, broken since 1999 |
| Penta-di-Casinca | 2,480 | Collected to Castellare-di-Casinca | | | | | | | | | |

| City | Population | | Wastewater Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Waste-water Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks | |
|--|------------|---|----------------------------|---|--|-----------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------------------|---------------------------------|--|
| | permanent | tourist | | | | | | | | | | |
| Pérols (Mauguio Plage Carnon Pérols) | 8,570 | — | Yes | 34,000 | Activated sludge | Secondary | 5,950 | Canal | | | The plant is located in Mauguio | |
| Piana | 440 | 2,000 | Yes | 2,500 | Activated sludge | Secondary | 375 | River | | | | |
| Portiragnes | 2,310 | 30,000 | Yes | 18,000 | Non aerated lagoons | Secondary | 2,500 | Lagoon | | | | |
| Port-St-Louis-du-Rhône | 8,210 | 3,000 | Yes | 24,000 | - | Secondary | 3,898 | River mouth | | | | |
| Port-Vendres | 4,580 | 6,000 | Yes | cf. MAP Technical Reports Series no. 157 | | | | | | | | |
| | | | | 200 | Non aerated lagoons | Primary | 40 | Brook | | | | |
| Poussan | 5,420 | — | Yes | 8,000 | Non aerated lagoons | Secondary | 1,640 | River | | | The plant treats another city | |
| Roquefort-la-Bédoule | 5,020 | — | Yes | 5,400 | Activated sludge | Tertiary | 1,200 | Ditch | | | | |
| St Florent | 1,600 | 5,000 | Yes | 9,500 | Activated sludge | Tertiary | 400 (winter) 1,200 (summer) | Canal ending in the sea | | | | |
| Saint Hippolyte | 2,300 | — | Yes | 1,000 | Activated sludge + Non aerated lagoons | Secondary | 150 | River ending in a lagoon | | | | |
| Saint-Jean-Cap-Ferrat | 2,100 | 6,000 | No | Connecting networks are under way to be collected to Nice (cf. MAP Technical Reports Series no. 157) End of the construction: 2011 | | | | | | | | |
| Saint Laurent-de-la-Salanque | 8,220 | 2,000 | Yes | 8,300 | Activated sludge | Secondary | 1,245 | River | | | | |
| Saint-Mandrier-sur-Mer | 6,660 | Collected to Toulon Cap-Sicié (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | |
| Saint Nazaire | 2,320 | Collected to Canet-en-Roussillon (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | |
| Sainte Marie-la-Mer | 3,840 | 21,000 | Yes | 24,117 | Activated sludge | Tertiary | 3,238 | River | | | | |
| Saleilles | 4,320 | — | Yes | 5,700 | Activated sludge | Tertiary | 900 | River | | | | |
| San-Martino-di-Lota | 2,580 | Collected to Bastia Nord (cf. MAP Technical Reports Series no. 157) | | | | | | | | | | |
| Sari-Solenzara | 1,170 | 3,000 | Yes | 5,000 | Activated sludge | Secondary | 330 | SO | | | | |
| Sartène (Tizzano, Chef-lieu, Cacciabello, Santa Barbara) | 3,100 | — | Yes | 2,500 | Activated sludge | Secondary | 500 | DI | | | | |
| | | | | 8,000 | Trickling filter | Primary | 1,200 | Brook | | | | |
| | | | | 250 | Primary sedimentation | Primary | NC | Infiltration | | | | |
| | | | | 400 | Trickling filter | Secondary | 60 | Brook | | | | |

| City | Population | | Wastewater Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Waste-water Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|---|------------|---|----------------------------|------------------------------------|--|-----------------------------------|-----------------------------|---------------------------------|--------------------------------|-----------------------------------|---|
| | permanent | tourist | | | | | | | | | |
| Sérignan | 6,520 | 20,000 | Yes | 53,000 | Activated sludge | Secondary | 10,600 | River | | | The plant treats another city |
| Serra-di-Ferro | 420 | 4,000 | Yes | 6,500 | Activated sludge | Tertiary | 975 | River | | | The plant treats other cities |
| Sigean | 5,000 | 2,000 | Yes | 10,000 | Membrane treatment | Tertiary | 1,500 | Canal | | | |
| Théoule-sur-Mer (dont Miramar) | 1,300 | 12,000 | Yes | 4,000 | Activated sludge | Secondary | 800 | SO | | | Most of the wastewaters are collected to Mandelieu plant (cf. MAP Technical Reports Series no. 157) |
| Torreilles | 2,960 | 9,000 | Yes | 15,000 | Activated sludge + Non aerated lagoons | Tertiary | 2,400 | River | | | |
| Ventiseri | 2,460 | — | Yes | 7,500 | Activated sludge | Secondary | 606 | SO | | | Oversized plant |
| Vescovato | 2,310 | Collected to Castellare-di-Casinca | | | | | | | | | |
| Vias | 5,310 | Collected to Agde (cf. MAP Technical Reports Series no. 157) | | | | | | | | | |
| Vic-la-Gardiole | 2,880 | 8,000 | Yes | 6,000 | Aerated lagoons | Secondary | 1,030 | River | | | |
| Ville-di-Pietrabugno | 3,060 | Collected to Bastia Nord (cf. MAP Technical Reports Series no. 157) | | | | | | | | | |
| Villelongue-de-la-Salanque | 2,800 | — | Yes | 3,000 | Activated sludge | Tertiary | 450 | River | | | |
| Villeneuve-lès-Maguelone | 8,160 | 3,000 | Yes | 12,000 | Activated sludge | Tertiary | 1,348 | River | | | |
| * Outflow estimation ** Data No Communicated | | | | | | | | | | | |

COUNTRY: FRANCE

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 10,000

| City | Permanent Population * | Wastewater Treatment Plant | Population Equivalent of the plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-----------------|------------------------|----------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---|
| Agde | 181,800 | Yes | 174,000 | Secondary | 35,600 | River | | | |
| Ajaccio | 77,610 | Yes | 80,000 | Secondary | 16,000 | SO | | | New plant under construction (65,000 PE), end of the construction: 2011 |
| Antibes ET Biot | 146,270 | Yes | 172,000 | Secondary | 39,743 | SO | | | |
| Argeles-sur-mer | 67,170 | Yes | 127,500 | Secondary | 17,000 | DI | | | |
| Banyuls | 14,340 | Yes | 11,300 | Primary | 2,250 | Infiltration | | | |
| Bastia - Nord | 20,230 | Yes | 45,000 | Primary | 6,600 | SO | | | |
| Bastia - Sud | 30,540 | Yes | 50,000 | Secondary | 18,978 | SO | | | |
| Berre l'Etang | 11,780 | Yes | 21,000 | Secondary | 4,200 | Water bodies | | | |
| Bonifacio | 10,670 | Yes | 8,000 | Primary | 1,200 | SO | | | New plant under construction (15,000 PE): tertiary treatment thanks to membrane treatment and all the treated water will be reused End of the construction: 2011 |

| City | Permanent Population * | Wastewater Treatment Plant | Population Equivalent of the plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-----------------------------|------------------------|----------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---|
| Borgo (Littoral, Nord, Sud) | 16,240 | Yes | 30,000 | Secondary | 4,668 | SO | | | |
| | | | 3,000 | Secondary | 456 | Brook | | | |
| | | | 3,000 | Secondary | 442 | Brook | | | |
| Bormes-les-Mimosas | 62,800 | Yes | 90,000 | Secondary | 13,500 | SO | | | |
| Cagnes-sur-Mer | 139,080 | Yes | 130,000 | Secondary | 23,000 | SO | | | |
| Calvi | 24,930 | Yes | 60,000 | Primary | 9,000 | SO | | | |
| Canet en Roussillon | 52,120 | Yes | 66,000 | Secondary | 10,500 | River | | | |
| Cannes & Mandelieu | 320,890 | Yes | 225,000 | Primary | 56,548 | SO | | | New plant under construction: tertiary treatment thanks to membrane treatment and a part of the treated water will be reused End of the construction: 2012 |
| Cassis | 17,120 | Yes | 25,000 | Secondary | 4,950 | SO | | | |
| Cavalaire | 65,970 | Yes | 68,000 | Secondary | 10,200 | SO | | | |
| Chateaufort les Martigues | 11,365 | Yes | 16,000 | Secondary | 1,600 | Water bodies | | | |
| Collioure-Port Vendres | 22,080 | Yes | 28,000 | Primary | 4,460 | SO | | | |
| Fos-sur-Mer | 15,090 | Yes | 22,500 | Secondary | 4,946 | River | | | |
| Frejus | 226,640 | Yes | 167,000 | Primary | 29,216 | SO | | | |
| Frontignan | 13,550 | Yes | 8,800 | Secondary | 690 | Water bodies | | | |
| Ghisonaccia | 10,330 | Yes | 15,000 | Secondary | 2,250 | River | | | |
| Gruissan | 49,070 | Yes | 49,500 | Secondary | 9,900 | SO | | | |
| Hyerres | 111,800 | Yes | 90,000 | Secondary | 20,913 | SO | | | |

| City | Permanent Population * | Wastewater Treatment Plant | Population Equivalent of the plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|------------------------------|------------------------|----------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---------|
| Istres (Entressens, Rassuen) | 36,800 | Yes | 5,000 | Secondary | 1,600 | Infiltration | | | |
| | | | 50,000 | Secondary | 8,300 | SO | | | |
| La Ciotat - Ceyreste | 52,710 | Yes | 95,000 | Secondary | 10,000 | SO | | | |
| La Grande Motte | 72,560 | Yes | 64,000 | Secondary | 12,000 | Canal | | | |
| La Londe les Maures ** | 25,130 | Yes | 36,000 | Secondary | 7,000 | SO | | | |
| Lattes | 12,740 | Yes | 470,000 | Secondary | 130,000 | Water bodies | | | |
| Lavandou-le Rayol Canadel | 24,600 | Yes | 17,300 | Secondary | 2,251 | SO | | | |
| Le Barcares | 73,470 | Yes | 45,000 | Secondary | 8,189 | Water bodies | | | |
| Le Grau du Roi | 115,830 | Yes | 10,000 / 100,000 | Secondary | 6,100 | Water bodies | | | |
| Leucate Port | 44,690 | Yes | 45,000 | Secondary | 4,180 | Infiltration | | | |
| Marignane | 44,700 | Yes | 70,000 | Secondary | 13,727 | Water bodies | | | |
| Marseille | 955,040 | Yes | 1,650,000 | Secondary | 276,068 | SO | | | |
| Martigues | 63,250 | Yes | 95,000 | Secondary | 12,136 | Water bodies | | | |
| Menton | 68,070 | Yes | 80,000 | Secondary | 11,217 | SO | | | |
| Narbonne Plage | 18,860 | Yes | 28,000 | Secondary | 2,800 | SO | | | |
| Nice | 478,220 | Yes | 620,000 | Secondary | 129,624 | SO | | | |
| Palavas | 25,230 | Yes | 45,000 | Secondary | 7,500 | Water bodies | | | |
| Pietrosella-Cruciatia | 27,660 | Yes | 30,000 | Primary | 5,100 | SO | | | |
| Port la Nouvelle | 24,790 | Yes | 30,000 | Secondary | 2,231 | Water bodies | | | |
| Porto-Vecchio | 26,880 | Yes | 30,000 | Secondary | 4,500 | SO | | | |
| Propriano | 16,170 | Yes | 15,000 | Primary | - | SO | | | |
| Ramatuelle | 17,460 | Yes | 18,900 | Secondary | 3,150 | SO | | | |
| Rognac | 11,470 | Yes | 16,000 | Secondary | 3,200 | Water bodies | | | |

| City | Permanent Population * | Wastewater Treatment Plant | Population Equivalent of the plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|---------------------------------|------------------------|----------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---|
| Roquebrune Cap Martin | 31,650 | No | | | | SO | | | New plant under construction: secondary treatment thanks to biological treatment End of the construction: 2012 |
| Roquebrune sur Argens-Issambres | 25,330 | Yes | 22,000 | Primary | 2,531 | SO | | | |
| Saint Chamas | 30,510 | Yes | 38,000 | Secondary | 9,000 | Water bodies | | | |
| Sainte Maxime | 45,500 | Yes | 60,000 | Secondary | 5,534 | SO | | | |
| Saintes Maries de la Mer | 15,540 | Yes | 18,000 | Secondary | 3,000 | Water bodies | | | |
| Saint-Tropez | 39,790 | Yes | 37,800 | Secondary | 5,140 | SO | | | |
| Sanary-Bandol | 69,120 | Yes | 54,000 | Secondary | 11,000 | SO | | | |
| Santa Maria Poggio Morianincu | 14,270 | Yes | 10,000 | Secondary | 1,887 | SO | | | |
| Sausset les Pins | 20,490 | Yes | 26,000 | Secondary | 5,200 | SO | | | |
| Sete | 102,950 | Yes | 135,000 | Secondary | 27,000 | SO | | | |
| St Cyprien | 68,780 | Yes | 77,000 | Secondary | 13,200 | SO | | | |
| St Cyr-sur-Mer | 29,530 | Yes | 21,000 | Primary | 3,425 | SO | | | |
| St Laurent-du-Var | 53,830 | Yes | 80,000 | Secondary | 20,250 | River | | | |
| St Raphael | 27,430 | Yes | 25,000 | Primary | 6,720 | SO | | | Extension plan under way (46,000 PE) with biological treatment |
| Stes Maries de la Mer | 18,320 | Yes | 18,000 | Tertiary | 3,000 | SO | | | |
| Toulon – Est (La garde) | 83,680 | Yes | 106,500 | Secondary | 24,847 | SO | | | |
| Toulon Cap-Sicie | 323,380 | Yes | 500,000 | Secondary | 80,000 | SO | | | |
| Vallauris | 50,510 | Yes | 50,000 | Primary | 7,500 | SO | | | |
| Valras Plage | 21,650 | Yes | 53,000 | Secondary | 10,600 | SO | | | |

| City | Permanent Population * | Wastewater Treatment Plant | Population Equivalent of the plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|---|------------------------|----------------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---------|
| Vendres (Zone littorale, Chef Lieu) | 11,340 | Yes | 8,000 | Secondary | - | Water bodies | | | |
| | | | 5,000 | Secondary | 1,050 | Water bodies | | | |
| Villefranche-sur- Mer | 14,610 | No | Connecting networks are under way to be collected to Nice (cf. MAP Technical Reports Series no. 157) End of the construction: 2011 | | | | | | |
| Vitrolles | 41,860 | Yes | 120,000 | Secondary | 9,345 | River | | | |
| Zonza-plaine de Ste Lucie | 13,650 | Yes | 19,000 | Secondary | 3,360 | River | | | |
| <i>Remarks:</i> * The figure in the column "Permanent Population" represents the population equivalent of the coastal area, i.e. permanent and seasonal. ** Partly biological treatment | | | | | | | | | |

COUNTRY: FRANCE

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|------------------------|----------------------|---|------------------------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---------|
| Aude | Font-Romeu-Odeillo-Via | 2,009 | Yes | 15,000 | Activated sludge | Secondary | 1,303 | L'Aude | - | - | - |
| Aude | Quillan | 3,445 | Yes | 6,000 | Activated sludge | Secondary | 800 | L'Aude | - | - | - |
| Aude | Espéraza | 2,166 | Yes | 5,000 | Activated sludge | Secondary | 500 | L'Aude | - | - | - |
| Aude | Limoux | 9,411 | Yes | 15,000 | Primary sedimentation + Trickling filter | Primary | 2,590 | L'Aude | - | - | - |
| Aude | Carcassonne | 43,937 | Yes – St Jean | 120,000 | Activated sludge | Tertiary | 24,000 | L'Aude | - | - | - |
| | | | Yes – Vilalbe Maquens | 1,100 | Activated sludge | Secondary | 165 | Malepère stream | | | |
| | | | Yes - Montredon | 1,100 | Activated sludge | Secondary | 165 | L'Aude | | | |
| | | | Yes - Grèzes | 500 | Activated sludge | Secondary | 75 | Sabartides stream | | | |
| | | | Yes - Herminis | 500 | Activated sludge | Secondary | 75 | L'Aude | | | |
| Aude | Trèbes | 5,646 | Yes | 8,000 | Activated sludge | Secondary | 1,000 | L'Aude | - | - | - |
| Aude | Cuxac d'Aude | 4,343 | Yes | 6,000 | Activated sludge | Secondary | 835 | L'Aude | - | - | - |
| Aude | Coursan | 5,248 | Yes | 9,000 | Activated sludge | Secondary | 1,100 | L'Aude | - | - | - |
| Rhône | St- Julien-en Genevois | 9,272 | Collected to Aire in Switzerland (391,000 PE – discharge into le Rhône) | | | | | | | | |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|---|----------------------|---|------------------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Rhône | Bellegarde -sur – Valsérine | 11,329 | Yes | 18,000 | Activated sludge | Secondary | 3,600 | Le Rhône | - | - | - |
| Rhône | Culoz | 2,914 | Yes | 5,000 | Activated sludge | Secondary | 900 | Infiltration Le Rhône | - | - | - |
| Rhône | Yenne | 2,841 | Yes | 5,000 | Activated sludge | Tertiary | 437 | Le Rhône | - | - | Plant currently, undersized (65% of the nominal discharge) |
| Rhône | Belley | 8,466 | Yes | 20,000 | Activated sludge | Tertiary | 4,750 | Rhône canal | - | - | - |
| Rhône | Montalieu-Vercieu | 2,590 | Yes | 4,880 | Activated sludge | Secondary | 750 | Le Fourron (Rhône tributary) | - | - | - |
| Rhône | Loyettes | 2,439 | Yes | 4,500 | Activated sludge | Tertiary | 675 | Le Rhône | - | - | - |
| Rhône | Lagnieu (chef-lieu, hameau de Proulieu) | 6,643 | Yes | 8,200 | Activated sludge | Secondary | 800 | Le Rhône | - | - | - |
| | | | | 400 | Macrophytes filters | Secondary | NC ** | Rhône tributary | | | |
| Rhône | Pont-de-Cheruy | 4,591 | Collected to Chavanoz | | | | | | | | |
| Rhône | Chavanoz | 4,068 | Yes | 27,000 | Activated sludge | Tertiary | 2,500 | Le Rhône | - | - | - |
| Rhône | Cremieu | 3,300 | Yes | 10,000 | Activated sludge | Tertiary | 1,700 | Le Rhône | - | - | The plant is located in Saint Romain de Jalionas |
| Rhône | Montluel | 6,505 | Yes | 15,000 | Activated sludge | Secondary | 3,000 | Le Rhône | - | - | Plan under way |
| Rhône | Jonage | 5,679 | Yes | 42,000 | Activated sludge | Secondary | 4,500 | Le Rhône | - | - | - |
| Rhône | Miribel | 8,545 | Collected to Pierre-Bénite | | | | | | | | |
| Rhône | Neyron | 2,295 | Collected to Pierre-Bénite | | | | | | | | |
| Rhône | Meyzieu | 28,500 | Yes | 35,000 | Biofilters | Secondary | 6,000 | Jonage canal | - | - | - |
| Rhône | Decines Charpieu | 24,500 | Collected to Saint Fons et Meyzieu | | | | | | | | |
| Rhône | Lyon | 467,400 | Collected to Pierre-Bénite and Saint Fons | | | | | | | | |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|-------------------------|--|-----------------------------------|------------------------------------|-------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|--|---------|
| Rhône | La Feyssine | New plant under construction (300,000 PE) to decrease the volume of wastewaters collected to Saint Fons WWTP. En dof the construction : May 2011 | | | | | | | | | |
| Rhône | Saint-Genis-Laval | 19,207 | Collected to Pierre-Bénite | | | | | | | | |
| Rhône | Vaulx en Velin | 39,600 | Collected to Saint Fons | | | | | | | | |
| Rhône | Villeurbanne | 134,800 | Collected to Saint Fons | | | | | | | | |
| Rhône | Oullins | 26,000 | Collected to Pierre-Bénite | | | | | | | | |
| Rhône | Pierre-Bénite | 9,949 | Yes | 950,000 | Activated sludge | Secondary | 300,000 | Le Rhône | No quantity available | Several rainfall overflow are discharged into Le Rhône | - |
| Rhône | Saint Fons | 16,400 | Yes | 700,000 | Activated sludge + biofilters | Tertiary | 484,000 | Le Rhône | No quantity available | Several rainfall overflow are discharged into Le Rhône | - |
| Rhône | Irigny | 8,279 | Collected to Pierre-Bénite | | | | | | | | |
| Rhône | Feyzin | 9,347 | Collected to Saint Fons | | | | | | | | |
| Rhône | Saint-Symphorien-d'Ozon | 5,217 | Collected to Saint Fons | | | | | | | | |
| Rhône | Givors | 18,700 | Yes | 89,750 | Biofilters | Secondary | 10,000 | Le Rhône | No quantity available | Some main sewer are still discharged into Le Rhône | - |
| Rhône | Chasse sur Rhône | 4,896 | Yes | 18,800 | Activated sludge | Secondary | 3,000 | Le Rhône | - | - | - |
| Rhône | Loire sur Rhône | 2,273 | Collected to Givors | | | | | | | | |
| Rhône | Ampuis | 2,538 | Collected to Vienne | | | | | | | | |
| Rhône | Vienne | 30,600 | Yes | 65,000 | Activated sludge | Secondary | 10,000 | Le Rhône | - | - | - |
| Rhône | Condrieu | 3,579 | Collected to Saint Alban du Rhône | | | | | | | | |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|------------------------|----------------------|---------------------------------|------------------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---------------------------------------|
| Rhône | Pelussin | 3,436 | Yes | 5,700 | Activated sludge | Secondary | 1,000 | La Valencize | - | - | - |
| Rhône | Chavannay | 2,323 | Yes | 16,000 | Activated sludge | Tertiary | 2,000 | Rhône canal | - | - | Plant located in Saint Alban du Rhône |
| Rhône | Saint Maurice l'Exil | 5,523 | Yes | 6,300 | Activated sludge | Tertiary | 1,000 | Rhône canal | - | - | - |
| Rhône | Le Péage-de-Roussillon | 6,338 | Collected to Roussillon | | | | | | | | |
| Rhône | Roussillon | 7,813 | Yes | 24,200 | Activated sludge | Secondary | 5,200 | Rhône canal | - | - | Plant often overloaded |
| Rhône | St-Rambert-d'Albon | 4,359 | Yes | 10,400 | Activated sludge | Secondary | 2,200 | Rhône canal | - | - | - |
| Rhône | St-Vallier | 4,051 | Yes | 16,000 | Activated sludge | Secondary | 2,900 | Le Rhône | - | - | - |
| Rhône | Tain – Hermitage | 5,764 | Yes | 17,500 | Activated sludge | Tertiary | 2,164 | Le Rhône | 13 rainfall overflows | Le Rhône | - |
| Rhône | Tournon-sur Rhône | 10,582 | Yes | 26,000 | Activated sludge | Secondary | 3,367 | Le Rhône | Diagnosis under way | - | - |
| Rhône | La Roche de Glun | 3,065 | Yes | 8,000 | Activated sludge | Tertiary | 1,680 | Le Rhône | - | - | - |
| Rhône | Pont de l'Isère | 2,604 | Collected to la Roche de Glun | | | | | | | | |
| Rhône | Cornas | 2,197 | Yes | 2,500 | Activated sludge | Secondary | 260 | Le Rhône | - | - | - |
| Rhône | Bourg les Valence | 18,300 | Collected to Valence | | | | | | | | |
| Rhône | Guilherand-Granges | 10,700 | Yes | 33,000 | Activated sludge | Tertiary | 3,800 | Le Rhône | - | - | - |
| Rhône | St-Peray | 6,963 | Collected to Guilherand-Granges | | | | | | | | |
| Rhône | Valence | 64,900 | Yes | 150,000 | Activated sludge | Secondary | 30,000 | Le Rhône | - | - | - |
| Rhône | La-Voulte-s-Rhône | 5,165 | Collected to Le Pouzin | | | | | | | | |
| Rhône | Le Pouzin | 2,668 | Yes | 12,700 | Activated sludge | Secondary | 2,700 | Rhône tributary | - | - | - |
| Rhône | Loriol-sur-Drome | 5,779 | Yes | 12,000 | Activated sludge | Tertiary | 1,380 | Rhône tributary | - | - | - |
| Rhône | Portes les Valence | 9,712 | Yes | 76,000 | Activated sludge | Secondary | 7,000 | Le Rhône | - | - | - |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|------------------------|----------------------|-----------------------------|------------------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|------------------------------|
| Rhône | Charmes sur Rhône | 2,325 | Yes | 3,000 | Activated sludge | Secondary | 650 | Le Rhône | - | - | - |
| Rhône | Montélimar | 31,349 | Yes | 95,000 | Activated sludge | Secondary | 10,370 | Rhône canal | - | - | - |
| Rhône | Le Teil | 8,285 | Yes | 7,500 | Activated sludge | Secondary | 1,200 | Le Rhône | - | - | - |
| Rhône | Chateauneuf du Rhône | 2,252 | Yes | 2,300 | Activated sludge | Secondary | 450 | Le Rhône | - | - | - |
| Rhône | Viviers | 3,768 | Yes | 2,500 | Activated sludge | Secondary | 520 | Le Rhône | - | - | - |
| Rhône | Donzère | 4,760 | Yes | 15,000 | Activated sludge | Secondary | 1,380 | Rhône canal | - | - | - |
| Rhône | Bourg-Saint-Andéol | 7,328 | Yes | 6,800 | Activated sludge | Secondary | 1,000 | Le Rhône | - | - | - |
| Rhône | Pierrelatte | 11,980 | Yes | 18,600 | Activated sludge | Secondary | 3,200 | Rhône | - | - | - |
| Rhône | Lapalud | 3,412 | Yes | 5,400 | Activated sludge | Tertiary | 1,050 | Le Rhône | - | - | - |
| Rhône | Pont-Saint Esprit | 9,661 | Yes | 10,000 | Activated sludge | Secondary | 1,700 | Le Rhône | - | - | - |
| Rhône | Bollène | 14,107 | Yes | 4,500 | Activated sludge | Secondary | 675 | Le Rhône | - | - | Extension under construction |
| Rhône | Mondragon | 3,353 | Yes | 4,000 | Activated sludge | Tertiary | 600 | Rhône canal | - | - | - |
| Rhône | Orange | 27,999 | Yes | 45,000 | Activated sludge | Secondary | 9,500 | La Meyne | - | - | - |
| Rhône | Caderousse | 2,712 | Yes | 1,800 | Activated sludge | Secondary | 300 | Le Rhône | - | - | - |
| Rhône | Chateauneuf –du-Pape | 2,098 | Yes | 7,000 | Activated sludge | Secondary | 400 | Le Rhône | - | - | - |
| Rhône | Roquemaure | 5,207 | Yes | 7,500 | Activated sludge | Secondary | 1,200 | Le Rhône | - | - | - |
| Rhône | Sorgues | 18,100 | Yes | 63,000 | Activated sludge | Secondary | 10,300 | L'Ouvèze (Rhône tributary) | - | - | - |
| Rhône | Villeneuve-les-Avignon | 12,078 | Collected to Avignon | | | | | | | | |
| Rhône | Le Pontet | 17,100 | Collected to Avignon | | | | | | | | |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|--------------|----------------------|-----------------------------|------------------------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|---|
| Rhône | Avignon | 90,800 | Yes | 150,000 | Primary sedimentation + a part of biological treatment | Primary | 70,000 | Le Rhône | - | - | Extension under construction (170,000 PE) in order to reach a secondary degree of treatment, end of the construction : 2011 |
| Rhône | Aramon | 3,869 | Yes | 4,500 | Activated sludge | Secondary | 705 | Le Rhône | - | - | - |
| Rhône | Beaucaire | 14,900 | Yes | 30,000 | Activated sludge | Secondary | 3,000 | Le Rhône | - | - | - |
| Rhône | Tarascon | 13,100 | Yes | 20,000 | Activated sludge | Secondary | 3,400 | Le Rhône | - | - | - |
| Rhône | Fourques | 2,702 | Yes | 3,500 | Activated sludge | Secondary | 420 | Little Rhône | - | - | - |
| Rhône | Bellegarde | 6,109 | Yes | 8,000 | Activated sludge | Secondary | 1,200 | Rhône canal | - | - | - |
| Rhône | Saint Gilles | 13,100 | Yes | 14,400 | Activated sludge | Tertiary | 3,000 | Le Rhône | - | - | New plant under construction (24,000 PE): secondary treatment thanks to biological treatment End of the construction: 2012 |

| River | City | Permanent Population | Waste water Treatment Plant | Population Equivalent of the plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Remarks |
|-------|----------------------|----------------------|---|------------------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Rhône | Arles | 52,400 | Yes (Raphèle Moule) | 4,000 | Activated sludge | Secondary | 915 | Rhône canal | - | - | - |
| | | | Yes (La Principale) | 50,000 | Activated sludge | Secondary | 10,000 | Le Rhône | - | - | - |
| | | | Yes (Mas Thibert) | 1,700 | Activated sludge | Secondary | 364 | Arles canal | - | - | - |
| Rhône | Aigues-Mortes | 6,798 | Collected to le Grau du Roi (cf MAP Technical Reports Series no, 157) | | | | | | | | |
| Var | Saint Paul | 2,874 | Collected to Cagnes-sur-Mer (cf MAP Technical Reports Series no, 157) | | | | | | | | |
| Var | Vence | 17,150 | Yes – Vence Nord | 9,000 | Activated sludge | Secondary | 1,100 | Lubiane stream | - | - | Plan under way for 2012 (30,000 PE) The old plants will be stopped |
| | | | Yes – Vence Malvan | 9,000 | Activated sludge | Secondary | 1,350 | Malvan stream | | | |
| Var | Levens | 3,700 | Yes – La Gumba | 3,000 | Activated sludge | Secondary | 300 | Gumba small valley | - | - | Plan under way for 2012 (5,000 PE) The old plants will be stopped |
| | | | Yes – Le Rivet | 700 | Trickling filter | Primary | 40 | Levens stream | | | |
| Var | Saint Martin du Var | 2,210 | Collected to Nice (cf. MAP Technical Reports Series no. 157) | | | | | | | | |
| Var | Colomars | 3,129 | Collected to Nice (cf MAP Technical Reports Series no, 157) | | | | | | | | |
| Var | Saint Laurent du Var | 27,252 | Yes | 80,000 | Activated sludge | Secondary | 14,000 | Le Var | - | - | Extension under construction in order to add a tertiary treatment with membrane treatment. End of the construction: 2012 |

**** Data No Communicated**

(1) City:

In this study, a city is considered to be situated in proximity of big rivers as it is situated at less than 5 kilometres from this one.

Some Mediterranean coastal cities have already been listed in previous studies MAP Technical Reports Series. These cities are not taken into account in the current study, but they are listed in the document named "Table 2" as a reminder.

(2) Population:

The National Institute of Statistic and Economical Studies (INSEE) supplied the most recent number of permanent inhabitants for each city.

(3) Wastewater:

Every data relative to municipal wastewater have been searched through Water Agency, local communities and wastewater treatment plant managers.

Some wastewater treatment plants collect wastewaters from more than one city, whereas some cities have several wastewater treatment plants. That is why it is not always easy to compare the plant population equivalent with the city population.

For this study we have the use of yearly average daily outflows.

When the column "Wastewater untreated" is empty, it means that either a collective treatment plant collects the whole wastewaters, or that a part of the wastewater is treated by individual systems.

As there is no quantity available, we have to notice that rainfall overflows are located on many cities' networks in order not to overload plants during heavy rains.

Country: GREECE

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION ABOVE 2,000

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Portocheli | 1910 | 1910 | Yes (Served by the WWTP of Kranidi) | Tertiary with N removal | 478 | SO | 8140 | |
| Kalamos(1) | 1970 | 2000 | No | - | 0 | - | 824 | Septic Tanks |
| Sourpi | 2010 | 2010 | No | - | 0 | | 302 | |
| Agios Vasileios | 2050 | 2050 | No (partly served by the WWTP of Patra) | - | 170 | - | 667 | Septic Tanks |
| Potos(1) | 690 | 2050 | No | - | 0 | sea | 100 | Septic Tanks |
| Gournes(1) | 1230 | 2070 | No | - | 0 | - | 731 | Septic Tanks |
| Chalkoutsí | 2080 | 2080 | No | - | 0 | - | 573 | Septic Tanks |
| Limni | 2080 | 2080 | Yes | Tertiary with N removal | 520 | - | 962 | Septic Tanks |
| Sami(1) | 1220 | 2080 | Yes | Secondary with N removal- | 518 | Sea (Saronic Gulf) | 307 | Septic Tanks |
| Vasiliki Lefkados(1) | 430 | 2090 | Yes | Secondary with N & P removal | 523 | - | 797 | Septic Tanks |
| Matala(1) | 100 | 2100 | Under construction | - | 0 | SO | - | - |
| Paralia Vergas | 2110 | 2110 | Yes (Served by the WWTP of Patras) | Tertiary with N removal | 527 | - | 853 | Septic Tanks |
| Diminio | 2130 | 2130 | Yes (Served by the WWTP of Volos) | Tertiary with N removal | 531 | - | 707 | Septic Tanks |
| Elounta | 1660 | 2160 | Yes | Tertiary with N removal | 540 | - | 661 | Septic Tanks |
| Emporeio (Kykklades) | 1770 | 2190 | Yes | Tertiary with N removal | 547 | - | 341 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Platamonas | 2200 | 2200 | Yes (Served by the WWTP of South Pieria) | Tertiary with N removal | 549 | - | 1322 | Septic Tanks |
| Antimacheia | 2210 | 2210 | No (Projection to be served by the WWTP of Kardamaina) | - | 0 | - | 913 | Septic Tanks |
| Neochori | 2210 | 2210 | No | - | 0 | - | 1952 | Septic Tanks |
| Nydri(1) | 870 | 2230 | Under construction | - | 0 | SO | | |
| Ouranoupoli | 960 | 2240 | Yes | Tertiary with N removal | 559 | DI through stream | - | - |
| Agia Paraskevi | 2270 | 2290 | Not operational | - | 0 | Sea | 3500 | |
| Nea Karvali | 2300 | 2300 | Yes (Served by the WWTP of Kavala) | Tertiary with N removal | 575 | | 2300 | |
| Selinia | 2350 | 2350 | No (Projection to be served by the WWTP of Psyttalia) | - | 0 | DI through stream | - | - |
| Zipario | 2360 | 2360 | No | - | 0 | DI through stream | 800 | |
| Demenika | 2390 | 2390 | Yes (Served by the WWTP of Patra) | Tertiary with N removal | 596 | - | 2343 | Septic Tanks |
| Nea Palatia | 2420 | 2420 | No | - | 0 | DI through stream | - | - |
| Pylio (Dodekanisa) | 2430 | 2430 | No | - | 0 | - | 1135 | Septic Tanks |
| Patitiri(1) | 1700 | 2440 | No | - | 0 | - | 1940 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Diakopto | 2290 | 2460 | No (Projection to be served by the WWTP of Aigio) | - | 0 | DI through stream | 2625 | Septic Tanks |
| Kefalos | 2460 | 2460 | No | - | 0 | - | 700 | Septic Tanks |
| Rododafni | 2510 | 2510 | No (Projection to be served by the WWTP of Aigio) | - | 0 | - | 756 | Septic Tanks |
| Assos | 2550 | 2550 | No | - | 0 | - | 702 | Septic Tanks |
| Efxinoupoli | 2550 | 2550 | Yes (Served by the WWTP of Almyros) | Tertiary with N removal | 638 | - | 552 | Septic Tanks |
| Vathy (Evoia) | 2560 | 2560 | No | - | 0 | SO | | |
| Paralia Avlidos | 2580 | 2580 | No | - | 0 | sea | | |
| Sarti | 1160 | 2610 | Yes | Tertiary with N removal | 653 | - | 862 | Septic Tanks |
| Vrachaiika | 2630 | 2630 | No (Projection to be served by the WWTP of Patra) | - | 0 | | 19375 | |
| Agios Nicolaos (Chalkida) | 2640 | 2640 | No (Projection to be served by the WWTP of Chalkida) | - | 0 | - | 637 | Septic Tanks |
| Agia Marina (Kropias) | 2670 | 2670 | No | - | 0 | - | 1080 | Septic Tanks |
| Agia Marina (Leros) | 2670 | 2670 | Yes | Secondary with N removal | 567 | - | 2217 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Kallithea (Pierias) | 2740 | 2740 | Yes (Served by the WWTP of South Pieria) | Tertiary with N removal | 685 | SO | | |
| Oia | 760 | 2760 | Yes | Tertiary with N removal | 690 | DI through stream | - | - |
| Vari Kykladon(1) | 1190 | 2780 | No | - | 0 | SO | 2993 | |
| Andros(1) | 1540 | 2800 | No | - | 0 | - | 520 | Septic Tanks |
| Antikyra | 2810 | 2810 | No | - | 0 | SO | 925 | |
| Agios Konstantinos | 2570 | 2830 | No | - | 0 | SO | 3262 | |
| Methoni(1) | 1170 | 2850 | Yes | Secondary with N removal | 422 | SO | 606 | |
| Skyros(1) | 1880 | 2850 | Not operational | - | 0 | - | 864 | Septic Tanks |
| Prinos(1) | 1190 | 2860 | No | - | 0 | DI through stream | - | - |
| Gefyras (Lakonia)(1) | 1230 | 2870 | Under construction | - | 0 | SO | - | - |
| Livadi (Serifos) | 960 | 2900 | Yes | Tertiary with N removal | 725 | - | 613 | Septic Tanks |
| Agia Marina(1) (Aigina) | 430 | 2930 | No | - | 0 | - | 794 | Septic Tanks |
| Seliniatika(1) | 1150 | 2940 | No(Projection to be served by the WWTP of Aigio) | - | 0 | SO | - | - |
| Plaka Dilesi | 2970 | 2970 | No | - | 0 | - | 1001 | Septic Tanks |
| Anthousa | 3020 | 3020 | No (Projection to be served by the WWTP of North Mesogeia) | - | 0 | DI through stream | - | - |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Benitsa | 790 | 3030 | Yes | Tertiary with N removal | 757 | | 24000 | |
| Moraitika | 590 | 3030 | Yes | Tertiary with N removal | 757 | Soil | - | - |
| Velo | 3040 | 3040 | Yes (Served by the WWTP of Kiato) | Tertiary | 533 | DI through stream | - | - |
| Lakki(1) | 1990 | 3050 | Yes (Served by the WWTP of Leros) | - | 610 | SO | - | - |
| Vrachati | 2950 | 3050 | No | - | 0 | sea | 914 | Septic Tanks |
| Perivoli Kydonias | 3060 | 3060 | Yes (Served by the WWTP of Nea Kydonia) | Tertiary with N removal | 763 | sea | 140 | |
| Methana(1) | 1150 | 3100 | Yes | Secondary with N & P removal | 620 | sea | 119 | Septic Tanks |
| Varda | 3100 | 3100 | Under construction | - | 0 | SO | - | - |
| Dilesi | 3180 | 3180 | No | - | 0 | - | 1403 | Septic Tanks |
| Kitsi | 3200 | 3200 | No (Projection to be served by the WWTP of Psyttalia) | - | 0 | - | 814 | Septic Tanks |
| Daratsou | 3210 | 3210 | Yes (Served by the WWTP of Nea Kydonia) | Tertiary with N removal | 802 | - | 718 | Septic Tanks |
| Kryopigi(1) | 590 | 3210 | No (Projection to be served by the WWTP of Kallithea Chalkidikis) | - | 0 | - | 517 | Septic Tanks |
| Skala Patmou(1) | 1730 | 3230 | Not operational | - | 0 | SO | | |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Gefyras | 3260 | 3260 | No (Projection to be served by the WWTP of Thessalonik) | - | 0 | - | 1827 | Septic Tanks |
| Velestino | 3270 | 3270 | Yes(Served by the WWTP of Volos) | Secondary | 817 | SO | 900 | |
| Adamantas(1) | 1390 | 3300 | No (Projection to be served by the WWTP of Milos) | - | 0 | river | - | - |
| Galaxidi | 1720 | 3330 | Yes | Tertiary with N removal | 833 | SO | 600 | |
| Kalyves (Chania)(1) | 1290 | 3370 | Yes | Secondary with N removal | 757 | DI through stream | - | - |
| Plomari | 3380 | 3380 | Yes | Tertiary with N removal | 845 | SO | - | |
| Nea Styra(1) | 990 | 3390 | No | - | 0 | - | 1032 | Septic Tanks |
| Agios Kirikos(1) | 1880 | 3410 | No | - | 0 | DI through stream | - | - |
| Arkitsa(1) | 1140 | 3450 | No | - | 0 | - | 954 | Septic Tanks |
| Chora | 3460 | 3460 | Under construction | - | 0 | SO | 1350 | |
| Lardou(1) | 1210 | 3480 | No | - | 0 | - | 500 | Septic Tanks |
| Roditsis | 2630 | 3520 | Yes (Served by the WWTP of Lamia) | Tertiary with N removal | 880 | SO | - | - |
| Trilofo | | 3520 | No (Projection to be served by the WWTP of Touristic Areas of Thessaloniki) | - | 0 | SO | | |
| Markopoulo (Oropou) | 3530 | 3530 | No | - | 0 | river | - | |
| Skala Kefallonias(1) | 530 | 3530 | Under construction | - | 0 | SO | - | - |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Kanali | 3650 | 3560 | Yes (served by the WWTP of Kerkyra) | Tertiary with N removal | 889 | - | 1658 | Septic Tanks |
| Palairos | 2470 | 3600 | Under construction | - | 0 | sea | 84 | Septic Tanks |
| Aianteio | 3650 | 3650 | No (Projection of be served by the WWTP of Psyttalia) | - | 0 | SO | - | - |
| Eretria | 3160 | 3660 | No | - | 0 | sea | 950 | Septic Tanks |
| Kato Gouves(1) | 1220 | 3660 | No | - | 0 | - | 1719 | Septic Tanks |
| Agiokampos(1) | 360 | 3680 | No | - | 0 | DI through stream | - | - |
| Loggos(1) | 760 | 3720 | No | - | 0 | river | 1080 | |
| Kokkari | 970 | 3740 | Yes | Tertiary with N removal | 935 | SO | 300 | |
| Petra(1) | 1250 | 3750 | Under construction | - | 0 | - | 914 | Septic Tanks |
| Plagari | 3770 | 3770 | No (Projection to be served by the WWTP of Touristic Areas of Thessaloniki) | - | 0 | SO | | |
| Paliochora | 2210 | 3800 | No | - | 0 | - | 614 | Septic Tanks |
| Ithaki(1) | 1830 | 3820 | No | - | 0 | SO | 750 | |
| Agioi Apostoloi | 3500 | 3850 | No | - | 0 | SO | - | |
| Koskinou | 3220 | 4000 | Yes (Served by the WWTP of Rhodes) | Tertiary with N removal | 1 | - | 1435 | Septic Tanks |
| Drosia (Evoia) | 4010 | 4010 | No | - | 0 | - | 801 | Septic Tanks |
| Neoi Epivates | 4070 | 4070 | Yes (Served by the WWTP of Touristic Areas of Thessaloniki) | Tertiary with N removal | 1017 | DI through stream | - | - |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Nerokourou | 4110 | 4110 | Yes (Served by the WWTP of Chania) | Tertiary with N removal | 1026 | SO | 1125 | |
| Istiaia | 4130 | 4130 | Under construction | - | 0 | SO | 370 | |
| Symi | 2430 | 4170 | No | - | 0 | SO | - | - |
| Vonitsa | 3840 | 4170 | Yes | Secondary with N & P removal | 417 | SO | - | - |
| Leptokarya | 4230 | 4230 | Yes (served by the WWTP of South Pieria) | Tertiary with N removal | 1056 | DI through stream | - | - |
| Malesina | 4250 | 4250 | Yes | Tertiary with N removal | 1061 | - | 802 | Septic Tanks |
| Aitoliko | 4310 | 4310 | Yes | Tertiary with N removal | 1077 | - | 1299 | Septic Tanks |
| Astakos | 2540 | 4320 | Under construction | - | 0 | - | 2312 | Septic Tanks |
| Livanates | 3020 | 4330 | No | - | 0 | sea | 152 | Septic Tanks |
| Ierissou | 3120 | 4350 | Yes | Tertiary with N removal | 1087 | DI through stream | | |
| Marathon | 4400 | 4400 | No (Projection to be served by the WWTP of Nea Makri) | - | 0 | - | 870 | Septic Tanks |
| Amfilochia | 4120 | 4500 | Yes | Tertiary with N & P removal | 1125 | DI through stream | - | - |
| Tigaki(1) | 230 | 4530 | No | - | 0 | - | 988 | Septic Tanks |
| Ampelakia | 4540 | 4540 | No (Projection to be served by the WWTP of Psyttalia) | - | 0 | DI | | |
| Vrontadon | 4610 | 4610 | Yes (Served by the WWTP of Chania) | Tertiary with N removal | 1151 | SO | 500 | |
| Marmari(1) | 460 | 4660 | No | - | 0 | - | 1238 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Agios Athanasios | 4850 | 4850 | Yes (served by the WWTP of Thessaloniki) | Tertiary with N & P removal | 1211 | SO | - | - |
| Leonidio | 3220 | 4950 | No | - | 0 | - | 1345 | Septic Tanks |
| Lechaio | 3950 | 4960 | No | - | 0 | DI through stream | - | - |
| Mithimna(1) | 1500 | 4960 | Yes | Secondary | 1240 | sea | 14000 | |
| Tympaki | 5010 | 5010 | Under construction | - | 0 | Soil | - | - |
| Stylida | 5100 | 5100 | Not operational | - | 0 | - | 1083 | Septic Tanks |
| Myrina | 5110 | 5110 | Under construction | - | 0 | DI through stream | - | - |
| Aliveri | 5140 | 5140 | Yes | Tertiary with N removal | 1285 | - | 929 | Septic Tanks |
| Kounoupidianon | 5170 | 5170 | Yes (Served by the WWTP of Chania) | Tertiary with N removal | 1293 | DI through stream | - | - |
| Kardamaina(1) | 1780 | 5200 | Yes | Secondary | 250 | Soil | - | |
| Kymi | 3040 | 5200 | Under construction | - | 0 | - | 1100 | Septic Tanks |
| Ovria | 5240 | 5240 | Yes (Served by the WWTP of Patras) | Tertiary with N removal | 131 | | 5000 | |
| Syvota(1) | 910 | 5270 | No | - | 0 | - | 882 | Septic Tanks |
| Agria | 5230 | 5290 | No | - | 0 | - | 1400 | Septic Tanks |
| Pylos | 2100 | 5320 | Yes | Tertiary with N removal | 133 | - | 1164 | Septic Tanks |
| Limenaria | 2440 | 5380 | No | - | 0 | - | 525 | Septic Tanks |
| Ios | 1630 | 5390 | Yes | Tertiary with N removal | 1346 | sea | | |
| Palaio Tsifliki | 1850 | 5500 | Yes | Tertiary with N removal | 1375 | DI through stream | - | |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|--|-------------------------------|-----------------------------------|
| Rio | 5230 | 5500 | Yes (Septic sewage, projection to be served by the WWTP of Patras) | - | 458 | SO | - | - |
| Neapoli Voion | 2730 | 5520 | No | - | 0 | DI through stream and via Psyttalia WWTP | | |
| Marmari (Evoia)(1) | 1010 | 5600 | Under construction | - | 0 | sea | 155 | Septic Tanks |
| Kissamos | 3820 | 5740 | Not Operetional | - | 0 | Soil | 290 | Septic Tanks |
| Nea Agchialos | 5510 | 5760 | No | - | 0 | sea | - | Septic Tanks |
| Psachna | 5770 | 5770 | No | - | 0 | DI through stream | - | - |
| Kalythia (Faliraki) | 5860 | 5860 | Yes (Served by the WWTP of Rhodes) | Tertiary with N removal | 1465 | SO | - | - |
| Pythagoreio(1) | 1330 | 5890 | Yes | Secondary with N removal | 1473 | sea | 650 | |
| Paralia | 6010 | 6010 | Yes (Served by the WWTP of Patras) | Tertiary with N removal | 1503 | - | 1276 | Septic Tanks |
| Silivaniotika(1) | 1330 | 6150 | No(Projection to be served by the WWTP of Aigio) | - | 0 | SO | 2219 | |
| Karystos | 4960 | 6180 | Yes | Tertiary with N removal | 1545 | sea | 400 | |
| Souda | 6430 | 6430 | Yes (Served by the WWTP of Chania) | Tertiary with N removal | 1606 | sea | - | |
| Vrasnon | 2430 | 6450 | No | - | 0 | sea | 787 | |
| Mournion | 6480 | 6480 | Yes (Served by the WWTP of Chania) | Tertiary with N removal | 162 | sea | | |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------------|----------------------|-----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Vasiliko | 6500 | 6500 | No (Projection to be served by the WWTP of Chalkida) | - | 0 | - | 1439 | Septic Tanks |
| Ydra | 2530 | 6600 | No | - | 0 | DI through stream | - | - |
| Kalyves (Chalkidiki)(1) | 1140 | 6640 | No | - | 0 | river | - | - |
| Thasos | 3130 | 6660 | Yes | Secondary with N & P removal | 1664 | SO | - | - |
| Thira | 2110 | 6670 | Yes | Tertiary with N removal | 1667 | | 5900 | |
| Messini | 6690 | 6690 | Yes (Served by the WWTP of Kalamata) | Tertiary with N removal | 1673 | - | 605 | Septic Tanks |
| Tinos | 4390 | 6740 | No | - | 0 | - | 1870 | Septic Tanks |
| Agioi Theodoroi | 5960 | 6780 | Yes | Secondary with N removal | 1386 | - | 848 | Septic Tanks |
| Filiatra | 6720 | 6780 | Yes | Secondary | 1577 | - | 1380 | Septic Tanks |
| Karpathos | 2080 | 6880 | No | - | 0 | DI through stream | - | - |
| Itea | 4670 | 7000 | Yes | Tertiary with N removal | 1650 | - | 551 | Septic Tanks |
| Lixouri | 3610 | 7000 | Yes | Tertiary with N removal | 175 | SO | - | - |
| Skopelos | 2800 | 7110 | Yes | Secondary with N removal- | 1688 | DI through stream | - | - |
| Gytheion | 4490 | 7310 | Under construction | - | 0 | SO | - | - |
| Epanomis | 7330 | 7330 | Yes (Served by the WWTP of Touristic Areas of Thessaloniki) | Tertiary with N removal | 1833 | - | 556 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------|----------------------|-----------------------|---|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Stavros | 4960 | 7350 | No | - | 0 | DI through stream | - | - |
| Nea Peramos | 7480 | 7480 | No (Projection to be served by the WWTP of Megara) | - | 0 | DI through stream | - | - |
| Neos Marmaras | 2850 | 7630 | Yes | Tertiary with N removal | 1907 | SO | - | - |
| Neo Karlovasi | 5740 | 7710 | Yes | Tertiary with N removal | 1926 | - | 2218 | Septic Tanks |
| Anavyssos | 7190 | 7760 | No | - | 0 | DI through stream | - | - |
| Aigina | 7410 | 7810 | No | - | 0 | - | 901 | Septic Tanks |
| Gazi | 8020 | 8020 | Yes (Served by the WWTP of Iraklio) | Secondary | 600 | - | 950 | Septic Tanks |
| Kremasti-Paradeison | 6980 | 8280 | Yes | Tertiary with N & P removal | 2068 | SO | - | - |
| Layrio | 8560 | 8560 | Yes | Tertiary with N removal | 214 | - | 644 | Septic Tanks |
| Astros | 3230 | 8870 | Under construction | - | 0 | SO | - | - |
| Palaia Fokaia | 2440 | 8870 | No | - | 0 | sea | 150 | - |
| Nea Artaki | 8650 | 9030 | Yes | Tertiary with N removal | 2258 | - | 610 | Septic Tanks |
| Kyparissia | 4890 | 9250 | Under construction | - | 0 | SO | 3825 | - |
| Amarynthos | 4140 | 9380 | No | - | 0 | DI through stream | - | - |
| Spestes | 3850 | 10000 | No | - | 0 | - | 937 | Septic Tanks |
| Andravida-Lechaina-Tragano | 10500 | 10500 | Not operational | Tertiary with N & P removal | 0 | - | 942 | Septic Tanks |
| Thira (Mesaria) | 15000 | 24350 | Yes | Secondary with N removal | 2962 | - | 743 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------|----------------------|-----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Alexandroupoli | 75000 | 35000 | Yes | Secondary | 11000 | DI through stream | - | - |
| Nea Kallikrateia | 19300 | 36000 | Yes | Secondary | 4825 | DI through stream | - | - |
| Megara | 17000 | 43300 | Yes | Secondary with N removal | 4250 | sea | 112 | |
| 243 citiies | 630900 | 831540 | | Sum: | 83553 | DI through stream | - | - |
| Athens | 3900000 | 5400000 | Yes | Primary/Secondary | 975000 | sea | | |
| Rhodes | 148000 | | Yes | Tertiary | 28860 | - | 513 | Septic Tanks |
| Ag. Nicolaos Lassithiou | 17250 | | Yes | Secondary | 41830 | DI | 9 | |
| Aigio | 35000 | | Yes | Secondary | 8750 | - | 715 | Septic Tanks |
| Alikarnassos | 11500 | | No | | | - | 1442 | Septic Tanks |
| Amaliada | 20500 | | Yes | Secondary | 4600 | - | 607 | Septic Tanks |
| Argos-Nafplio | 85000 | | Yes | Tertiary | 21250 | DI through stream | - | - |
| Argostoli | 27000 | | Yes | Secondary | 6750 | DI through river | | |
| Artemida*** | 77500 | | No | | | sea | | Septic Tanks |
| Chalkida | 77000 | | Yes | Tertiary | 18383 | | 3800 | |
| Chania | 115540 | | Yes | Secondary | 2961 | SO | 700 | |
| Chersonissos | 45000 | | Yes | Tertiary | 7990 | SO | | |
| Chios | 34650 | | Yes | Secondary | 8056 | - | 417 | Septic Tanks |
| Elefsina**** | 80000 | | Under construction | | | DI through stream | - | - |
| Ermoupolis | 27800 | | Yes | Secondary | 6811 | - | 628 | Septic Tanks |
| Greater Thessaloniki area | 55650 | | Yes (septic sewage) | Secondary | 13913 | sea | | Septic Tanks |
| Ierapetra | 18000 | | Yes | Secondary | 3600 | DI through stream | - | - |
| Igoumenitsa | 30000 | | Yes | Secondary | 7800 | - | 586 | Septic Tanks |
| Iraklio | 175000 | | Yes | Secondary | 43750 | - | 735 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------------|----------------------|-----------------------|----------------------------|--------------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Kalamata | 92000 | | Yes | Secondary | 22917 | - | 1538 | Septic Tanks |
| Kallithea Chalkidikis | 15000 | | Yes | Secondary | 3000 | sea | | |
| Kalymnos | 16000 | | Yes | Tertiary with N & P removal | 4000 | - | 882 | Septic Tanks |
| Katerini | 108000 | | Yes | Secondary | 25920 | - | 807 | Septic Tanks |
| Kato Achaia | 15000 | | Yes | Secondary | 3450 | sea | 600 | |
| Kavala | 80000 | | Yes | Secondary | 15000 | sea | 88 | Septic Tanks |
| Kerkyra (Corfu) | 50000 | | Yes | Secondary | 11750 | - | 712 | Septic Tanks |
| Kiato | 15000 | | Yes | Tertiary | 3750 | SO | - | - |
| Korinthos-Loutraki | 60000 | | Yes | Secondary | 13875 | - | 502 | Septic Tanks |
| Kos | 37000 | | Yes | Secondary | 8880 | - | 2500 | Septic Tanks |
| Lamia | 65000 | | Yes | Secondary | 14000 | - | 1837 | Septic Tanks |
| Lefkada | 10000 | | Yes | Tertiary | 2000 | - | 1275 | Septic Tanks |
| Lefkimmi | 16000 | | Yes | Secondary | 4000 | - | 1042 | Septic Tanks |
| Litochoro | 70000 | | Yes | Constructed but not yet in operation | | - | 1318 | Septic Tanks |
| Mallia | 15000 | | Yes | Tertiary with N & P removal | 3750 | SO | | Septic Tanks |
| Markopoulo | 20000 | | Yes | Constructed but not operational | | SO | | |
| Mesologgi | 14000 | | Yes | Tertiary | 3500 | DI through stream | - | - |
| Metamorfosi (Athens, north area) | 450000 | | Yes | Secondary | 11250 | sea | 787 | |
| Mykonos | 26000 | | Yes | Secondary | 5850 | - | 1132 | Septic Tanks |
| Mytelene | 35500 | | Yes | Secondary | 6656 | - | 1685 | Septic Tanks |
| N. Kydonia | 52000 | | Yes | Secondary with N & P removal | 12600 | sea | 268 | |
| Nafpaktos | 21000 | | Yes | Secondary with N removal | 5250 | - | 880 | Septic Tanks |

| City | Permanent Population | Population equivalent | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------|----------------------|-----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Naousa Parou | 15000 | | Yes | Secondary | 2962 | - | 1252 | Septic Tanks |
| Naxos | 20000 | | Yes | Tertiary | 5000 | - | 775 | Septic Tanks |
| Nea Makri | 26000 | | No | | | - | 569 | Septic Tanks |
| Paroikia Parou | 15000 | | Yes | Secondary | 3600 | sea | | Septic Tanks |
| Patras | 170000 | | Yes | Secondary | 38675 | - | 1626 | Septic Tanks |
| Poros | 15000 | | Yes | Secondary with N removal | 3640 | - | 641 | Septic Tanks |
| Potamia Thasou | 16000 | | Yes | Secondary with N & P removal | 4000 | SO- | | Septic Tanks |
| Preveza | 23600 | | Yes | Secondary | 5891 | SO- | 227 | Septic Tanks |
| Pyrgos | 25000 | | Yes | Secondary | 6250 | SO | 2078 | |
| Rafina**** | 19000 | | No | | | DI through stream | 625 | Septic Tanks |
| Rethymno | 56000 | | Yes | Secondary | 13300 | - | 656 | Septic Tanks |
| Rhodes | 25000 | | Yes (Septic sewage) | Secondary | 6000 | - | 761 | Septic Tanks |
| Siteia | 15000 | | Yes | Secondary | 3750 | - | 1613 | Septic Tanks |
| Skiathos | 15000 | | Yes | Secondary | 3150 | SO | - | - |
| Thessaloniki | 900000 | | Yes | Secondary | 225000 | SO | 250 | |
| Tolo | 15000 | | Yes | Secondary | 34802 | - | 1649 | Septic Tanks |
| Volos | 175000 | | Yes | Secondary | 41673 | river | | |
| Xylokastro | 15000 | | Yes | Secondary | 3500 | - | 590 | Septic Tanks |
| Zakinthos | 44550 | | Yes | Secondary | 11138 | | | |

Country: GREECE

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Additional information |
|----------|------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Akheloos | Neokhorion | 3208 | Y | Biological Treatment | Tertiary | 513.28 | 80% DI through stream | 128.32 | 20% Septic tanks | Part of the sewerage network has been constructed. |
| Akheloos | Katokhi | 2890 | N | | | | | 578 | Septic tanks | The WWTP has been constructed but not the network |
| Akheloos | Lepenou | 2227 | N | | | | | 445.4 | Septic tanks | To be served by the WWTP of Agrinio |
| Aliakmon | Aiani | 2074 | N | | | | | 414.8 | DI through stream | The sewerage network has been constructed |
| Aliakmon | Meliki | 3102 | N | | | | | 620.4 | Septic tanks | |
| Aliakmon | Neapoli | 2351 | N | | | | | 470.2 | DI through stream | The sewerage network has been constructed. |
| Aliakmon | Servia | 3290 | N | | | | | 658 | DI through stream | The sewerage network has been constructed. |
| Aliakmon | Siatista | 5642 | N | | | | | 1128.4 | DI through stream | The sewerage network has been constructed. |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Additional information |
|----------|-----------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Aliakmon | Velventos | 3497 | N | | | | | 699.4 | DI through stream | The sewerage network has been constructed. |
| Aliakmon | Aiginion | 4280 | Y | Biological treatment | Secondary treatment | 856 | DI through stream | | | |
| Aliakmon | Argos Orestikon | 7595 | Y | Biological treatment | Tertiary treatment | 1519 | DI through stream | | | Served by the WWTP of Kastoria |
| Aliakmon | Grevena | 10500 | Y | Biological treatment | Tertiary treatment | 2100 | DI through stream | | | |
| Aliakmon | Kastoria | 28200 | Y | Biological treatment | Tertiary treatment | 5640 | DI through stream | | | |
| Aliakmon | Makrohorion | 4843 | Y | Biological treatment | Tertiary treatment | 968.6 | DI through stream | | | Served by the WWTP of Veroia |
| Aliakmon | Veroia | 54000 | Y | Biological treatment | Tertiary treatment | 10800 | DI through stream | | | |
| Axios | Koufalia | 2189 | Y | Biological treatment | Secondary | 197 | 45% DI through stream | 240.8 | 55% Septic tanks | Part of the sewerage network has been constructed. |
| Axios | Anatolikon | 2539 | N | | | | | 507.8 | Septic tanks | To be served by the WWTP of Chalastra |
| Axios | Khalkidon | 3749 | N | | | | | 749.8 | Septic tanks | |
| Axios | Kimina | 3692 | N | | | | | 738.4 | Septic tanks | |
| Axios | Nea Malgara | 2443 | N | | | | | 488.6 | Septic tanks | |
| Axios | Nea Mesimbria | 2343 | N | | | | | 468.6 | Septic tanks | |
| Axios | Vathylakos | 2198 | N | | | | | 439.6 | Septic tanks | To be served by the WWTP of Thessalonikh |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Additional information |
|-------------|-----------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|--|--|
| Axios | Europos | 2425 | Y | Biological treatment | Secondary | 436.5 | 90% DI through stream | 48.5 | 10% Septic tanks | Part of the sewerage network has been constructed. |
| Axios | Khalastra | 7298 | Y | Biological treatment | Tertiary | 1313.64 | 90% DI through stream | 145.96 | 10% Septic tanks | Part of the sewerage network has been constructed. |
| Axios | Polykastron-Axioupoli | 9842 | Y | Biological treatment | Tertiary treatment | 1614.09 | RB | 354.31 | Septic tanks | |
| Evros/Meric | Ferai | 5206 | N | | | | | 1041.2 | 25% DI through stream 75% Septic tanks | Part of the sewerage network has been constructed. |
| Evros/Meric | Nea Vissa | 2844 | N | | | | | 568.8 | Septic tanks | |
| Evros/Meric | Tikheron | 2031 | N | | | | | 406.2 | 30% DI through stream 70% Septic tanks | Part of the sewerage network has been constructed. |
| Evros/Meric | Didimotikhon | 15000 | Y | Biological treatment | Tertiary treatment | 3000 | DI through stream | | | |
| Evros/Meric | Orestias | 24000 | Y | Biological treatment | Tertiary treatment | 4800 | DI through stream | | | |
| Evros/Meric | Soufliou | 4258 | Y | Biological treatment | Tertiary treatment | 340.64 | DI through stream | 510.96 | Septic tanks | |
| Nestos | Khrisoupolis | 16000 | Y | Biological treatment | Tertiary treatment | 3200 | DI through stream | | | |
| Strymon | Nigriti | 5620 | DNO | | | | | 1124 | DI through stream | The WWTP is out of operation |
| Strymon | Terpni | 2189 | DNO | | | | | 437.8 | DI through stream | The WWTP is out of operation |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Additional information |
|---------|-----------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Strymon | Neon Petritsion | 2373 | N | | | | | 474.6 | DI through stream | The sewerage network has been constructed. |
| Strymon | Neos Skopos | 2991 | N | | | | | 598.2 | DI through stream | The sewerage network has been constructed. |
| Strymon | Skoutari | 2614 | N | | | | | 522.8 | Septic tanks | |
| Strymon | Iraklia | 3551 | UC | | | | | 710.2 | Septic tanks | The WWTP is under construction |
| Strymon | Sidirokastro | 5911 | UC | | | | | 1182.2 | DI through stream | The WWTP is under construction. The sewerage network has been constructed. |
| Strymon | Choristi | 2625 | Y | Biological treatment | Tertiary treatment | 525 | DI through stream | | | Served by the WWTP of Drama |
| Strymon | Doxato | 7280 | Y | Biological treatment | Secondary treatment | 1456 | DI through stream | | | |
| Strymon | Drama | 46000 | Y | Biological treatment | Tertiary treatment | 9200 | DI through stream | | | |
| Strymon | Kalampaki | 3489 | Y | Biological treatment | Tertiary treatment | 697.8 | DI through stream | | | Served by the WWTP of Drama |
| Strymon | Prosotsani | 5882 | Y | Biological treatment | Secondary treatment | 1058.76 | DI through stream | 117.64 | Septic tanks | |
| Strymon | Serres | 75000 | Y | Biological treatment | Tertiary treatment | 15000 | DI through stream | | | |

Country: ISRAEL

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| Treatment facility | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | Discharge to sea/river (m3/year) |
|----------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|----------------------------------|
| Akko | 84,000 | Yes | Tertiary | 14,400 | SO | - | - | 1,000,000 |
| Ashdod | 211,300 | Yes | Secondary | 35,000 | RE | - | - | 3,500,000 |
| Ayalon * | 235,000 | Yes | Secondary | 44,000 | | | | 8,000,000 |
| Baqa-Jatt * | 15,000 | Yes | Tertiary | 2,000 | | | | 730,000 |
| Be'er Sheva * | 218,000 | Yes | Secondary | 38,900 | | | | 2,000,000 |
| Sharon South-East * | 35,000 | Yes | Secondary | 11,500 | | | | 1,000,000 |
| En Shemer * | 68,000 | Yes | Primary | 8,500 | | | | 2,200,000 |
| Gush-Dan/Shafdan (Tel Aviv area) | 2,000,000 | Yes | Secondary | 348,200 | RE | - | - | Sludge 6,225,000 |
| Hadera | 144,000 | Yes | Secondary | 25,000 | RE + River | - | - | 1,400,000 |
| Herzlia | 85,300 | Yes | Tertiary | 20,000 | SO | - | - | 6,500,00 |
| Karmiel * | 160,000 | Yes | Tertiary | 25,000 | | | | 6,000,000 |
| Kefar Sava - Hod HaSharon * | 129,000 | Yes | Secondary | 23,000 | | | | 6,700,000 |
| Menashe2 (Gan Shmuel) * | 12,000 | Yes | Secondary | 2,200 | | | | 250,000 |
| Qiryat Gat * | 50,000 | Yes | Secondary | 14,500 | | | | 1,000,000 |
| Ra'annana * | 73,400 | Yes | Tertiary | 13,700 | | | | 2,800,000 |
| Ramat HaSharon * | 39,000 | Yes | Tertiary | 10,300 | | | | 3,100,000 |
| Sederot * | 20,000 | Yes | Primary | 4,900 | | | | 1,000,000 |
| Yavne | 33,000 | Yes | Secondary | 5,800 | | | | 2,100,000 |

Country: ITALY

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Acciaroli (Pollica) | 2477 | Yes | Primary | 346.78 | | 148.62 | |
| Aci Castello (Sicily) | 18196 | On projection | | | | 3639.2 | |
| | | On projection | | | | | |
| Aci Trezza (Aci Castello) | * | | | | | | |
| Acireale | 52881 | On projection | | | | 10576.2 | |
| Agrigento | 59188 | Yes | Secondary | 8286.32 | | 3551.28 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Agropoli | 20840 | Yes | - | 2917.6 | | 1250.4 | |
| Alassio | 11277 | Forecasted | Secondary | | | 2255.4 | |
| Alba Adriatica | 12440 | Yes | Secondary ? | 1741.6 | | 746.4 | |
| Albenga | 24249 | Under construction | Secondary | | | 4849.8 | |
| Albinia (Orbetello) | 2597 | Yes | Secondary | 363.58 | | 155.82 | |
| Albissola Marina | 10595 | Yes | Primary | 1483.3 | | 635.7 | |
| Alghero | 40803 | Yes | Tertiary | 5712.42 | | 2448.18 | |
| Ali Terme | 2598 | On projection | | | | 519.6 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Altavilla Milicia | 7043 | Yes | Primary | 986.02 | | 422.58 | |
| Amalfi | 5345 | No | | | | 1069 | |
| Amantea | 13914 | Yes | Secondary | 1947.96 | | 834.84 | |
| Ancona | 102521 | Yes | Tertiary | 14352.94 | | 6151.26 | |
| Ansedonia (Orbetello) | * | | | | | | |
| Anzio | 53924 | Yes | | 7549.36 | | 3235.44 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Aquileia | 3519 | No | | | | 703.8 | |
| Arenzano | 11650 | Yes | Primary | 1631 | | 699 | |
| Arzachena (includes: Baja Sardinia, Porto Cervo) | 13149 | Yes | Primary | 1840.86 | | 788.94 | |
| Assemini | 26752 | Yes | Pre-treatment | 3745.28 | | 1605.12 | |
| Augusta | 34393 | Under construction | None | | | 6878.6 | |
| Avola | 31799 | Yes | Secondary | 4451.86 | | 1907.94 | |
| Bacoli | 27298 | | | 3821.72 | | 1637.88 | |
| | | Yes | Secondary | | | | |
| Bagheria | 55973 | Yes | Primary | 7836.22 | | 3358.38 | |
| Bagnara Calabra | 10661 | Yes | Primary | 1492.54 | | 639.66 | |
| Barcellona Pozzo di Gotto | 41718 | Yes | Primary | 5840.52 | | 2503.08 | |
| | | Forecasted | Primary | | | | |
| Bari | 320667 | Yes | Primary | 44893.38 | | 19240.02 | |
| | | Yes | Primary | | | | |
| Barletta | 94089 | Yes | Primary | 13172.46 | | 5645.34 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Bellaria-Igea Marina | 19093 | Yes | Primary | 2673.02 | | 1145.58 | |
| Belvedere Marittimo | 9410 | Yes | Secondary | 1317.4 | | 564.6 | |
| Bianco | 4360 | Yes | Primary | 610.4 | | 261.6 | |
| Bibione (San Michele al Tagliamento) | 12040 | Yes | Tertiary | 1685.6 | Reuse | 722.4 | |
| Bisceglie | 54527 | Yes | Secondary | 7633.78 | | 3271.62 | |
| Bordighera | 10833 | Yes | Primary | 1516.62 | | 649.98 | |
| Borghetto Santo Spirito | 5300 | Yes | Secondary | 742 | | 318 | |
| Bosa | 8138 | Yes | Primary | 1139.32 | | 488.28 | |
| Bova Marina | 3967 | Yes | Secondary | 555.38 | | 238.02 | |
| Bovalino Marina (Bovalino) | 8767 | Yes | Secondary | 1227.38 | | 526.02 | |
| Brancaleone Marina (Brancaleone) | 3882 | No | | | | 776.4 | |
| Brindisi | 89735 | Yes | Secondary | 12562.9 | | 5384.1 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Brolo | 5815 | Yes | Secondary | 814.1 | | 348.9 | |
| Buonfornello (Termini Imerese) | * | No | | | | | |
| Cabras (includes: S. Giovanni di Sinis) | 9126 | Yes | Primary | 1277.64 | | 547.56 | |
| Cagliari | 157297 | Yes | Secondary | 22021.58 | | 9437.82 | |
| Cagnano Varano | 7697 | Out of order | | | | 1539.4 | |
| Cala Gonone (Dorgali) | 8514 | Yes | Primary | 1191.96 | | 510.84 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Camerano | 7207 | Yes | Secondary | 1008.98 | | 432.42 | |
| Camogli | 5621 | Yes | Primary | 786.94 | | 337.26 | |
| Campomarino | 7168 | Yes | Primary | 1003.52 | | 430.08 | |
| Campora S. Giovanni (Amantea) | 2792 | Yes | Primary | 390.88 | | 167.52 | |
| Caorle | 12016 | Yes | Tertiary | 1682.24 | | 720.96 | |
| | | Yes | Tertiary | | | | |
| Capaci | 10564 | Yes | Primary | 1478.96 | | 633.84 | |
| Capalbio | 4306 | Yes | Primary | 602.84 | | 258.36 | |
| Capo d' Orlando | 13080 | Yes | Primary | 1831.2 | | 784.8 | |
| Capo S.ta Maria di Leuca (Castrignano del Capo) | 5474 | Yes | Primary | 766.36 | | 328.44 | |
| Capri | 7292 | Yes | Primary | 1020.88 | | 437.52 | |
| Cariati | 8637 | Yes | Primary | 1209.18 | | 518.22 | |
| Carovigno | 16138 | Yes | Primary | 2259.32 | | 968.28 | |
| Casamicciola Terme | 8317 | Yes | Primary | 1164.38 | | 499.02 | |
| Castel Volturno | 23870 | Yes | Primary | 3341.8 | | 1432.2 | |
| Casteldaccia | 11030 | Out of order | | | | 2206 | |
| Castellabate | 8140 | Yes | Primary | 1139.6 | | 488.4 | |
| Castellamare del Golfo | 15184 | No | | | | 3036.8 | |
| Castelsardo | 5847 | Yes | Primary | 818.58 | | 350.82 | |
| Castiglione (Rosignano Marittimo) | 3843 | Yes | Secondary | 538.02 | | 230.58 | |
| Castiglione della Pescaia (includes:Punta Ala) | 7445 | | | 1042.3 | | 446.7 | |
| | | Yes | Primary | | | | |
| Castroreale Terme (Terme Vigliatore) | 7098 | Yes | Primary | 993.72 | | 425.88 | |
| Catania | 296469 | Yes | Primary | 41505.66 | | 17788.14 | |
| Catanzaro Lido (Catanzaro) | 93302 | Yes | Primary | 13062.28 | | 5598.12 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Cattolica | 16679 | Yes | Secondary | 2335.06 | | 1000.74 | |
| Cecina | 28370 | Yes | Secondary | 3971.8 | | 1702.2 | |
| Cefalù | 13797 | Yes | Secondary | 1931.58 | | 827.82 | |
| Celle Ligure | 5456 | Yes | Primary | 763.84 | | 327.36 | |
| Cervia | 28161 | Yes | Tertiary | 3942.54 | | 1689.66 | |
| Cesenatico | 25375 | Yes | Secondary | 3552.5 | | 1522.5 | |
| Cetraro | 10144 | Yes | Primary | 1420.16 | | 608.64 | |
| Chiavari | 27569 | Yes | Primary | 3859.66 | | 1654.14 | |
| Chioggia | 50772 | Yes | Secondary | 7108.08 | | 3046.32 | |
| Cinisi | 11456 | Yes | Pre-treatment | 1603.84 | | 687.36 | |
| Ciro` Marina | 14885 | Yes | - | 2083.9 | | 893.1 | |
| Civitanova Marche | 40661 | Yes | Primary | 5692.54 | | 2439.66 | |
| Civitavecchia | 52204 | Yes | - | 7308.56 | | 3132.24 | |
| Codevigo | 5.987 | Yes | Primary | 0.83818 | | 0.35922 | |
| Comacchio (includes: Lido delle Nazioni, Lido degli Estensi, Lido di Spina, Porto Garibaldi) | 23084 | Yes | | 3231.76 | | 1385.04 | |
| Contarina (Porto Viro) | 14700 | Yes | Primary | 2058 | | 882 | |
| Corno | 3324 | No | | | | 664.8 | |
| Crotone | 61392 | Yes | Secondary | 8594.88 | | 3683.52 | |
| Cupra Marittima | 5392 | Yes | Primary | 754.88 | | 323.52 | |
| Diamante | 5424 | Yes | Secondary | 759.36 | | 325.44 | |
| Duino-Aurisina (includes:Sistiana) | 8675 | Yes | Primary | 1214.5 | | 520.5 | |
| Elmas | 8974 | Yes | Pre-treatment | 1256.36 | | 538.44 | |
| Eraclea Mare (Eraclea) | 12844 | Yes | Primary | 1798.16 | | 770.64 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Ercolano | 55032 | No | | | | 11006.4 | |
| Erice | 28527 | Yes | Primary | 3993.78 | | 1711.62 | |
| Falconara Marittima | 27744 | Yes | Secondary | 3884.16 | | 1664.64 | |
| Falcone | 2921 | Yes | Primary | 408.94 | | 175.26 | |
| Fano | 63907 | Yes | Primary | 8946.98 | | 3834.42 | |
| | | Yes | Primary | | | | |
| Fermo | 37834 | Yes | | 5296.76 | | 2270.04 | |
| Fertilia (Alghero) | 1703 | Yes | | 238.42 | | 102.18 | |
| Finale Ligure | 11669 | Yes | Secondary | 1633.66 | | 700.14 | |
| Fiumicino (includes: Fregene, Palidoro) | 68668 | Yes | Secondary | 9613.52 | | 4120.08 | |
| Florida | 22938 | Yes | Secondary | 3211.32 | | 1376.28 | |
| Foce Verde (Latina) | 118612 | Yes | Secondary | 16605.68 | | 7116.72 | |
| Follonica | 22142 | Yes | Secondary | 3099.88 | | 1328.52 | |
| Forio | 17279 | Under construction | | | | 3455.8 | |
| Formia | 37483 | Yes | Secondary | 5247.62 | | 2248.98 | |
| Forte dei Marmi | 7760 | Yes | - | 1086.4 | | 465.6 | |
| Fossacesia | 6225 | Yes | Primary | 871.5 | | 373.5 | |
| Francavilla al mare | 24514 | Yes | Secondary | 3431.96 | | 1470.84 | |
| | | Yes | Secondary | | | | |
| Fuscaldo | 8316 | Yes | Secondary | 1164.24 | | 498.96 | |
| Gabicce Mare | 5931 | Yes | Primary | 830.34 | | 355.86 | |
| Gaeta | 21668 | Yes | - | 3033.52 | | 1300.08 | |
| Gagliano del Capo | 5502 | Yes | Primary | 770.28 | | 330.12 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Gallipoli | 21038 | Yes | - | 2945.32 | | 1262.28 | |
| Gela | 77209 | Yes | Primary | 10809.26 | | 4632.54 | |
| Genova | 609746 | Under construction | Secondary | 85364.44 | | 36584.76 | |
| | | Out of order | | | | | |
| | | Yes | | | | | |
| | | Yes | | | | | |
| | | Yes | | | | | |
| | | Under construction | | | | | |
| | | Out of order | | | | | |
| | | Yes | | | | | |
| Giardini-Naxos | 9638 | Yes | Primary | 1349.32 | | 578.28 | |
| Giarre | 27621 | Yes | Primary | 3866.94 | | 1657.26 | |
| Gioia Tauro | 18499 | Yes | Primary | 2589.86 | | 1109.94 | |
| Giovinazzo | 20643 | Yes | Secondary | 2890.02 | | 1238.58 | |
| Giulianova | 23505 | Yes | Secondary | 3290.7 | | 1410.3 | |
| | | | | | | | |
| Golfo Aranci | 2378 | Yes | Primary | 332.92 | | 142.68 | |
| Goro | 3976 | Yes | Primary | 556.64 | | 238.56 | |
| Grado | 8.926 | Yes | Primary | 1.24964 | | 0.53556 | |
| Grottammare | 15546 | Yes | Secondary | 2176.44 | | 932.76 | |
| Isole | 25232 | Yes | Secondary | 3532.48 | | 1513.92 | |
| Imperia | 42319 | Yes | Primary | 5924.66 | | 2539.14 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Under construction | Tertiary | | | | |
| Ischia | 18687 | Under construction | Secondary | | Reuse planned | 3737.4 | |
| Isola di S. Pietro (Carloforte) | 6465 | Yes | Primary | 905.1 | | 387.9 | |
| La Caletta (Siniscola) | 11603 | No | | | | 2320.6 | |
| La Maddalena | 11901 | Yes | Primary | 1666.14 | | 714.06 | |
| | | Yes | Primary | | | | |
| La Spezia | 95641 | Yes | Secondary | 13389.74 | | 5738.46 | |
| Ladispoli | 40279 | Yes | Secondary | 5639.06 | | 2416.74 | |
| Laigueglia | 1927 | No | | | | 385.4 | |
| Lavagna | 12966 | Yes | Primary | 1815.24 | | 777.96 | |
| Lavinio Lido di Enea (Anzio) | * | | | | | | |
| Lerici | 10447 | Yes | Secondary | 1462.58 | | 626.82 | |
| Lesina | 6424 | Yes | Primary | 899.36 | | 385.44 | |
| Levanto | 5599 | Yes | Primary | 783.86 | | 335.94 | |
| Licata | 39136 | Yes | Tertiary | 5479.04 | Reuse planned | 2348.16 | |
| Lido di Camaiore (Camaiore) | 32289 | Yes | Primary | 4520.46 | | 1937.34 | |
| Lido di Classe (Ravenna) | * | | | | | | |
| Lido di Metaponto (Bernalda) | 12218 | Yes | Primary | 1710.52 | | 733.08 | |
| Lido di Ostia (Roma) | 2743796 | Yes | Secondary | 384131.44 | | 164627.76 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Lido di Savio (Ravenna) | * | | | | | | |
| Lido Silvana (Pulsano) | 10904 | Yes | Primary | 1526.56 | | 654.24 | |
| Lignano Sabbiadoro | 6706 | Yes | Primary | 938.84 | | 402.36 | |
| Lipari (includes: Stromboli) | 11268 | Yes | Primary | 1577.52 | | 676.08 | |
| Livorno | 160742 | Yes | | 22503.88 | | 9644.52 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Loano | 11848 | Yes | Primary | 1658.72 | | 710.88 | |
| Locri | 12845 | Yes | Secondary | 1798.3 | | 770.7 | |
| Loreto | 12325 | Yes | Primary | 1725.5 | | 739.5 | |
| Maiori | 5644 | No | | | | 1128.8 | |
| Manfredonia | 57294 | Yes | Primary | 8021.16 | | 3437.64 | |
| Marano Lagunare | 1987 | Yes | Secondary | 278.18 | | 119.22 | |
| Maratea | 5212 | Yes | Primary | 729.68 | | 312.72 | |
| Margherita di Savoia | 12550 | Yes | Primary | 1757 | | 753 | |
| Marina di Camerota (Camerota) | 7290 | Under construction | | | | 1458 | |
| Marina di Carrara (Carrara) | 65588 | | | 9182.32 | | 3935.28 | |
| | | Yes | Primary | | | | |
| Marina di Castagneto-Donoratico (Castagneto Carducci) | 8850 | Yes | Primary | 1239 | | 531 | |
| Marina di Gioiosa Ionica | 6753 | Yes | Secondary | 945.42 | | 405.18 | |
| Marina di Grosseto (Grosseto) | 80742 | Yes | Primary | 11303.88 | | 4844.52 | |
| Marina di Massa (Massa) | 70818 | Yes | Secondary | 9914.52 | | 4249.08 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Marina di Pisa (Pisa) | 87440 | Yes | Secondary | 12241.6 | Reuse planned | 5246.4 | |
| Marina di Ragusa (Ragusa) | 73333 | Yes | Secondary | 10266.62 | Reuse planned | 4399.98 | |
| Marina di Torre Grande (Oristano) | 32156 | Yes | Secondary | 4501.84 | | 1929.36 | |
| Marinella (Castelvetrano) | 30660 | Yes | Primary | 4292.4 | | 1839.6 | |
| Marsala (includes: Birgi) | 82545 | Yes | Primary | 11556.3 | | 4952.7 | |
| Mattinata | 6534 | Yes | Primary | 914.76 | | 392.04 | |
| Mazara del Vallo | 51407 | Yes | Primary | 7196.98 | | 3084.42 | |
| Melito di Porto Salvo | 11441 | No | | | | 2288.2 | |
| Menfi | 12911 | Yes | Primary | 1807.54 | | 774.66 | |
| Messina | 242864 | Yes | Primary | 34000.96 | | 14571.84 | |
| | | Yes | Primary | | | | |
| Mestre (Venezia) | * | | | | | | |
| Milazzo | 32655 | Yes | Primary | 4571.7 | | 1959.3 | |
| Mola di Bari | 26333 | Yes | Secondary | 3686.62 | | 1579.98 | |
| Molfetta | 59923 | Yes | Tertiary | 8389.22 | | 3595.38 | |
| Monasterace Marina (Monasterace) | 3554 | Yes | Secondary | 497.56 | | 213.24 | |
| Mondello (Palermo) | * | | | | | | |
| Mondolfo (includes: Marotta) | 11989 | Yes | Primary | 1678.46 | | 719.34 | |
| Mondragone | 27142 | Yes | Primary | 3799.88 | | 1628.52 | |
| Monfalcone | 28043 | Yes | Secondary | 3926.02 | | 1682.58 | |
| Monopoli | 49488 | Yes | Tertiary | 6928.32 | | 2969.28 | |
| Montalto di Castro | 8925 | Yes | Primary | 1249.5 | | 535.5 | |
| Monte S. Angelo | 13250 | No | | | | 2650 | |
| Montesilvano Marina (Montesilvano) | 50389 | Yes | Primary | 7054.46 | | 3023.34 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Muggia | 13410 | Yes | Primary | 1877.4 | | 804.6 | |
| Murano (Venezia) | * | | | | | | |
| Muzzana del Turgnano | 2682 | Yes | Secondary | 375.48 | | 160.92 | |
| Napoli | 960082 | Yes | Primary | 134411.48 | | 57604.92 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |
| Nervi (Genova) | * | | | | | | |
| Nettuno | 46847 | Yes | Secondary | 6558.58 | | 2810.82 | |
| | | Yes | Secondary | | | | |
| Nicotera | 6356 | Yes | Secondary | 889.84 | | 381.36 | |
| Noli | 2872 | Yes | Primary | 402.08 | | 172.32 | |
| Nova Siri | 6725 | Yes | Primary | 941.5 | | 403.5 | |
| Numana | 3912 | Yes | Primary | 547.68 | | 234.72 | |
| Olbia | 54873 | Yes | Primary | 7682.22 | | 3292.38 | |
| | | Yes | Primary | | | | |
| Oneglia (Imperia) | * | | | | | | |
| Opicina (Trieste) | * | | | | | | |
| Orbetello | 15217 | Yes | Primary | 2130.38 | | 913.02 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |
| Orosei | 6790 | Yes | Primary | 950.6 | | 407.4 | |
| Ortona | 23892 | Yes | Secondary | 3344.88 | | 1433.52 | |
| Ospedaletti | 3630 | | | 508.2 | | 217.8 | |
| | | Yes | Secondary | | | | |
| Otranto | 5858 | Yes | Secondary | 820.12 | | 351.48 | |
| Pachino | 21902 | Yes | Primary | 3066.28 | | 1314.12 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Paestum (Capaccio) | 22083 | Yes | Primary | 3091.62 | | 1324.98 | |
| Palau | 4424 | Yes | Primary | 619.36 | | 265.44 | |
| Palermo | 656081 | Yes | Secondary | 91851.34 | | 39364.86 | |
| | | Yes | Secondary | | | | |
| Palinuro (Centola) | 4958 | Yes | Secondary | 694.12 | | 297.48 | |
| Palma di Montechiaro | 24145 | Yes | Primary | 3380.3 | | 1448.7 | |
| Palmadula (Sassari) | 130366 | Yes | Primary | 18251.24 | | 7821.96 | |
| Palmi | 19436 | On projection | | | | 3887.2 | |
| Paola | 16890 | Yes | Primary | 2364.6 | | 1013.4 | |
| Patti | 13456 | Under construction | None | 1883.84 | | 807.36 | |
| | | On projection | None | | | | |
| Pedaso | 2643 | Yes | Primary | 370.02 | | 158.58 | |
| Pegli (Genova) | * | | | | | | |
| Pesaro | 94799 | Yes | Primary | 13271.86 | | 5687.94 | |
| Pescara | 123062 | Yes | Tertiary | 17228.68 | | 7383.72 | |
| | | Yes | Tertiary | | | | |
| Peschici (includes: Manacore) | 4401 | Yes | Primary | 616.14 | | 264.06 | |
| Pietra Ligure | 9345 | Yes | Primary | 1308.3 | | 560.7 | |
| Pietrasanta | 24833 | Yes | Primary | 3476.62 | | 1489.98 | |
| Pineto | 14591 | Yes | Secondary | 2042.74 | | 875.46 | |
| Piombino | 34921 | Yes | Primary | 4888.94 | | 2095.26 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Pisciotta | 2879 | Yes | Primary | 403.06 | | 172.74 | |
| Pizzo | 9235 | Yes | Pre-treatment | 1292.9 | | 554.1 | |
| Platamona Lido (Sassari) | 12842 | No | | 2024 | | 544.4 | |
| Poggio Imperiale | 2838 | Forecasted | | | | 567.6 | |
| Policastro (Petilia Policastro) | 9318 | No | | | | 1863.6 | |
| Polignano a mare | 17718 | Yes | Tertiary | 2480.52 | | 1063.08 | |
| Pomposa (Codigoro) | 12615 | Yes | Primary | 1766.1 | | 756.9 | |
| Pontecagnano Faiano | 25049 | No | | 3388 | | 1621.8 | |
| Port'Ercole (Monte Argentario) | 13023 | Yes | Primary | 1823.22 | | 781.38 | |
| Porto Azzurro | 3527 | Yes | Primary | 493.78 | | 211.62 | |
| Porto Cesareo | 5573 | Forecasted | | | | 1114.6 | |
| Porto Empedocle | 17222 | Yes | Secondary | 2411.08 | | 1033.32 | |
| Porto Pino (Sant'Anna Arresi) | 2692 | Yes | Primary | 376.88 | | 161.52 | |
| Porto Recanati | 12155 | Yes | Primary | 1701.7 | | 729.3 | |
| Porto Rotondo (Olbia) | * | | | | | | |
| Porto San Giorgio | 16372 | Yes | Secondary | 2292.08 | | 982.32 | |
| Porto Sant' Elpidio | 25434 | Yes | Secondary | 3560.76 | | 1526.04 | |
| Porto Santo Stefano (Monte Argentario) | 13023 | Yes | Primary | 1823.22 | | 781.38 | |
| Porto Tolle (includes: Scardovari) | 10192 | Yes | Primary | 1426.88 | | 611.52 | |
| Porto Torres | 22461 | Yes | Secondary | 3144.54 | | 1347.66 | |
| Portoferraio | 12182 | Yes | Secondary | 1705.48 | | 730.92 | |
| | | Yes | Primary | | | | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Portoscuso | 5280 | Yes | Primary | 739.2 | | 316.8 | |
| Portovenere | 3942 | Yes | Primary | 551.88 | | 236.52 | |
| Posada | 2889 | Yes | Primary | 404.46 | | 173.34 | |
| Positano | 3981 | Yes | Primary | 557.34 | | 238.86 | |
| Potenza Picena | 16074 | Yes | Primary | 2250.36 | | 964.44 | |
| Pozzallo | 19116 | Yes | Primary | 2676.24 | | 1146.96 | |
| Praia a Mare | 6824 | Yes | Tertiary | 955.36 | | 409.44 | |
| Procida | 10627 | Under construction | | | | 2125.4 | |
| Pula (includes: S.ta Margherita) | 7340 | Yes | Primary | 1027.6 | | 440.4 | |
| Quarto d'Antino | 8077 | Yes | Primary | 1130.78 | | 484.62 | |
| Quartu Sant' Elena | 71430 | Yes | | 10000.2 | | 4285.8 | |
| Rapallo | 30571 | Forecasted | Primary | | | 6114.2 | |
| Ravenna | 157731 | Yes | Tertiary | 22082.34 | | 9463.86 | |
| | | Yes | Tertiary | | | | |
| | | Yes | Tertiary | | | | |
| Recco | 10210 | Under construction | | | | 2042 | |
| Reggio di Calabria | 185854 | Yes | Primary | 26019.56 | | 11151.24 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |
| Riccione | 35543 | Yes | Secondary | 4976.02 | | 2132.58 | |
| Rimini | 141505 | Yes | Secondary | 19810.7 | | 8490.3 | |
| | | Yes | Secondary | | | | |
| Rio Marina (includes: Cavo) | 2251 | Yes | Primary | 315.14 | | 135.06 | |
| Riola Sardo | 2144 | Yes | Primary | 300.16 | | 128.64 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Roccalumera | 4272 | Yes | Primary | 598.08 | | 256.32 | |
| Roccella Ionica | 6738 | Yes | Secondary | 943.32 | | 404.28 | |
| Rodi Garganico | 3704 | Yes | Primary | 518.56 | | 222.24 | |
| Ronchi dei Legionari | 12085 | Yes | Secondary | 1691.9 | | 725.1 | |
| Roseto degli Abruzzi | 24887 | Yes | Primary | 3484.18 | | 1493.22 | |
| Rosignano Marittimo | 32389 | Yes | Secondary | 4534.46 | | 1943.34 | |
| Rosolina (includes: I. Albarella) | 6495 | Yes | Primary | 909.3 | | 389.7 | |
| S. Cataldo (Lecce) | 94949 | Yes | Primary | 13292.86 | | 5696.94 | |
| S. Felice Circeo | 6496 | Yes | Primary | 909.44 | | 389.76 | |
| S. Giovanni a Piro | 3865 | Yes | Primary | 541.1 | | 231.9 | |
| S. Giovanni Suergiu | 6044 | Under construction | | | | 1208.8 | |
| S. Lucido | 6025 | Yes | Secondary | 843.5 | | 361.5 | |
| S. Stefano di Camastra | 4534 | Yes | Primary | 634.76 | | 272.04 | |
| S. Vincenzo | 7002 | Yes | Primary | 980.28 | | 420.12 | |
| S. Vito Chietino | 5326 | Yes | Primary | 745.64 | | 319.56 | |
| S. Vito lo Capo (includes: Torre dell'Impiso) | 4283 | Yes | Primary | 599.62 | | 256.98 | |
| S.ta Caterina Pittinuri (Cuglieri) | 2947 | Yes | Primary | 412.58 | | 176.82 | |
| S.ta Cesarea Terme | 3070 | Yes | Primary | 429.8 | | 184.2 | |
| S.ta Eufemia Lamezia (Lamezia Terme) | 70961 | Yes | Primary | 9934.54 | | 4257.66 | |
| S.ta Severa (Santa Marinella) | * | | | | | | |
| S.ta Teresa di Gallura | 5211 | Yes | Primary | 729.54 | | 312.66 | |
| S.ta Teresa di Riva | 9237 | Yes | Primary | 1293.18 | | 554.22 | |
| Sabaudia | 19381 | Yes | | 2713.34 | | 1162.86 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Yes | | | | | |
| | | Yes | | | | | |
| | | Yes | - | | | | |
| San Benedetto del Tronto | 48036 | Yes | Secondary | 6725.04 | | 2882.16 | |
| San Remo | 58879 | Yes | Tertiary | 8243.06 | | 3532.74 | |
| Sant'Antioco | 11730 | Yes | Primary | 1642.2 | | 703.8 | |
| Santa Marinella | 18088 | Yes | Primary | 2532.32 | | 1085.28 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |
| Sant'Agata di Militello | 13172 | Yes | Primary | 1844.08 | | 790.32 | |
| Sapri | 7056 | Yes | Primary | 987.84 | | 423.36 | |
| Sarroch | 5327 | No | | 745.78 | | 319.62 | |
| Savona | 62494 | Yes | Secondary | 8749.16 | | 3749.64 | |
| Scalea | 10763 | Yes | Primary | 1506.82 | | 645.78 | |
| Sciacca | 41023 | Out of order | None | | | 8204.6 | |
| Scilla | 5155 | Yes | Secondary | 721.7 | | 309.3 | |
| Selinunte (Castelvetrano) | 30660 | Yes | Primary | 4292.4 | | 1839.6 | |
| Senigallia | 44673 | Yes | Secondary | 6254.22 | | 2680.38 | |
| Sestri Levante | 18721 | Yes | Primary | 2620.94 | | 1123.26 | |
| Sferracavallo (Palermo) | * | | | | | | |
| Siderno | 18066 | Yes | Secondary | 2529.24 | | 1083.96 | |
| Silvi Marina | 15750 | Yes | Primary | 2205 | | 945 | |
| Sirolo | 3826 | Yes | Primary | 535.64 | | 229.56 | |
| Solvay (Rosignano Marittimo) | * | | | | | | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Sorso | 14811 | Yes | Primary | 2073.54 | | 888.66 | |
| Sottomarina (Chioggia) | * | | | | | | |
| Soverato | 9616 | Yes | Primary | 1346.24 | | 576.96 | |
| Sperlonga | 3273 | Yes | Primary | 458.22 | | 196.38 | |
| Spotorno | 4094 | Yes | Primary | 573.16 | | 245.64 | |
| Strongoli | 6295 | Yes | Primary | 881.3 | | 377.7 | |
| Taggia (includes:Arma di Taggia) | 14380 | Yes | Primary | 2013.2 | | 862.8 | |
| Taglio di Po | 8534 | Yes | Primary | 1194.76 | | 512.04 | |
| Taormina (includes: Mazzarò) | 11096 | Yes | Primary | 1553.44 | | 665.76 | |
| Taranto | 193136 | Yes | Primary | 27039.04 | | 11588.16 | |
| | | Yes | Primary | | | | |
| | | Yes | Primary | | | | |
| Terme Luigiane (Acquappesa) | 1964 | Yes | Secondary | 274.96 | | 117.84 | |
| Termini Imerese | 27568 | Yes | Primary | 3859.52 | | 1654.08 | |
| | | Under construction | Secondary | | | | |
| Termoli | 32606 | Yes | Secondary | 4564.84 | | 1956.36 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Termoli | 44081 | Yes | Secondary | 6171.34 | | 2644.86 | |
| | | Yes | Secondary | | | | |
| Tindari (Patti) | * | | | | | | |
| Tirrenia (Pisa) | 87440 | Yes | Primary | 12241.6 | Reuse | 5246.4 | |
| Torcello (Venezia) | * | | | | | | |
| Torchiarolo | 5156 | Yes | Primary | 721.84 | | 309.36 | |
| Torre Annunziata | 43981 | Forecasted | | | | 8796.2 | |
| Torre Canne (Fasano) | 38493 | Yes | Primary | 5389.02 | | 2309.58 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--------------------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Torre del Greco | 87323 | Yes | Primary | 12225.22 | | 5239.38 | |
| Torre Faro (Messina) | * | | | | | | |
| Torre Mileto (Sannicandro Garganico) | 16134 | Yes | Primary | 2258.76 | | 968.04 | |
| Tortoli (includes: Arbatax) | 10749 | Yes | Primary | 1504.86 | | 644.94 | |
| Tortoreto | 9952 | Yes | Secondary | 1393.28 | | 597.12 | |
| Trabia | 9546 | Yes | Primary | 1336.44 | | 572.76 | |
| Tramariglio (Alghero) | * | | | | | | |
| Trani | 53855 | Yes | Tertiary | 7539.7 | | 3231.3 | |
| Trapani | 70654 | Under construction | Primary | | | 14130.8 | |
| Trebisacce | 9365 | Yes | Secondary | 1311.1 | | 561.9 | |
| Tremestieri Etneo | 21490 | No | | 2984 | | 1314 | |
| Tricase | 17803 | Yes | Primary | 2492.42 | | 1068.18 | |
| Trieste | 205523 | Yes | Secondary | 28773.22 | | 12331.38 | |
| | | Yes | Secondary | | | | |
| | | Yes | Secondary | | | | |
| Trinitapoli | 14502 | Yes | Primary | 2030.28 | | 870.12 | |
| Tropea | 6775 | Yes | Secondary | 948.5 | | 406.5 | |
| Vado Ligure | 8511 | Yes | | 1191.54 | | 510.66 | |
| Varazze | 13732 | Yes | Secondary | 1922.48 | | 823.92 | |
| Vasto | 39811 | Yes | Secondary | 5573.54 | | 2388.66 | |
| Venezia | 270722 | Yes | Tertiary | 37901.08 | | 16243.32 | |
| | | Yes | Tertiary | | | | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Yes | Tertiary | | | | |
| | | Yes | Tertiary | | | | |
| | | Yes | Tertiary | | | | |
| Ventimiglia | 25693 | Yes | Primary | 3597.02 | | 1541.58 | |
| Viareggio | 64192 | Yes | Secondary | 8986.88 | | 3851.52 | |
| Vico del Gargano | 7989 | Yes | Primary | 1118.46 | | 479.34 | |
| Vico Equense | 20879 | Under construction | Secondary | | Reuse planned | 4175.8 | |
| Vieste | 13886 | Yes | Secondary | 1944.04 | | 833.16 | |
| Vietri sul Mare | 8325 | Yes | Primary | 1165.5 | | 499.5 | |
| Villa San Giovanni | 13700 | Yes | Primary | 1918 | | 822 | |
| Villafranca Tirrena | 8957 | Yes | Primary | 1253.98 | | 537.42 | |
| Villasimius | 3576 | Yes | Primary | 500.64 | | 214.56 | |
| Viserba (Rimini) | * | | | | | | |
| Voltri (Genova) | * | | | | | | |
| Zapponeta | 3403 | Yes | Primary | 476.42 | | 204.18 | |

Remarks: * As these towns belong to municipalities (in parenthesis) already included in the report, no population is indicated

Country: ITALY

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------|-----------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Adige | Malles Venosta | 5050 | yes | --- | Primary | 707 | --- | 303 | --- |
| Adige | Silandro | 6014 | yes | --- | primary | 841.96 | --- | 360.84 | --- |
| Adige | Merano | 37673 | yes | --- | primary | 5274.22 | --- | 2260.38 | --- |
| Adige | Lana | 11120 | yes | --- | primary | 1556.8 | --- | 667.2 | --- |
| Adige | Bolzano | 103679 | yes | --- | tertiary | 14515.06 | RB | 6220.74 | --- |
| Adige | Appiano | 14013 | yes | --- | tertiary | 1961.82 | RB | 840.78 | --- |
| Adige | Caldaro | 7572 | yes | --- | primary | 1060.08 | --- | 454.32 | --- |
| Adige | Ora | 3022 | yes | --- | tertiary | 423.08 | RB | 181.32 | --- |
| Adige | Mezzolombardo | 6801 | yes | --- | primary | 952.14 | --- | 408.06 | --- |
| Adige | S. Michele all' Adige | 2803 | yes | --- | primary | 392.42 | --- | 168.18 | --- |
| Adige | Lavis | 8588 | yes | --- | primary | 1202.32 | --- | 515.28 | --- |
| Adige | Trento | 115511 | yes | --- | primary | 16171.54 | --- | 6930.66 | --- |
| Adige | Folgaria | 3112 | yes | --- | primary | 435.68 | --- | 186.72 | --- |
| Adige | Rovereto | 37556 | yes | --- | primary | 5257.84 | --- | 2253.36 | --- |
| Adige | Mori | 9383 | yes | --- | primary | 1313.62 | --- | 562.98 | --- |
| Adige | Ala | 8973 | yes | --- | primary | 1256.22 | --- | 538.38 | --- |
| Adige | Lazise | 6877 | yes | --- | primary | 962.78 | --- | 412.62 | --- |
| Adige | Bussolengo | 19574 | yes | --- | primary | 2740.36 | --- | 1174.44 | --- |
| Adige | Verona | 264475 | yes | --- | primary | 37026.5 | --- | 15868.5 | --- |
| Adige | Zevio | 14332 | yes | --- | primary | 2006.48 | --- | 859.92 | --- |
| Adige | S. Giovanni Lupatoto | 23860 | no | --- | --- | --- | --- | --- | --- |
| Adige | S. Bonifacio | 20255 | yes | --- | primary | 2835.7 | --- | 1215.3 | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------|------------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Adige | Minerbe | 4783 | yes | --- | primary | 669.62 | --- | 286.98 | --- |
| Adige | Legnago | 25556 | yes | --- | primary | 3577.84 | --- | 1533.36 | --- |
| Adige | Villa Bartolomea | 5861 | yes | --- | primary | 820.54 | --- | 351.66 | --- |
| Adige | Badia Polesine | 10896 | yes | --- | tertiary | 1525.44 | RB | 653.76 | --- |
| Adige | Lendinara | 12247 | yes | --- | tertiary | 1714.58 | RB | 734.82 | --- |
| Adige | Boara Pisani | 2639 | yes | --- | primary | 369.46 | --- | 158.34 | --- |
| Adige | Rovigo | 52118 | yes | --- | primary | 7296.52 | --- | 3127.08 | --- |
| Adige | Anguillara Ven. | 4690 | yes | --- | primary | 656.6 | --- | 281.4 | --- |
| Adige | Cavarzere | 14983 | yes | --- | primary | 2097.62 | --- | 898.98 | --- |
| Adige | Loreo | 3732 | yes | --- | tertiary | 522.48 | RB | 223.92 | --- |
| Adige | Rosolina | 6495 | yes | --- | primary | 909.3 | --- | 389.7 | --- |
| Arno | Stia | 2952 | yes | --- | primary | 413.28 | --- | 177.12 | --- |
| Arno | Poppi | 6379 | yes | --- | primary | 893.06 | --- | 382.74 | --- |
| Arno | Bibbiena | 12725 | yes | --- | primary | 1781.5 | --- | 763.5 | --- |
| Arno | Subbiano | 6383 | yes | --- | primary | 893.62 | --- | 382.98 | --- |
| Arno | Terranuova Bracciolini | 12206 | yes | --- | --- | 1708.84 | --- | 732.36 | --- |
| Arno | Bucine | 10150 | yes | --- | primary | 1421 | --- | 609 | --- |
| Arno | Montevarchi | 24022 | yes | --- | --- | 3363.08 | --- | 1441.32 | --- |
| Arno | San Giovanni Valdarno | 17171 | yes | --- | primary | 2403.94 | --- | 1030.26 | --- |
| Arno | Figline Valdarno | 16987 | yes | --- | primary | 2378.18 | --- | 1019.22 | --- |
| Arno | Incisa in Val d' Arno | 6259 | yes | --- | primary | 876.26 | --- | 375.54 | --- |
| Arno | Bagno a Ripoli | 25913 | yes | --- | primary | 3627.82 | --- | 1554.78 | --- |
| Arno | Pontassieve | 20811 | yes | --- | primary | 2913.54 | --- | 1248.66 | --- |
| Arno | Fiesole | 14264 | yes | --- | primary | 1996.96 | --- | 855.84 | --- |
| Arno | Firenze | 368901 | yes | --- | primary | 51646.14 | --- | 22134.06 | --- |
| Arno | Cambi Bisenzio | 43224 | no | --- | --- | --- | --- | --- | --- |
| Arno | Lastra a Signa | 19684 | yes | --- | primary | 2755.76 | --- | 1181.04 | --- |
| Arno | Montelupo Fior. | 13537 | no | --- | --- | --- | --- | --- | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------|---------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Arno | Empoli | 47549 | yes | --- | primary | 6656.86 | --- | 2852.94 | --- |
| Arno | San Miniato | 28124 | yes | --- | primary | 3937.36 | --- | 1687.44 | --- |
| Arno | Fucecchio | 23340 | yes | --- | --- | 3267.6 | --- | 1400.4 | --- |
| Arno | Pontedera | 28198 | yes | --- | --- | 3947.72 | --- | 1691.88 | --- |
| Arno | Bientina | 7495 | yes | --- | primary | 1049.3 | --- | 449.7 | --- |
| Arno | Cascina | 43714 | yes | --- | primary | 6119.96 | --- | 2622.84 | --- |
| Arno | S. Giuliano Terme | 31621 | yes | --- | --- | 4426.94 | --- | 1897.26 | --- |
| Arno | Pisa | 87440 | yes | --- | primary | 12241.6 | --- | 5246.4 | --- |
| Brenta | Levico Terme | 6325 | Yes | --- | primary | 885.5 | --- | 379.5 | --- |
| Brenta | Rocegno | 2821 | Yes | --- | primary | 394.94 | --- | 169.26 | --- |
| Brenta | Borgo Valsugana | 6733 | Yes | --- | primary | 942.62 | --- | 403.98 | --- |
| Brenta | Grigno | 2329 | Yes | --- | primary | 326.06 | --- | 139.74 | --- |
| Brenta | Arsie | 2597 | Yes | --- | primary | 363.58 | --- | 155.82 | --- |
| Brenta | Enego | 1898 | yes | --- | primary | 265.72 | --- | 113.88 | --- |
| Brenta | Bassano d. Grappa | 43015 | Yes | --- | primary | 6022.1 | --- | 2580.9 | --- |
| Brenta | Marostica | 13761 | Yes | --- | primary | 1926.54 | --- | 825.66 | --- |
| Brenta | Rosà | 13970 | no | --- | --- | --- | --- | --- | --- |
| Brenta | Sandrigo | 8620 | Yes | --- | primary | 1206.8 | --- | 517.2 | --- |
| Brenta | Cittadella | 20027 | Yes | --- | primary | 2803.78 | --- | 1201.62 | --- |
| Brenta | Piazzola sul Brenta | 11119 | Yes | --- | primary | 1556.66 | --- | 667.14 | --- |
| Brenta | Vigonza | 21879 | Yes | --- | primary | 3063.06 | --- | 1312.74 | --- |
| Brenta | Padova | 212989 | Yes | --- | primary | 29818.46 | --- | 12779.34 | --- |
| Brenta | Stra | 7636 | no | --- | --- | --- | --- | --- | --- |
| Brenta | Dolo | 15078 | Yes | fitodepuration | tertiary | 2110.92 | --- | 904.68 | --- |
| Brenta | Piove di Sacco | 19109 | Yes | Biological | secondary | 2675.26 | --- | 1146.54 | --- |
| Brenta | Chioggia | 50772 | Yes | --- | --- | 7108.08 | --- | 3046.32 | --- |
| Pescara | Montereale | 2794 | Yes | --- | --- | 391.16 | --- | 167.64 | --- |
| Pescara | Pizzoli | 3705 | yes | --- | --- | 518.7 | --- | 222.3 | --- |
| Pescara | L' Aquila | 72696 | yes | --- | Primary | 10177.44 | --- | 4361.76 | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------|-------------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Pescara | Pratola Peligna | 7878 | yes | --- | Primary | 1102.92 | --- | 472.68 | --- |
| Pescara | Popoli | 5537 | yes | --- | Primary | 775.18 | --- | 332.22 | --- |
| Pescara | Torre de Passeri | 3214 | yes | --- | Primary | 449.96 | --- | 192.84 | --- |
| Pescara | Scafa | 3919 | yes | --- | Primary | 548.66 | --- | 235.14 | --- |
| Pescara | Manoppello | 6928 | yes | --- | tertiary | 969.92 | RB | 415.68 | --- |
| Pescara | Cepagatti | 10460 | yes | --- | Primary | 1464.4 | --- | 627.6 | --- |
| Pescara | Chieti | 54305 | yes | --- | Primary | 7602.7 | --- | 3258.3 | --- |
| Po | Paesana | 2916 | yes | --- | Primary | 408.24 | --- | 174.96 | --- |
| Po | Saluzzo | 16877 | yes | --- | tertiary | 2362.78 | RB | 1012.62 | --- |
| Po | Villafranca Piemonte | 4871 | yes | --- | tertiary | 681.94 | RB | 292.26 | --- |
| Po | Carignano | 9206 | yes | --- | tertiary | 1288.84 | RB | 552.36 | --- |
| Po | Moncalieri | 58087 | yes | --- | tertiary | 8132.18 | RB | 3485.22 | --- |
| Po | Torino | 909538 | yes | --- | tertiary | 127335.32 | RB | 54572.28 | --- |
| Po | Settimo To. | 47713 | yes | --- | tertiary | 6679.82 | RB | 2862.78 | --- |
| Po | Gassino Torinese | 9504 | yes | --- | tertiary | 1330.56 | RB | 570.24 | --- |
| Po | Chivasso | 25981 | yes | --- | tertiary | 3637.34 | RB | 1558.86 | --- |
| Po | Saluggia | 4182 | yes | --- | Primary | 585.48 | --- | 250.92 | --- |
| Po | Trino | 7669 | yes | --- | Primary | 1073.66 | --- | 460.14 | --- |
| Po | Crescentino | 8153 | yes | --- | tertiary | 1141.42 | RB | 489.18 | --- |
| Po | Casale Monferrato | 35993 | yes | --- | tertiary | 5039.02 | RB | 2159.58 | --- |
| Po | Valenza | 20163 | yes | --- | Primary | 2822.82 | --- | 1209.78 | --- |
| Po | Castelnuovo Scr. | 5508 | yes | --- | tertiary | 771.12 | RB | 330.48 | --- |
| Po | Sale | 4286 | yes | --- | tertiary | 600.04 | RB | 257.16 | --- |
| Po | Sannazzaro de' Burgondi | 5930 | yes | --- | Primary | 830.2 | --- | 355.8 | --- |
| Po | Casei Gerola | 2568 | yes | --- | tertiary | 359.52 | RB | 154.08 | --- |
| Po | Pavia | 71184 | yes | --- | Primary | 9965.76 | --- | 4271.04 | --- |
| Po | Stradella | 11603 | yes | --- | tertiary | 1624.42 | RB | 696.18 | --- |
| Po | Casalpusterlengo | 15216 | yes | --- | tertiary | 2130.24 | RB | 912.96 | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------|------------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Po | S. Colombano al Lambro | 7519 | yes | --- | tertiary | 1052.66 | RB | 451.14 | --- |
| Po | Codogno | 15656 | yes | --- | Primary | 2191.84 | --- | 939.36 | --- |
| Po | Caorso | 4893 | yes | --- | tertiary | 685.02 | RB | 293.58 | --- |
| Po | Cremona | 72248 | yes | --- | tertiary | 10114.72 | RB | 4334.88 | --- |
| Po | Busseto | 6978 | yes | --- | tertiary | 976.92 | RB | 418.68 | --- |
| Po | Sissa | 4313 | yes | --- | Primary | 603.82 | --- | 258.78 | --- |
| Po | Casalmaggiore | 14930 | yes | --- | Primary | 2090.2 | --- | 895.8 | --- |
| Po | Sabbioneta | 4373 | yes | --- | tertiary | 612.22 | RB | 262.38 | --- |
| Po | Colorno | 8989 | yes | --- | Primary | 1258.46 | --- | 539.34 | --- |
| Po | Viadana | 19503 | yes | --- | tertiary | 2730.42 | RB | 1170.18 | --- |
| Po | Guastalla | 15135 | yes | --- | tertiary | 2118.9 | RB | 908.1 | --- |
| Po | Luzzara | 9167 | yes | --- | tertiary | 1283.38 | RB | 550.02 | --- |
| Po | Suzzara | 20343 | yes | --- | Primary | 2848.02 | --- | 1220.58 | --- |
| Po | S. Benedetto Po | 7748 | yes | --- | tertiary | 1084.72 | RB | 464.88 | --- |
| Po | Ostiglia | 7225 | yes | --- | tertiary | 1011.5 | RB | 433.5 | --- |
| Po | Sermide | 6486 | yes | --- | Primary | 908.04 | --- | 389.16 | --- |
| Po | Castelmassa | 4416 | yes | --- | tertiary | 618.24 | RB | 264.96 | --- |
| Po | Ficarolo | 2641 | yes | --- | Primary | 369.74 | --- | 158.46 | --- |
| Po | Bondeno | 15447 | yes | --- | tertiary | 2162.58 | RB | 926.82 | --- |
| Po | Occhiobello | 11403 | yes | --- | Primary | 1596.42 | --- | 684.18 | --- |
| Po | Ferrara | 134967 | yes | --- | tertiary | 18895.38 | RB | 8098.02 | --- |
| Po | Polesella | 4183 | yes | --- | tertiary | 585.62 | RB | 250.98 | --- |
| Po | Crespino | 2043 | yes | --- | Primary | 286.02 | --- | 122.58 | --- |
| Po | Berra | 5345 | yes | --- | tertiary | 748.3 | RB | 320.7 | --- |
| Po | Corbola | 2575 | yes | --- | Primary | 360.5 | --- | 154.5 | --- |
| Po | Adria | 20488 | yes | --- | Primary | 2868.32 | --- | 1229.28 | --- |
| Po | Ariano nel Polesine | 4706 | yes | --- | tertiary | 658.84 | RB | 282.36 | --- |
| Po | Taglio di Po | 8534 | yes | --- | Primary | 1194.76 | --- | 512.04 | --- |
| Po | Porto Tolle | 10192 | yes | --- | Primary | 1426.88 | --- | 611.52 | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--------|---------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Reno | San Marcello Pist. | 6871 | yes | --- | Primary | 961.94 | --- | 412.26 | --- |
| Reno | Porreta Terme | 4784 | yes | --- | Primary | 669.76 | --- | 287.04 | --- |
| Reno | Vergato | 7846 | yes | --- | Primary | 1098.44 | --- | 470.76 | --- |
| Reno | Monzuno | 6477 | yes | --- | Primary | 906.78 | --- | 388.62 | --- |
| Reno | Sasso Marconi | 14719 | yes | --- | tertiary | 2060.66 | RB | 883.14 | --- |
| Reno | Casalecchio di Reno | 35513 | yes | --- | tertiary | 4971.82 | RB | 2130.78 | --- |
| Reno | Bologna | 377220 | yes | --- | tertiary | 52810.8 | RB | 22633.2 | --- |
| Reno | Cento | 35150 | yes | --- | Primary | 4921 | --- | 2109 | --- |
| Reno | Poggio Renatico | 9446 | yes | --- | Primary | 1322.44 | --- | 566.76 | --- |
| Reno | Malalbergo | 8732 | yes | --- | Primary | 1222.48 | --- | 523.92 | --- |
| Reno | Molinella | 15756 | yes | --- | Primary | 2205.84 | --- | 945.36 | --- |
| Reno | Argenta | 22570 | yes | --- | Primary | 3159.8 | --- | 1354.2 | --- |
| Reno | Alfonsine | 12373 | yes | --- | Primary | 1732.22 | --- | 742.38 | --- |
| Tevere | Pieve S. Stefano | 3224 | yes | --- | Primary | 451.36 | --- | 193.44 | --- |
| Tevere | Sansepolcro | 16365 | yes | --- | Primary | 2291.1 | --- | 981.9 | --- |
| Tevere | S. Giustino | 11393 | yes | --- | tertiary | 1595.02 | RB | 683.58 | --- |
| Tevere | Citta di Castello | 40455 | yes | --- | Primary | 5663.7 | --- | 2427.3 | --- |
| Tevere | Umbertide | 16763 | yes | --- | Primary | 2346.82 | --- | 1005.78 | --- |
| Tevere | Perugia | 166667 | yes | --- | tertiary | 23333.38 | RB | 10000.02 | --- |
| Tevere | Deruta | 9521 | yes | --- | Primary | 1332.94 | --- | 571.26 | --- |
| Tevere | Marsciano | 18619 | yes | --- | Primary | 2606.66 | --- | 1117.14 | --- |
| Tevere | Todi | 17282 | yes | --- | Primary | 2419.48 | --- | 1036.92 | --- |
| Tevere | Prato | 186798 | yes | --- | Primary | 26151.72 | --- | 11207.88 | --- |
| Tevere | Baschi | 2845 | yes | --- | Primary | 398.3 | --- | 170.7 | --- |
| Tevere | Castiglione in T. | 2383 | yes | --- | tertiary | 333.62 | RB | 142.98 | --- |
| Tevere | Orte | 8986 | yes | --- | Primary | 1258.04 | --- | 539.16 | --- |
| Tevere | Magliano Sabina | 3929 | yes | --- | Primary | 550.06 | --- | 235.74 | --- |
| Tevere | Poggio Mirteto | 6056 | yes | --- | primary | 847.84 | --- | 363.36 | --- |
| Tevere | Fiano R. | 13369 | yes | --- | tertiary | 1871.66 | RB | 802.14 | --- |
| Tevere | Monterotondo | 39092 | yes | --- | primary | 5472.88 | --- | 2345.52 | --- |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------|-----------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Tevere | Mentana | 20973 | yes | --- | primary | 2936.22 | --- | 1258.38 | --- |
| Tevere | Roma | 2743796 | yes | --- | primary | 384131.44 | --- | 164627.76 | --- |
| Tevere | Fiumicino | 68668 | yes | --- | tertiary | 9613.52 | RB | 4120.08 | --- |
| Volturno | Venafro | 11502 | yes | --- | primary | 1610.28 | --- | 690.12 | --- |
| Volturno | Alife | 7490 | yes | --- | tertiary | 1048.6 | RB | 449.4 | --- |
| Volturno | Dragoni | 2148 | yes | --- | primary | 300.72 | --- | 128.88 | --- |
| Volturno | Telese Terme | 6848 | yes | --- | tertiary | 958.72 | RB | 410.88 | --- |
| Volturno | Caiazzo | 5816 | yes | --- | primary | 814.24 | --- | 348.96 | --- |
| Volturno | Capua | 18879 | yes | --- | primary | 2643.06 | --- | 1132.74 | --- |
| Volturno | S. Maria Capua Vetere | 33521 | yes | --- | tertiary | 4692.94 | RB | 2011.26 | --- |
| Volturno | Grazzanise | 6833 | yes | --- | primary | 956.62 | --- | 409.98 | --- |
| Volturno | Castel Volturno | 23870 | yes | --- | tertiary | 3341.8 | RB | 1432.2 | --- |
| Remarks: | | | | | | | | | |

Country: LEBANON

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| Location | Population served | Design Flow (m3/d) | Technology | Status |
|--|-------------------|--------------------|----------------|-------------------|
| Beirut & Mount Lebanon, BML | | | | |
| Al Ghadir- preliminary, BML | 250,000 | 50,000 | PT | operating (*) |
| Al Ghadir- upgrade, BML | 850,000 | 138,000 | - | - |
| Jbeil, BML | 50,000 | 9,000 | B | on going |
| Ras Nabi Younis, BML | 88,000 | 11,900 | B | completed |
| Barouk, BML | 12,000 | 1,000 | AS | Under preparation |
| Nabeh el Safa, BML | 30,000 | 3,000 | AS | Under preparation |
| Hrajel, BML | 37,000 | 6,000 | - | |
| Keserwan/Tabarja, BML | 505,000 | 70,000 | B | |
| Bourj Hammoud, BML * | 2,200,000 | 330,000 | PT | |
| South Lebanon and Nabatieh, SLN | | | | |
| Saida, SLN | 390,000 | 55,000 | PT | operating |
| Sour, SLN | 200,000 | 45,000 | AS | on going |
| Nabatieh, SLN | 100,000 | 9,000 | EAAS | completed |
| North Lebanon, NL | | | | |
| Batroun, NL | 30,000 | 4,100 | EAAS | completed |
| Bcharre, NL | 15,600 | 3,560 | - | under preparation |
| Chekka, NL | 16,700 | 1,750 | EAAS | completed |
| Tripoli, NL | 1,000,000 | 135,000 | Medium Load AS | completed |
| Abdeh, NL | 185,000 | 30,000 | AS | under preparation |

| Location | Population served | Design Flow (m3/d) | Technology | Status |
|-------------------------|-------------------|--------------------|------------|-------------------|
| Mechmech, NL | 42,000 | 6,800 | - | under preparation |
| Bekaa (**) | | | | |
| Baalbek, Bekaa | 89,000 | 12,000 | AS | operating |
| Zahle, Bekaa | 120,000 | 18,000 | TF | on going |
| Jib Jinine, Bekaa | 77,000 | 10,500 | EAAS | on going |
| Saghbine, Bekaa | 4,100 | 530 | EAAS | |
| Laboue, Bekaa | 53,000 | 7,000 | - | on going |
| Majdl Anjar, Bekaa | 275,000 | 44,500 | - | under preparation |
| Tibnine el Tahta, Bekaa | 100,000 | 25,000 | - | under preparation |
| Aitanit, Bekaa | 37,500 | 5,000 | TF | Operating |
| Fourzol, Bekaa | 7,400 | 1,000 | TF | Operating |
| Chmistar, Bekaa | 13,200 | 1,800 | TF | under preparation |
| Ablah, Bekaa | 14,630 | 2,000 | TF | under preparation |

Remarks:

* Primary Treatment in operation and currently being extended for secondary treatment according to the old data

** The area of Beqaa has been excluded from the analysis as it is not a coastal area

Country: LIBYA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Discharge of treated water | remarks |
|------------------|------------------|-----------------------|---------------------------|--|-----------------------------------|-------------------|----------------------------|-----------------------|
| Tripoli 1 | abuslim | 27000 | 17000 | Biological treatment | yes | Chlorine solution | Project of Green area | Need to be maintained |
| Tripoli 2 | | 11000 | 600 | Ventilation prolonged activated sludge | no | | | under construcion |
| Tripoli | Jansur | 25000 | 25000 | Ventilation prolonged activated sludge | yes | Chlorine solution | Project of Green area | good |
| Tiripoli | Tajura | 15000 | 15000 | Ventilation prolonged activated sludge | yes | Chlorine solution | To the Sea | good |
| bengazi 1 | Algwrsha M1 | 27300 | 27000 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| bengazi 2 | | 54000 | 54000 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| Almarge | Al marge M1 | 4500 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| Al marge | Al marge M2 | 8300 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| Berses | Berses | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| Al agoria | Al agoria | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| Al abiat | Al abair | 7400 | 0 | Ventilation prolonged activated sludge | no | | | |
| tobruk | tobruk | 33000 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Need to be maintained |
| North of albaida | North of albaida | 2507 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Discharge of treated water | remarks |
|---------------|-------------|-----------------------|---------------------------|--|-----------------------------------|-------------------|----------------------------|-----------------------|
| gernada | gernada | 2507 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| shehat | shehat | 6743 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| massa | massa | 2507 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | under construcion |
| derna | derna | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| ras alhelal | ras alhelal | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| karsa | karsa | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of Order |
| Al gobba | Al gobba | 2500 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Need to be maintained |
| Al gaigab | Al gaigab | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Al thron | Al thron | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Al abrag | Al abrag | | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Al dabosia | Al dabosia | 1200 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Need to be maintained |
| Lib. palce | Lib. palce | 1500 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Need to be maintained |
| Atnmara 1 | Atnmara 1 | 300 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Ainmara2 | Ainmara2 | 500 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Martuba | Martuba | 1500 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Umarrzam | Umarrzam | 1000 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Discharge of treated water | remarks |
|---------------|-----------|-----------------------|---------------------------|--|-----------------------------------|-------------------|----------------------------|-----------------------|
| Al mchili | Al mchili | 350 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Al tememi | Al tememi | 1000 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Al iziat | Al iziat | 350 | 0 | Ventilation prolonged activated sludge | no | Chlorine solution | To the Sea | Out of order |
| Musrata 1 | Musrata | 1350 | 1350 | Biological treatment prolonged ventilation | yes | Chlorine solution | To the Sea | Need to be maintained |
| Musrata 2 | | 24000 | 24000 | Biological treatment prolonged ventilation | no | | | |
| nsallta | msallta | 4500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | under construcion |
| Tarhuna | tarhuna | 3200 | 0 | Biological treatment prolonged ventilation | no | | | Out of order |
| alchoms | alchoms | 8000 | 0 | Biological treatment prolonged ventilation | no | | | Out of order |
| ziletin | ziletin | 6000 | 0 | Biological treatment prolonged ventilation | no | | | Out of order |
| Strte | Strte | 26400 | 21000 | Biological treatment prolonged ventilation | yes | Chlorine solution | To the Sea | good |
| Abuhadi | Abuhadi | 3000 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | Need to be maintained |
| ajdabia | ajdabia | 15600 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | Out of order |
| alkufra | alkufra | 600 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | |
| Al jagbub | Al gagbub | 2500 | 0 | Biological treatment prolonged ventilation | yes | Chlorine solution | To the Sea | |
| Al zawia | Al zawia | 65000 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | out of order |
| sabrata | sabrata | 4000 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the Sea | under construcion |

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Discharge of treated water | remarks |
|---------------|---------------|-----------------------|---------------------------|--|-----------------------------------|-------------------|----------------------------|-----------------------|
| Zwara | Zwara | 27500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Project of Gresing area | Need to be maintained |
| surman | surman | 15000 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the SEA | Need to be maintained |
| Al jelat | Al jelat | 0 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | To the SEA | Need to be maintained |
| garian | garian | 3000 | 3000 | Biological treatment prolonged ventilation | yes | Chlorine solution | In the valley | Need to be maintained |
| yfren | yfren | 1720 | 0 | Biological treatment prolonged ventilation | yes | Chlorine solution | In the valley | Need to be maintained |
| kabo | kabo | 0 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | In the valley | Need to be maintained |
| Algariat East | Algariat East | 500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | In the valley | Need to be maintained |
| Algariat west | Algariat west | 500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | In the valley | Need to be maintained |
| tabga | tabga | 100 | 0 | Biological treatment prolonged ventilation | no | | | Need to be maintained |
| teji | teji | 100 | 0 | Biological treatment prolonged ventilation | no | | | Need to be maintained |
| Sabha1 | Sabha | 1500 | 500 | Biological treatment prolonged ventilation | yes | disinfectant | | Need to be maintained |
| Sabha2 | | 0 | | Biological treatment prolonged ventilation | no | disinfectant | Free area | under construcion |
| Tamanhat | Sabha | 0 | | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | under construcion |
| Azzaian | Sabha | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Samno | sabha | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| gadug | sabha | 500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Dischasrge of treated water | remarks |
|---------------|--------------|-----------------------|---------------------------|--|-----------------------------------|-------------------|-----------------------------|--------------|
| murzuk | murzuk | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Tragen | | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Um alarneb | | 130 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Al gatrun | Al gatrun | 270 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Ubari | Ubari | 270 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Jerma | Ubari | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Al ghrefa | Ubari | 200 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| al grara | Ubari | 160 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Al fejej | ubari | 128 | 0 | Biological treatment prolonged ventilation | no | | | |
| Al alberket | ghat | 500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Ghat | ghat | 500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Brak alshati | Brak alshati | 1500 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| adre | | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| machruga | | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| wenzrik | | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |
| Al bergen | | 180 | 0 | Biological treatment prolonged ventilation | no | Chlorine solution | Free area | Out of order |

| Name of plant | Location | Nominal capacity m3/d | Operational capacity m3/d | Processing | State of the plant Working or not | Disinfectant | Discharge of treated water | remarks |
|---------------|-----------|-----------------------|---------------------------|--|-----------------------------------|--------------|----------------------------|---------|
| Abrega | Al brega | 3500 | | Biological treatment prolonged ventilation | yes | | Green area | good |
| Ras lanuf | Ras naluf | 5000 | | Biological treatment prolonged ventilation | yes | | Green area | good |

Country: MALTA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|----------------------|--|-----------------------------------|---|---------------------------------|---|-----------------------------------|
| Attard | 10,655 | SASTP | Tertiary | Circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Balzan | 3,973 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Birgu | 2,627 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Birzebbugia | 9,405 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| B'Kara | 22,492 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Bormla | 5,589 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|----------------------|--|--|---|---------------------------------|---|-----------------------------------|
| Dingli | 3,376 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Fgura | 11,578 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Floriana | 2,202 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Ghajnsielem | 2,508 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | 0% | N/A |
| Ghargur | 2,404 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Ghaxaq | 4,475 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Gozo Main | 31,295 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | 0% | N/A |
| Gudja | 2,896 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Gzira | 7,087 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Hamrun | 9,420 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land catchment | RE | circa 49% of Marsa Land catchment untreated | SO |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|------------|----------------------|--|-----------------------------------|---|---------------------------------|---|-----------------------------------|
| Iklin | 3,256 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Isla | 3,011 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Kalkara | 2,869 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Kirkop | 2,211 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Lija | 2,883 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Luqa | 5,813 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Marsa | 6,000 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Marsascala | 9,853 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Marsaxlokk | 3,298 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Mellieha | 7,944 | Cumnija STP | Secondary | 100% | SO | 0% | N/A |
| Mgarr | 3,031 | Cumnija STP | Secondary | 100% | SO | 0% | N/A |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|----------------------|--|--|---|---------------------------------|---|-----------------------------------|
| Mosta | 19,155 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Mqabba | 3,091 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Msida | 7,851 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Mtarfa | 2,478 | SASTP | Tertiary | Circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Nadur | 4,206 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | N/A | N/A |
| Naxxar | 12,354 | SASTP | Tertiary | Circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Paola | 8,719 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Pembroke | 3,012 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Pieta | 3,846 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------|----------------------|--|--|---|---------------------------------|---|-----------------------------------|
| Qormi | 16,730 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Qrendi | 2,566 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Rabat | 11,412 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Rabat (Gozo) | 6,184 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | 0% | N/A |
| Safi | 2,028 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| San Gwann | 13,103 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| San Giljan | 7,820 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| San Pawl il-Bahar | 14,481 | Cumnija STP | Secondary | 100% | SO | 0% | N/A |
| Santa Lucia | 3,153 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Santa Venera | 6,147 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|----------------------|--|--|---|---------------------------------|---|-----------------------------------|
| Siggiewi | 8,063 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land Catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Sliema | 13,508 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Swieqi | 8,615 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Tarxien | 7,737 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Valletta | 6,221 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Xaghra | 3,772 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | 0% | N/A |
| Xewkija | 3,087 | Ras il-Hobz wastewater treatment plant | Tertiary but without disinfection for discharge to sea | 100% | SO | 0% | N/A |
| Zabbar | 14,981 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Zebbug | 11,507 | SASTP | Tertiary | circa 41% of sewage generated by the Marsa Land catchment | RE | circa 49% of Marsa Land catchment untreated | SO |
| Zejtun | 11,347 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |
| Zurrieq | 10,042 | Currently not connected to a treatment plant. To be connected to Ta' Barkat STP – operational 1st qtr 2011 | No treatment | 0% | N/A | 100% | SO |

Acronyms

SASTP – Sant Antnin Sewage Treatment Plant
RE – agricultural reuse
SO – submarine outfall

General Comments on Wastewater Treatment Plants

Malta currently has three urban wastewater treatment plants in operation, the Sant Antnin Sewage Treatment Plant (SASTP), a plant situated between Zejtun and Marsascala, which has been in operation since 1983. The plant was originally designed for a capacity of 12,000m³/day but until the early 90s was treating only 7,000m³/day, a figure which at that time equated to less than 10% of the sewage production total in Malta and Gozo Catchment. The plant underwent an extensive upgrade in 1998. The plant which is equipped with screening, grit/grease removal, primary sedimentation, a biological activated sludge stage and a tertiary stage (sand filtration and chlorination), currently treats an average of about 5,491 m³/day of sewage a day (2009 figures), meeting the irrigation water demand of circa 120 hectares of arable agricultural land, situated in the vicinity of the plant.

Another plant, situated in the North of Malta (Cumnija Sewage Treatment Plant) was commissioned in October 2008 and received urban wastewater from the Malta North agglomeration. The plant has a design capacity of 6,700m³/day and is equipped with sand filtration and chlorination, discharging into a sensitive area. The treatment process is impaired by farmyard waste discharges disturbing the treatment process and impairing de-nitrification, because of the high pollutant load received at the plant.

The plant situated in Gozo (Ras il-Hobz Sewage Treatment Plant) was commissioned in November 2007 and received urban wastewater from the Gozo Main agglomeration. The Nadur agglomeration (also in Gozo but designated as a separate agglomeration) has been connected to the Ras il-Hobz Urban wastewater treatment plant and has thus resulted in the elimination of the San Blas Bay outfall. The urban wastewater from this agglomeration has been redirected to the main sewage treatment plant by the construction of a pressure main and a new sewage pumping station. The Gharb agglomeration (also in Gozo but designated as a separate agglomeration) is intended to eliminate a second outfall at Wied il-Mielah (Gozo) by redirecting the effluent to the Ras il-Hobz sewage treatment plant. The scheme will comprise the construction of approximately a 5km stretch of pressure mains and a new pumping station. All works are scheduled for completion by the end of 2010.

The South STP, with a design capacity of 60,000m³/day of sewage is currently at an advanced stage of construction. The plant is expected to be put in operation during the first quarter 2011. The completion of this urban wastewater treatment plant will be followed by an eventual decommissioning of SASTP.

Degree of Wastewater Treatment

Tertiary – Mechanical & Biological Treatment followed by sand filtration and Chlorine disinfection
Secondary - Mechanical & Biological Treatment followed by sand filtration

General comments re Wastewater Treated/Untreated

The SASTP caters for the collection of agglomerations which is defined as the Marsa Land catchment. SASTP will be decommissioned once the South STP at Ta' Barkat will come on stream in 2011.

The following is the estimated sewage production by catchment. The specific flow data by city *is not* available. The catchments are defined as follows:

| Catchments | Contributing Catchments by Local Council |
|----------------------------------|--|
| Marsa Land | Dingli, Rabat, Mdina, Attard, B'Kara, Hamrun, Mtarfa, Mosta, Naxxar, Ghargur, Lija, Balzan, Siggiewi, Zebbug, Qormi, Luqa, Iklin. |
| Malta North | Mellieha, San Pawl il-Bahar, Mgarr. |
| Gozo | Fontana, Ghajnsielem, Kercem, Munxar, Qala, Rabat (Gozo), Sannat, Xaghra, Xewkija. |
| Nadur in Gozo | Nadur |
| Gharb in Gozo | Gharb, San Lawrenz, Zebbug, Ghasri |
| Malta South excluding Marsa Land | San Giljan, Sliema, Msida, Marsa, Gzira, Kalkara, Birgu, Bormla, Isla, Zabbar, Fgura, Paola, M'Scala, M'Xlokk, B'Buga, Mqabba, Qrendi, Zurrieq, Safi, Kirkop, Gudja, Ghaxaq, Pembroke, San Gwann, Valletta, Floriana, Xghajra, Zejtun, Pieta', Santa Lucija, Santa Venera, Swieqi, Ta' Xbiex, Tarxien. |

Estimated Current Sewage Production by Catchment (2009 figures based on flows received at the treatment plants including stormwater and seawater infiltrations, excluding losses from the collection system):

Malta North Catchment - 8,127 m³/day

Gozo catchment - 3,886 m³/day

South Catchment – estimated 55,000 m³/day

Country: MOROCCO

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| Province | City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------|--------------------------------------|----------------------|--|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Al Hoceima | Al Hoceima | 55357 | 1996 (operational) Extension en cours | Secondary | 5400 | | | |
| | Targuist | 11560 | 2006 (operational) | Secondary | 1200 | | | |
| | Bni Bouayach 15497 Imzouren 26575 | 421072 | 2006 (operational) | Secondary | 5400 | | | |
| | Aknoul | 3325 | 1980 | Decanter | 400 | | | |
| | Bni Bourfrah | 10298 | No | | | | | |
| | Bni Gmil | 9461 | No | | | | | |
| | Bni Gmil Maksouline | 9922 | No | | | | | |
| | Senada | 9870 | No | | | | | |
| | Izemmouren | 4437 | No | | | | | |
| | Louta | 6325 | No | | | | | |
| | Rouadi | 8092 | No | | | | | |
| | AJDIR | 3987 | scheduled | | | | | |
| | BNI HADIFA | 2061 | scheduled | | | | | |
| | ISSAGUEN | 1638 | scheduled | | | | | |
| Berkane | Berkane | 80012 | 2006 (operational) | Secondary | 11200 | | | |
| | Tafoghalt | 3150 | 2004 (operational) | Secondary | 180 | | | |
| | Saidia | 3338 | 2010 Step complexe en cours | Secondary | 21900 | | | |
| | Ahfir | 19482 | Programmé | Secondary | 520 | | | |
| Chefchaouen | Chefchaouen | 31410 | En cours | Secondary | 5475 | | | |
| | Jebha | 2984 | No | | | | | |
| | Amtar | 10038 | programmé | Secondary | | | | |
| | Steha | 10637 | programmé | Secondary | | | | |

| Province | City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|---|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Nador | Grand Nador: Nador, Bni Nsar, Zeghanghane, Ihddaden, Jaadar, Selouane, Taouima et kariat Arekmane | 245000 | 2010 operational | Tertiaire | 19000 | | | |
| | Ben Taib | 10446 | 2008 (scheduled) | Secondary | 800 | | | |
| | Al Aaroui | 36021 | 2004 (operational) | Secondary | 2500 | | | |
| | Zaio | 29851 | 2007 operational | A+F+M | 3100 | | | |
| | Ait Mait | 7188 | No | | | | | |
| | Amejjaou | 5977 | No | | | | | |
| | Dar El Kibdani | 2990 | No | | | | | |
| | Driouch | 10381 | programmé | Secondary | | | | |
| | Oulad Boubker | 5765 | No | | | | | |
| | Tazaghine | 5032 | No | | | | | |
| | Bni Chiker | 4188 | programmé | Secondary | | | | |
| | Bni Sidel Jbel | 9623 | No | | | | | |
| | Bni Sidel Louta | 7331 | No | | | | | |
| | Farkhana | 10994 | Programmé | Secondary | 390 | | | |
| | Iksane | 9001 | No | | | | | |
| | Afsou | 3413 | No | | | | | |
| | Bni Oukil Oulad M'Hand | 10496 | No | | | | | |
| | Oulad Daoud Zkhanine | 3666 | No | | | | | |
| | Ras El Ma | 4532 | Programmé | Secondary | 75 | | | |
| | Tiztoutine | 4050 | No | | | | | |
| | Azlaf | 5337 | No | | | | | |
| | Ben Taieb | 10446 | No | | | | | |
| | Boudinar | 10504 | No | | | | | |
| Iferni | 7527 | No | | | | | | |
| M'Hajer | 3232 | No | | | | | | |
| Midar | 16022 | Programmé | Secondary | | | | | |

| Province | City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|-------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Nador | Ouardana | 6921 | No | | | | | |
| | Oulad Amghar | 6342 | No | | | | | |
| | Tafriisset | 3555 | No | | | | | |
| | Tallit | 6161 | No | | | | | |
| | Kerouna | 2188 | No | | | | | |
| Oujda | Oujda | 400738 | operational | Tertiaire | 40000 | | | |
| | Bni Drar | 8919 | 1976 (Lagoons) programmé | Secondary | | | | |
| Tanger | Dar Chaoui (1) | 1424 | programmée | Decanter | 65? | | | |
| | Dar Chaoui (2) | 4495 | 2008 (scheduled) | A+F+M | 150 | | | |
| | Tanger | 657000 | Scheduled) | | | | 89300 | |
| | Jouamaa | 7173 | No | | | | | |
| | Ksar El Majaz | 8949 | programme 2010 | Secondary | | | | |
| | Al Bahraouine | 10501 | No | | | | | |
| | Ksar Sghir | 10995 | No | | | | | |
| | Malloussa | 10739 | En cours | | | | | |
| | Port MED | | En cours | | | | | |
| | Allyene | 6126 | No | | | | | |
| Tetouan | M'diq | 36596 | avec fnideq | | | | | |
| | Fnideq | 53559 | En cours | Tertiaire | 23405 | | | |
| | Martil | 39011 | No | | | | 2,376 | DI |
| | Oued Laou (M) | 8383 | No | | | | | |
| | Ain Lahsan | 6552 | No | | | | | |
| | Bni Harchen | 7646 | No | | | | | |
| | Tetouan | 458800 | Scheduled | | | | 54600 | |
| | Bghaghza | 6457 | No | | | | | |
| | Oulad Ali Mansour | 5612 | No | | | | | |

| Province | City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|--------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Tetouan | Sahtryine | 7402 | No | | | | | |
| | Zaouiat Sidi Kacem | 10495 | No | | | | | |
| <p>Remarks: * FS: Septic Tank A : anaerobic ponds F : facultative ponds M : maturation ponds</p> | | | | | | | | |

Country: MONACO

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 10,000

| City | Permanent Population (in 000) | Population Served (in 000) | | Waste water Treatment Plant | Year of Construction | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|-------------------------------|----------------------------|---------|-----------------------------|----------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Plant + Network | Network | | | | | | | |
| | | | | | 1987 | Pre-treatment | 19,000 | SO | 1,500 ** | SO |
| Total pour MONACO (*) | 35,0 | 70,0 | 00,0 | Oui | 1990 | Secondary | 17,500 | SO | 0 | - |
| Remarks: * The plant also treats wastewater from nearby coastal areas of France containing 40,000 inhabitants Les valeurs indiquées sont des moyennes sur l'année. ** The discharge of untreated wastewater correspond to the excess flow that enter the wastewater treatment plant during highly unusual cases. | | | | | | | | | | |

Data reported by the MED POL National Coordinator

Country: MONTENEGRO

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) ^{*)} | Discharge of Untreated Wastewater |
|--------------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|---|-----------------------------------|
| HERCEG NOVI Municipality | 30,034 | No | - | - | - | 5,800 | SO |
| Herceg Novi City | 12,739 | | | | | | SO |
| Igalo | 3,754 | | | | | | SO |
| Bijela | 3,748 | | | | | | SS |
| KOTOR Municipality | 22,947 | No | - | - | - | 950 | SO |
| Kotor City | 1,331 | | | | | | SO |
| Risan | 2,083 | | | | | | SS |
| Dobrota | 8,169 | | | | | | SS |
| TIVAT Municipality | 13,630 | No | - | - | - | 1,400 | SS |
| Tivat City | 9,467 | | | | | | SS |
| BUDVA Municipality | 15,909 | No | - | - | - | 5,800 | SO |
| Budva City | 10,918 | | | | | | SO |
| BAR Municipality | 40,037 | No | - | - | - | 8,750 | SO |
| Bar City | 13,719 | | | | | | SO |
| Burtaiši | 3,013 | | | | | | SO |
| Šušanj | 2,212 | | | | | | SO |
| Sutomore | 1,827 | | | | | | SO |
| ULCINJ Municipality | 20,290 | No | - | - | - | 4,300 | SO |
| Ulcinj City | 10,828 | | | | | | SO |

Remarks:

*) Estimated annual average in 2003.y. (Households, Tourists and Industry)

Source: NDA for Montenegro (SAPMED)

Comment: The Suburban and rural settlements in the all municipalities were not connected to the urban sewage system, mostly

Country: SLOVENIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population in the cities (#) | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) (\$) | Discharge of Untreated Wastewater (\$) |
|--------------|--|----------------------------|-----------------------------------|-----------------------------|---------------------------------|------------------------------------|--|
| Ankaran | 2.984 | Connected to WWTP Koper | Tertiary treatment | | Estuary of the river Rižana | no data | no data |
| Jagodje | 2.153 | Connected to WWTP Koper | Tertiary treatment | | Estuary of the river Rižana | no data | no data |
| Izola (city) | 10.381 | Connected to WWTP Koper | Tertiary treatment | | Estuary of the river Rižana | no data | no data |
| Koper (city) | 23.726 | Connected to WWTP Koper | Tertiary treatment | 11111(1, **) | Estuary of the river Rižana | no data | no data |
| Lucija | 5.792 | Connected to WWTP Piran | Tertiary treatment | | | no data | no data |
| Piran (city) | 4.143 | Connected to WWTP Piran | Tertiary treatment | 4463 (1*) +2630 (2 *) | sea | no data | no data |
| Portoroz | 2.849 | Connected to WWTP Piran | Tertiary treatment | | | no data | no data |

Remarks:

- * data for WWTP Piran, 2009 (reconstruction in 2009)
- ** data for WWTP Koper, 2009
 - (1) Direct measurement
 - (2) Estimated on the basis of the pumps operation time
- # Source Statistical Office of the Republic of Slovenia, Census of Population, Households and Housing, 2002 (www.stat.si)
- \$ Not available In the national data base

Country: SPAIN

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|-----------------------------|---------------------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| CATALONIA | | | | | | | | |
| Altafulla ¹ | 4,685 | | See WWTP Altafulla | | | | | |
| Ametlla de Mar, L' | 7,592 | 7,252 | Yes | Secondary | 883 | SO | None | - |
| Ampolla, L' | 3,118 | 3,419 | Yes | Secondary | 1,055 | SO | None | - |
| Begur | 4,258 | 2,495 | Yes | Secondary | 532 | SO | None | - |
| Cabrera de Mar ² | 4,408 | | See WWTP Mataró | | | | | |
| Cadaqués | 2,860 | 5,934 | Yes | Tertiary (1%) | 1,173 | SO+RB | None | - |
| Caldes d'Estrach ³ | 2,799 | | See WWTP Sant Andreu de Llavaneres | | | | | |
| Coma-ruga (TM El Vendrell) ⁴ | 3,759 | | See WWTP El Vendrell | | | | | |
| Creixell ⁵ | 3,219 | | See WWTP Torredembarra | | | | | |
| L' Hospitalet de l'Infant (TM Vandellòs -L' Hospitalet de l'Infant) | 4,416 | 4,863 | Yes | Secondary | 871 | SO | None | - |
| Empuriabrava (TM Castelló d'Empuries) | 7,045 | 11,177 | Yes | Tertiary (81%) | 2,836 | Coastal creek | None | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|-----------------------------|---------------------------------------|------------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Estartit, L (TM Torroella de Montgrí) ⁶ | 3,366 | | See WWTP Torroella de Montgrí | | | | | |
| Llançà | 5,209 | 7,616 | Yes | Tertiary (6%) | 2,463 | SS+RB | None | - |
| Mont-roig del Camp (Miami) | 6,686 | 9,719 | Yes | Secondary | 1,084 | SO | None | - |
| Palafolls ⁷ | 8,584 | | See WWTP Pineda de Mar | | | | | |
| Pals ⁹ | | | See WWTP Pals | | | | | |
| Perelló, El | 3,235 | 2,017 | Yes | Lagoon | 412 | Coastal creek | None | - |
| Roda de Barà ⁵ | 6,186 | | See WWTP Torredembarr a | | | | | |
| St. Pere Pescador | 2,029 | | No | | | | | |
| St. Pol de Mar ¹⁰ | | | See WWTP Sant Pol de Mar | | | | | |
| St. Vicenç de Montalt ³ | 5,627 | | See WWTP Sant Andreu de Llavaneres | | | | | |
| Sta. Cristina d'Aro ⁸ | 5,017 | | See WWTP Castell-Platja d'Aro | | | | | |
| Santa Susanna ⁷ | 3,251 | | See WWTP Pineda de Mar | | | | | |
| Tossa de Mar | 5,948 | 11,992 | Yes | Tertiary (14%) | 2,186 | DI / coastal creek +RB | None | - |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------------------------|--|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| WWTP: | | | | | | | | |
| 1) Altafulla | | 27,483 | Yes | Secondary | 3,973 | SO | None | - |
| Altafulla includes: | Altafulla; El Catllar; La Riera de Gaià; Tarragona (partially) | | | | | | | |
| 2) Sant Andreu de Llaneres | | 21,091 | Yes | Tertiary (30%) | 3,832 | SO+RB | None | - |
| Sant Andreu de Llaneres includes: | Caldes d'Estrac; St. Andreu de Llaneres; Sant Vivenç de Montalt | | | | | | | |
| 3) Torroella de Montgrí | | 19,220 | Yes | Tertiary (24%) | 5,083 | Coastal creek+RB | None | |
| Torroella de Montgrí includes: | Estartit, I; Torroella de Montgrí; Ullà | | | | | | | |
| 4) Castell – Platja d'Aro | | 54,100 | Yes | Tertiary (24%) | 11,513 | SS+ Coastal creek+RB | None | - |
| Castell – Platja d'Aro includes: | Castell d'Aro; Platja d'Aro; Sant Pol; Sant Feliu de Guíxols; Santa Cristina d'Aro | | | | | | | |
| 5) Pals | 2,799 | 4,666 | Yes | Tertiary (72%) | 1,669 | Coastal creek | None | - |
| Pals includes: | Begur, Pals, Regencòs | | | | | | | |
| 6) Sant Pol de Mar | 5,102 | 14,272 | Yes | Secondary | 3,658 | SO | None | - |
| Sant Pol de Mar includes: | Sant Pol de Mar, Sant Cebrià de Vallalta, Sant Iscle de Vallalta | | | | | | | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|-----------------------------|---------------------------------------|-------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| CATALONIA - Cities with population >10000 | | | | | | | | |
| Alcanar | 10,600 | 6,000 | Yes | Lagoon | 1,086 | DI | None | - |
| Arenys de Mar ⁵ | 14,600 | | See WWTP Arenys de Mar | | | | | |
| Badalona ¹ | 219,500 | | See WWTP Besòs | | | | | |
| Barcelona ^{1,2} | 1,621,500 | | See WWTP Besòs & Prat | | | | | |
| Blanes | 40,500 | 46,200 | Yes | Tertiary (55%) | 10,175 | SO+Coastal creek+RB | None | - |
| Calafell | 24,300 | 29,900 | Yes | Secondary | 7,351 | SO | None | - |
| Calella ³ | 18,600 | | See WWTP Pineda de Mar | | | | | |
| Calonge ⁴ | 10,600 | | See WWTP Palamòs | | | | | |
| Cambrils | 31,700 | 64,500 | Yes | Secondary | 13,458 | SO | None | - |
| Canet de Mar ⁵ | 13,500 | | See WWTP Arenys de Mar | | | | | |
| Castelldefels ⁶ | 62,100 | | See WWTP Gavà-Viladecans | | | | | |
| Castell – Platja d'Aro ⁹ | 10,400 | | See WWTP Castell-Platja d'Aro | | | | | |
| Cubelles ¹⁵ | 13,700 | | See WWTP Cunit-Cubelles | | | | | |
| Cunit ¹⁵ | 12,700 | | See WWTP Cunit-Cubelles | | | | | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------------------------|-----------------------------|---------------------------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Escala, L ¹² | 10,100 | | See WWTP L'Escala | | | | | |
| Gavà ⁶ | 46,000 | | See WWTP Gavà-Viladecans | | | | | |
| Lloret de Mar | 39,400 | 47,100 | Yes | Tertiary (96%) | 12,224 | SO+RB | None | - |
| Malgrat de Mar ⁴ | 18,500 | | See WWTP Pineda de Mar | | | | | |
| El Masnou ⁷ | 22,300 | | See WWTP Teià - Maresme sud | | | | | |
| Mataró ⁸ | 121,700 | | See WWTP Mataró | | | | | |
| Montgat ¹ | 10,300 | | See WWTP Besòs | | | | | |
| Palafrugell ⁴ | 22,400 | | See WWTP Palamòs | | | | | |
| Palamòs ⁴ | 18,200 | | See WWTP Palamòs | | | | | |
| Pineda de Mar ⁵ | 26,200 | | See WWTP Pineda de Mar | | | | | |
| Prat de Llobregat, E ² | 63,400 | | See WWTP Prat de Llobregat | | | | | |
| Premia de Mar ⁷ | 27,400 | | See WWTP Teià - Maresme sud | | | | | |
| Roses | 20,200 | 27,500 | Yes | Tertiary (0,5%) | 9,584 | SO+RB | None | - |
| Salou ¹⁶ | 26,600 | | See WWTP Vila-seca/Salou | | | | | |
| San Adrià del Besòs ¹ | 33,800 | | See WWTP Besòs | | | | | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------------------|-----------------------------|---------------------------------------|----------------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Sant Andreu de Llavanes ¹³ | 10,200 | | See WWTP Sant Andreu de Llavanes | | | | | |
| San Carles de la Ràpita | 15,500 | 20,500 | Yes | Tertiary (100%) | 2,917 | DI+RB | None | - |
| Sant Feliu de Guíxols ⁹ | 22,000 | | See WWTP Castell-Platja d'Aro | | | | | |
| Sitges | 27,700 | 49,300 | Yes | Secondary | 9,913 | SO | None | - |
| Tarragona ¹⁰ | 140,300 | | See WWTP Tarragona | | | | | |
| Torredembarra ¹⁴ | 15,300 | | See WWTP Torredembarra | | | | | |
| Vendrell ¹¹ , El | 35,800 | | See WWTP Vendrell | | | | | |
| Viladecans ⁷ | 63,500 | | See WWTP Gavà-Viladecans | | | | | |
| Vilanova y la Geltru | 65,900 | 96,700 | Yes | Secondary | 14,847 | SO | None | - |
| Vila-seca ¹⁶ | 20,900 | | See WWTP Vila-seca/Salou | | | | | |
| Vilassar de Mar ⁸ | 19,500 | | See WWTP Mataró | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| WWTP: | | | | | | | | |
| 1) Besòs | | 1,813,100 | Yes | Secondary | 361,414 | SO | None | - |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | |
|-----------------------------|---|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| Besos includes: | Badalona; Barcelona (part); Montcada i Reixac (part); Mongat (part); Sant Adrià del Besós; Santa Coloma de Gramanet (part); Tiana | | | | | | | | |
| 2) Prat de Llobregat, El | | 1,247,500 | Yes | Tertiary (24%) | 273,719 | SO+RB | | - | |
| Prat de Llobregat includes: | Barcelona (part); El Prat de Llobregat; Cornellà de Ll.; L'Hospitalet de Ll.; Sant Joan Despí; Sant Boi de Ll.; Santa Coloma de Cervelló; Sant Just Desvern | | | | | | | | |
| 3) Pineda de Mar | | 166666 (disseny) | Yes | pre-treatment | 40,000 (disseny) | SO | None | - | |
| Pineda de Mar includes: | Pineda, Santa Susanna, Palafolls, Calella, Malgrat de Mar | | | | | | | | |
| 4) Palamòs | | 82,500 | Yes | Tertiary (0%) | 15,282 | SO | None | - | |
| Palamòs includes: | Calonge; Mont-ras; Palafrugell; Palamòs; Vall-Llobrega; Begur | | | | | | | | |
| 5) Arenys de mar | | 26,700 | Yes | Secondary | 4,276 | SO | None | - | |
| Arenys de Mar includes: | Arenys de Mar; Arenys de Munt; Canet de Mar | | | | | | SO | | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------------|---|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| 6) Gavà-Viladecans | | 267,000 | Yes | Secondary | 35,567 | | None | - |
| Gavà-Viladecans includes | Gavà, Viladecans, Sant Climent de Llobregat, Castelldefels, Les Botigues de Sitges | | | | | | | |
| 7) Teià - Maresme Sud | | 102,000 | Yes | Secondary | 14,330 | SO | None | - |
| Teià - Maresme Sud includes: | Alella; Masnou; Premia de Dalt; Premia de Mar; Teia; Vilassar de Dalt | | | | | | | |
| 8) Mataró | | 156,700 | Yes | Secondary | 26,193 | SO | None | - |
| Mataró includes: | Argentona; Cabrera de Mar; Cabriils; Dosrius; Mataró; Vilassar de Dalt; Vilassar de Mar | | | | | | | |
| 9) Castell – Platja d’Aro | | 54,100 | Yes | Tertiary (24%) | 11,513 | SS+ coastal creek+RB | None | - |
| Castell – Platja d’Aro includes: | Castell d’Aro; Platja d’Aro; Sant Pol; Sant Feliu de Guíxols; Santa Cristina d’Aro | | | | | | | DI |
| 10) Tarragona | | 164,700 | Yes | Secondary | 25,698 | | None | - |
| Tarragona includes: | Constanti, Els Pallaresos, Tarragona. | | | | | | | Coastal creek+RB |
| 11) El Vendrell | | 52,600 | Yes | Tertiary (100%) | 9,736 | | None | - |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater | |
|-----------------------------------|---|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|--|
| El Vendrell includes: | El Vendrell, Santa Oliva, Sant Vicenç de Calders, Sant Salvador, Comaruga i Albinyana | | | | | | SO | | |
| 12) L'Escala | | 12,900 | Yes | Secondary | 3,608 | | None | - | |
| L'Escala includes: | Albons; Escala, I'; St.Martí d'Empúries | | | | | | SO+RB | | |
| 13) Sant Andreu de Llaneres | | 21,100 | Yes | Tertiary (30%) | 3,832 | | None | - | |
| Sant Andreu de Llaneres includes: | Caldes d'Estrac; St. Andreu de Llaneres; Sant Vivenç de Montalt | | | | | | SO | | |
| 14) Torredembarra | | 31,900 | Yes | Secondary | 7,766 | | None | - | |
| Torredembarra includes: | El Creixell; La Pobla de Montorés; Roda de Barà; Torredembarra | | | | | | SO | | |
| 15) Cunit-Cubelles | | 34,400 | Yes | Secondary | 5,863 | | None | - | |
| Cunit-Cubelles includes: | Cubelles; Cunit, Castellet i La Gornal | | | | | | SO+RB | | |
| 16) Vilaseca y Salou | | 120,800 | Yes | Tertiary (21%) | 28,151 | | None | - | |
| Vilaseca y Salou includes: | Vila-seca; Salou; Tarragona (partially) | | | | | | | | |
| Valencia (2009) | | | | | | | | | |
| Alboraya | 21,263 | 2,689 | Yes | Secondary | 549 | Ravine Carraixet | None | | |
| Alcala de Xivert | 7,074 | 3,593 | Yes | Secondary | 929 | Ravine | None | | |
| Alcala de Xivert (Alcocebre) | See above | 9,793 | No | Screening | 2,254 | SO | 2,254 | SO | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--------------------------------|-----------------------------|---------------------------------------|----------------------------|--|-----------------------------|------------------------------------|-------------------------------|-----------------------------------|
| Almenara | 5,324 | 7,698 | Yes | Secondary | 1,428 | Ravine | None | |
| Benissa | 12,424 | 6,439 | Yes | Secondary | 1,084 | Ravine Pou d'Avall | None | |
| Cabanes | 2,734 | 4,030 | Yes | Secondary | 523 | Ravine Ravachol | None | |
| Canet d'En Berenguer | 4,696 | 5,712 | No | Screening | 4,234 | SO | 4,234 | SO |
| Elx (Algorox) | 219,032 | 213,676 | Yes | Secondary | 23,695 | Irrigation ditch | None | |
| Elx (Arenales) | | 22 | Yes | Secondary + Tertiary | 2,852 | +RB | None | |
| Elx (Carrizales) | | 3,865 | Yes | Tertiary | 774 | RB | None | |
| Favara | 1,965 | 2,256 | Yes | Secondary | 1,146 | Irrigation canal | None | |
| Finestrat | 4,172 | 2,482 | Yes | Secondary | 285 | Irrigation canal and Anchero river | None | |
| Moncofa | 5,278 | 9,949 | Yes | Secondary | 3 | Belcaire river | None | |
| Nules (Villavieja) | 12,666 | 8,296 | Yes | Chemical addition plus secondary treatment | 2,743 | Ravine Juan de Mora | None | |
| Oliva | 26,844 | 9,704 | Yes | Secondary | 3,880 | SO | None | |
| Orihuela | 77,979 | 44,644 | Yes | Secondary | 5,070 | Irrigation lagoon + RB | None | |
| Orihuela (La Aparecida) | | 3,398 | Yes | Secondary | 269 | | None | |
| Orihuela-Costa | | 58,693 | Yes | Secondary + Chemical | 7,359 | Ravine | None | |
| Orihuela (San Bartolomé) | | 2,544 | Yes | Secondary + Tertiary | 469 | RB | None | |
| Orihuela (Unknown WWTP) | See above | 2,745 | Yes | Chemical addition plus secondary treatment | 562 | Irrigation ditch and Segura river | None | |
| Rojales | 15,987 | 11,054 | Yes | Secondary | 1,705 | Irrigation lagoon | None | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------------------------------|-----------------------------|---------------------------------------|----------------------------|---|---|---------------------------------|-------------------------------|-----------------------------------|
| Rojales (Lo Pepín) | | 7,600 | Yes | Secondary | 866 | | None | |
| Rojales (Doña Pepa) | | 3,027 | Yes | Secondary | 287 | | None | |
| Sueca | 27,593 | 19,759 | Yes | Secondary and Tertiary | 8,952 | RB:Irrigation canal del Rey | None | |
| Sueca (el Perelló) | | 4,539 | Yes | Secondary and Physico-chemical | 1,976 | Irrigation canal | None | |
| Sueca (Mareny de Barraquetes) | | 2,433 | Yes | Secondary and Physico-chemical | 1,561 | Coasta ravine | None | |
| Tavernes de la Valldigna (Basa) | 17,988 | 7,824 | Yes | Secondary | 1,364 | Irrigation canal Mare | None | |
| Tavernes de la Valldigna (Goleta) | See above | 4,197 | Yes | Secondary | 2 | Irrigation canal | None | |
| Teulada | 12,745 | 5,621 | Yes | Secondary | 792 | Ravine Teulada | None | |
| Teulada (Moraira) | | 6,860 | Yes | Physico-chemical P removal | 1,046 | SO | None | |
| Torreblanca | 5,884 | 7,272 | Yes | Chemical addition plus secondary treatment with N & P removal | 1,551 | SO | None | |
| Valencia (El Palmar) | 805,304 | 2,519 | Yes | Secondary | 480 | Irrigation canal La Sequiota | None | |
| Valencia (El Saler) | See above | 3,948 | Yes | Secondary with N and P removal | 2,528 | Irrigation canal Albufera | None | |
| Valencia (Massarrojos) | See above | 2,108 | Yes | Secondary | 377 | | None | |
| Valencia (Vera) | See above | 10,368 | Yes | Pretreatment | 58,151 (NO explanation for this big flow) | Coastal canal | None | |
| Valencia (Perellonet) | See above | 2,317 | Yes | Secondary with N and P removal | 1,097 | Irrigation canal Albufera | None | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|-----------------------------|---------------------------------------|----------------------------|--|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Poblets els - el Verger | 4,538 | 3,218 | Yes | Secondary | 763 | Girona ravine | None | |
| Xeresa | | 4,458 | Yes | Secondary with N removal | 616 | Ravine Martina | None | |
| Valencia (2009) Population > 10000 | | | | | | | | |
| Alacant North (Monte Orgegia) | 97,900 | 200,900 | Yes | Secondary + Tertiary | 30,584 | RB + SO | None | |
| Alacant South (Rincón de León) | 224,600 | 419,100 | Yes | Secondary + Tertiary | 59,010 | RB + SO | None | |
| Almazora | 15,300 | 32,500 | Yes | Secondary with N and P removal | 6,300 | River | None | |
| Altea | 12,300 | 31,600 | Yes | Secondary with N removal | 9,268 | Ravine | None | |
| Benicarlo | 16,500 | 63,800 | Yes | Pretreatment | 13,168 | SO | None | |
| Benidorm | 73,800 | 229,100 | Yes | Secondary with N and P removal plus Tertiary | 35,613 | RB + ravine | None | |
| Burriana | 24,400 | 46,100 | Yes | Secondary | 14,795 | Ravine | None | |
| Calpe | 11,000 | 30,100 | Yes | Secondary with N and P removal | 5,768 | SO | None | |
| Castellon de la Plana | 133,300 | 264,700 | Yes | Secondary with P removal plus Tertiary | 42,029 | SO | None | |
| Cullera | 20,500 | 20,000 | Yes | Secondary with N and P removal | 10,721 | Canal | None | |
| Denia | 35,500 | 63,500 | Yes | Secondary with N and P removal plus Tertiary | 18,714 | Canal | None | |
| Gandia - La Safor | 76,900 | 143,200 | Yes | Secondary with Partial Physico-chemical | 51,327 | SO | None | |
| Javea / Xabia | 16,600 | 23,200 | Yes | Secondary with N and P removal | 5,356 | SO | None | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------------------|--------------------------------------|---------------------------------------|----------------------------|--|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Nules - Villavieja | 14,900 | 8,300 | Yes | Secondary with N removal | 2,743 | Canal | None | |
| Oliva | 20,300 | 9,700 | Yes | Secondary | 3,880 | SO | None | |
| Sagunto (El Puerto de) | 62,100 | 66,800 | Yes | Secondary | 13,681 | Canal | None | |
| Santa Pola | 16,300 | 66,000 | Yes | Secondary with N and P removal plus Tertiary | 8,474 | RB | None | |
| Tabernes de la Valldigna (Casco) | 16,100 | 26,700 | Yes | Secondary with N removal | 2,414 | Irrigation cana Mare | None | |
| Torreveija | 42,300 | 141,600 | Yes | Secondary with N and P removal plus Tertiary | 17,676 | RB | None | |
| Valencia (Cuenca del Carraixet) | 805,304 | 193,000 | Yes | Secondary and tertiary | 38,634 | RB | None | |
| Valencia (Quart – Benàger) | See above | 243,100 | Yes | Secondary and tertiary with P removal | 37,735 | RB | None | |
| Valencia (Pinedo - 1) | See above | 310,700 | Yes | Secondary | 135,096 | SO | None | |
| Valencia (Pinedo - 2) | See above | 861,100 | Yes | Secondary with N removal | 213,510 | RB | None | |
| Vila Joiosa | | 83,900 | Yes | Secondary with N removal | 10,699 | Ravine | None | |
| Vinaros | 16,500 | 35,100 | Yes | Secondary with N and P removal | 5,991 | SO | None | |
| Balearic Islands (2009) | | | | | | | | |
| Andratx | Andratx (10,410) | 8,670 | Yes | Tertiary | 1,745 | SO-RB | None | |
| Cala ferrera | Felanix (16,948) & Santanyi (11,172) | 7,222 | Yes | Tertiary | 1,222 | SO | None | |
| Cala mesquida | Capdepera (11,074) | 1,461 | Yes | Secondary | 3,945 | RB | None | |
| Camp de mar | Andratx (10,410) | 2,767 | Yes | Secondary | 345 | SO-RB | None | |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|---|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Canyamel | Capdepera (11,074) | 3,585 | Yes | Tertiary | 485 | SO | None | |
| Colònia de Sant Pere | Artà (6,730) | 2,037 | Yes | Secondary | 208 | RB | None | |
| Font de sa cala | Capdepera (11,074) | 2,503 | Yes | Tertiary | 415 | SO-RB | None | |
| Portocolom | Felanitx (16,948) | 4,965 | Yes | Secondary | 624 | SO-RB | None | |
| Sa Ràpita | Campos (8,296) + Lluçmajor (31,381) | 1,555 | Yes | Secondary | 322 | RB | None | |
| Son Serra | Santa Margalida (10,204) | 2,323 | Yes | Tertiary | 162 | RB | None | |
| Cala en Porter | Alaior (8,933) | 3,108 | Yes | Tertiary | 272 | SO | None | |
| Cala Galdana | Ciutadella (27,468) & Ferreries (4,476) | 2,774 | Yes | Tertiary | 364 | RB | None | |
| Es Migjorn | 1,503 | 3,938 | Yes | Tertiary | 686 | RB | None | |
| Cala de Sant Vicent | San Joan de Labritja (4,975) | 674 | Yes | Secondary | 110 | RB | None | |
| Cala Llonga | Santa Eularia del Riu (27,152) | 3,941 | Yes | Secondary | 303 | RB | None | |
| Port de Sant Miquel | San Joan de Labritja (4,975) | 1,471 | Yes | Tertiary | 180 | RB | None | |
| Balearic Islands (2009) - Population >10000 | | | | | | | | |
| Ciudadela (North) | 900 | 16,500 | Yes | Secondary | 899 | SO | 0 | |
| Ciudadela (South) | 17,000 | 57,400 | Yes | Tertiary* | 9,789 | SO | 0 | |
| Eivissa (Ibiza) | 29,200 | 83,400 | Yes | Tertiary* | 13,617 | SO | 0 | |
| Mahon (Menorca) | 23,600 | 43,200 | Yes | Tertiary* | 4,577 | SO | 0 | |
| Palma de Mallorca Palma-1 | 15,000 | 28000 (needs to be updated) | Yes | Tertiary* | 43,990 | RB (50%) SO (50%) | None | R. Mujeriego |
| Palma de Mallorca Palma-2 | 281,400 | 481500 (needs to be updated) | Yes | Tertiary* | 45,060 | RB (50%) SO (50%) | None | R. Mujeriego |
| Murcia | | | | | | | | |
| Isla Plana-La Azohía | 741 | 3,846 | Yes | Terciario | 361 | RB | 0 | - |

| City | Permanent Population (2009) | Population Equivalent treated by WWTP | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|--------------------------------------|-----------------------------|---------------------------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Atamaría | 642 | 8,700 | Yes | Secundario | 870 | RB | 0 | - |
| Murcia - Population >10000 | | | | | | | | |
| Águilas | 33,589 | 45,500 | Yes | Terciario | 5,460 | RB | 0 | - |
| Los Alcázares | 15,516 | 29,135 | Yes | Terciario | 7,376 | RB | 0 | - |
| Cartagena | | | | | | | | |
| Cabezo-Beaza | 175,184 | 181,602 | Yes | Secundario | 35,000 | RB | 0 | - |
| Mar Menor Sur | 19,008 | 64,833 | Yes | Secundario | 15,813 | SO/RB | 0 | - |
| Mazarrón | 25,842 | 43,089 | Yes | Terciario | 12,829 | RB | 0 | - |
| San Javier | 26,131 | 26,131 | Yes | Terciario | 10,283 | SO | 0 | - |
| San Pedro del Pinatar | 22,887 | 23,768 | Yes | Terciario | 7,626 | SO | 0 | - |
| Andalucía* (2009) | | | | | | | | |
| Algarrobo | 5,668 | | Yes | Secondary | 6,000 | Coastal waters | None | |
| Balanegra-Balerma | 6,736 | | Yes | Secondary | 1,500 | Coastal waters | None | |
| Carchuna-Calahonda | 3,367 | | Yes | Secondary | 210 | Coastal waters | None | |
| Castell de Ferro-Gualchos | 2,762 | | Yes | Tertiary | 105 | Coastal waters | None | |
| La Herradura | 4,151 | | Yes | Secondary | 210 | Coastal waters | None | |
| Manilva | 11,181 | | Yes | Secondary | No data available | Coastal waters | None | |
| Torrox | 14,925 | | Yes | Secondary | 204 | Coastal waters | None | |
| Palmones | 2,681 | | Yes | Secondary | No data available | Coastal creek | None | |
| Vera | 11,159 | | Yes | Secondary | 2,305 | Coastal creek | None | |

Remarks:

*Data used for the province of Andalucía are the old ones due to lack of new data

Country: SPAIN

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|-------------------------------------|------------------|-------------------------------|--|-------------------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| SIÓ | Ebro | AGRAMUNT | 5,608 | 6,441 | not available | Yes | Biological | Secondary | 1,878 | river basin | None | - |
| SEGRE | Ebro | AITONA-SERÒS | 4,262 | 4,794 | not available | Yes | Biological | Secondary | 1,896 | river basin | None | - |
| Aitona includes the following cities: | Aitona (2,376)*, Seròs (1,886)* | | | | | | | | | | | |
| SEGRE | Ebro | ALCARRÀS | 7,776 | 22,225 | not available | Yes | Biological | Secondary | 2,867 | river basin | None | - |
| NOGUERA RIBAGORÇANA | Ebro | ALFARRÀS-ALMENAR | 6,824 | 7,409 | not available | Yes | Biological | Secondary | 1,519 | river basin | None | - |
| Alfarràs-Almenar includes the following cities: | Alfarràs (3,155)*, Almenar (3,669)* | | | | | | | | | | | |
| SEGRE | Ebro | ALCOLETGE | 2,677 | - | not available | No | - | - | - | - | - | - |
| SEGRE | Ebro | ALGUAIRE | 3,165 | - | not available | No | - | - | - | - | - | - |
| SEGRE | Ebro | ALMACELLE S | 6,506 | 1,104 | not available | Yes | Biological | Secondary | 1,229 | river basin | None | - |
| EBRO | Ebro | AMPOSTA | 21,240 | 25,790 | not available | Yes | Biological | Secondary | 4,499 | river basin | None | - |
| SEGRE | Ebro | ARBECA | 2,480 | - | not available | No | - | - | - | - | - | - |
| SENILL | Ebro | ARTESA DE SEGRE | 3,869 | 3,957 | not available | Yes | Biological | Secondary | 841 | river basin | None | - |
| SEGRE | Ebro | BALAGUER | 16,779 | 28,471 | not available | Yes | Biological | Secondary | 5,229 | river basin | None | - |
| MATARRA | Ebro | BATEA | 2,163 | 3,361 | not available | Yes | Biological | Secondary | 376 | river basin | None | - |

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|---|----------------------|-------------------------------|--|-------------------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| NYA | | | | | available | | | | | | | |
| SEGRE | Ebro | BELL-LLOC D'URGELL | 2,447 | 3,119 | not available | Yes | Biological | Secondary | 1,393 | river basin | None | - |
| CORB | Ebro | BELLPUIG | 4,940 | 7,966 | not available | Yes | Biological | Secondary | 1,372 | river basin | None | - |
| SEGRE | Ebro | BELLVER DE CERDANYA | 2,231 | 1,997 | not available | Yes | Biological | Secondary | 1,099 | river basin | None | - |
| SEGRE | Ebro | BELLVÍS | 2,481 | 1,877 | not available | Yes | Biological | Secondary | 772 | river basin | None | - |
| SEGRE | Ebro | BORGES BLANQUES, LES | 6,058 | 8,344 | not available | Yes | aerated lagoons | Secondary | 2,293 | river basin | None | - |
| EBRO | Ebro | CAMARLES | 3,555 | 2,079 | not available | Yes | Biological | Secondary | 607 | river through channels | None | - |
| ONDARA | Ebro | CERVERA | 9,328 | 12,261 | not available | Yes | aerated lagoons | Secondary | 2,953 | river basin | None | - |
| EBRO | Ebro | DELTEBRE | 11,751 | 10,860 | not available | Yes | Biological | Secondary | 4,353 | river basin | None | - |
| SIURANA | Ebro | FALSET | 2,864 | 2,728 | not available | Yes | Biological | Secondary | 479 | river basin | None | - |
| EBRO | Ebro | FLIX | 4,098 | 4,525 | not available | Yes | Biological | Secondary | 1,086 | river basin | None | - |
| SEGRE | Ebro | FONDARELL A | 21,542 | 50,009 | not available | Yes | Biological | Secondary | 20,400 | river basin | None | - |
| Fondarella includes the following cities: | Vilanova de Bellpuig (1,170)*, Golmés (1,693)*, Mollerussa (14,319)*, Palau d'Anglesola (2,099)*, Fondarella (821)*, Miralcamp (1,440)* | | | | | | | | | | | |
| SEC | Ebro | GANDESA | 3,236 | 3,236 | not available | Yes | Biological | Secondary | 462 | river basin | None | - |
| EBRO | Ebro | GARCIA | 602 | not available | not available | No | - | - | - | - | - | - |
| SEGRE | Ebro | GUISSONA | 6,145 | 6,158 | not available | Yes | aerated lagoons | Secondary | 2,639 | river basin | None | - |
| SEGRE | Ebro | JUNEDA | 5,672 | 5,452 | not available | Yes | Biological | Secondary | 2,289 | river basin | None | - |

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|--|---------------------|-------------------------------|--|-------------------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| Juneda includes the following cities: | Juneda (3.417)*, Torregrossa (2.255)* | | | | | | | | | | | |
| CORB | Ebro | LINYOLA | 2,836 | 2,442 | not available | Yes | Biological | Secondary | 1,327 | river basin | None | - |
| SEGRE | Ebro | LLEIDA | 141,977 | 286,984 | not available | Yes | Biological | Secondary | 59,716 | river basin | None | - |
| Lleida includes the following cities: | Lleida (135,919)*, Alpicat (6,058)* | | | | | | | | | | | |
| SEGRE | Ebro | MONTFERRER | 15,349 | 12,206 | not available | Yes | aerated lagoons | Secondary | 5,385 | river basin | None | - |
| Montferrer includes the following cities: | Alàs (391)*, Aravell (118)**, Bellestar (106)**, Arfa (163)**, Castellciutat (509)**, La Seu d'Urgell (13,063)*, Montferrer (1,089)* | | | | | | | | | | | |
| EBRO | Ebro | MÓRA D'EBRE/LA NOVA | 8,866 | 9,514 | not available | Yes | Biological | Secondary | 1,351 | river basin | None | - |
| Mora de Ebro includes the following cities: | Mora d'Ebre (5,695)*, Mora la Nova (3,171)* | | | | | | | | | | | |
| SEGRE | Ebro | OLIANA | 1,976 | 2,111 | not available | Yes | Biological | Secondary | 545 | river basin | None | - |
| NOGUERA PALLARESA | Ebro | POBLA DE SEGUR, LA | 3,237 | 10,795 | not available | Yes | Biological | Secondary | 1,543 | river basin | None | - |
| NOGUERA RIBAGORÇANA | Ebro | PONT DE SUERT (EL) | 2,570 | 3,206 | not available | Yes | Biological | Secondary | 997 | river basin | None | - |
| SEGRE | Ebro | PONTS | 2,803 | 5,484 | not available | Yes | Biological | Secondary | 620 | river basin | None | - |
| SEGRE | Ebro | PUIGCERDÀ | see next row | 22,928 | not available | Yes | Biological | Secondary | 8,271 | river basin | None | - |

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|---|--|---------------------|-------------------------------|--|-------------------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| Puigcerdà includes the following cities: | Puigcerdà (9,022)*, Llívia (1.589)*, Age (150)**, Vilallobent (116)** (Catalunya, SPAIN), Bourg-Madame, Ur, Vilanova de les Escaldes, Angostrina, Dorres, Estavar, Gorguja, Sallagouse, Llo, Ro, Err, Santa Llocaia, Verdingnans, Bajande, Onces (FRANCE). | | | | | | | | | | | |
| EBRO | Ebro | SANT JAUME D'ENVEJA | 3,528 | not available | not available | No | - | - | - | - | - | - |
| SÈNIA | Ebro | SANTA BÀRBARA | 3,955 | 3,767 | not available | Yes | aerated lagoons | Secondary | 575 | river basin through channel | None | - |
| SÈNIA | Ebro | SÈNIA, LA | 6,179 | 5,549 | not available | Yes | Biological | Tertiary | 984 | river basin | None | - |
| NOGUERA PALLARE SA | Ebro | SORT | 2,382 | 5,234 | not available | Yes | Biological | Secondary | 809 | river basin | None | - |
| ONDARA | Ebro | TÀRREGA | 16,539 | 19,881 | not available | Yes | Biological | Secondary | 3,022 | river basin | None | - |
| SEGRE | Ebro | TORRES DE SEGRE | 3,768 | 6,589 | not available | Yes | Biological | Secondary | 2,108 | river basin | None | - |
| Torres de Segre includes the following cities: | Soses (1.716)*, Torres de Segre (2.052)* | | | | | | | | | | | |
| EBRO | Ebro | TORTOSA-ROQUETES | 43,366 | 32,799 | not available | Yes | Biological | Secondary | 6,845 | river basin | None | - |
| Tortosa-Roquetes includes the following cities: | Tortosa (35,143), Roquetes (8,223) | | | | | | | | | | | |
| NOGUERA PALLARE SA | Ebro | TREMP | 6,625 | 13,407 | not available | Yes | Biological | Secondary | 2,374 | river basin | None | - |

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|--|---|---------------------|-------------------------------|--|-------------------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| Tremp includes the following cities: | Talam (397), Tremp (6.228) | | | | | | | | | | | |
| GARONA | Ebro | VIELHA E MITJARAN | 5,710 | 11,769 | | Yes | Biological | Secondary | 7,261 | river basin | None | - |
| Ebro | Ebro | HARO | 22,044 | 46,000 | 22,044 | Yes | Extended aeration | Secondary | 25,000 | Ebro | None | |
| Haro includes the following cities: | Santo Domingo de la Calzada ((6,300) Castañares de Rioja (500), Casalarreina (1,370), Haro (12,263), Curcurrita del Río Tirón (573), Tirgo (264), Cihuri (250), Anguciana (524) | | | | | | | | | | | |
| Oja | Ebro | EZCARAY | 2,083 | 7,728 | 2,083 | Yes | Extended aeration | Secondary | 3,700 | Oja | None | |
| Ebro | Ebro | GENICERO | 2,135 | 3,500 | 2,135 | Yes | Extended aeration | Secondary | 1,300 | Ebro | None | |
| Old Ebro river bed | Ebro | FUENMAYO R | 7,438 | 10,100 | 7,438 | Yes | Extended aeration | Secondary | 3,300 | Río Antiguo | None | |
| Fuenmayor includes the following cities: | Entrena (1,500), Navarrete (2,700), Fuenmayor (3,238) | | | | | | | | | | | |
| Ebro | Ebro | LOGROÑO | 172,544 | 242,000 | 172,544 | Yes | Activated sludge | Secondary | 60,000 | Ebro | None | |
| Logroño includes the following cities: | Viguera (440), Nalda (1,030), Albelda (3,403), Alberite (2,700), Villamediana (6,417), Lardero (8,156), Logroño (150,398) | | | | | | | | | | | |
| Creek | Ebro | EL VILLAR DE ARNEDO | 672 | 1,500 | 672 | Yes | Trickling filter | Secondary | 250 | Barranco Costeras | None | |
| Ebro | Ebro | CALAHORRA | 46,083 | 68,000 | 46,083 | Yes | Activated sludge | Secondary | 18,000 | Ebro | None | |
| Calahorra includes the following cities: | Arnedo (14,289), Quel (2,000), Autol (4,617), Calahorra (25,177) | | | | | | | | | | | |
| Ebro | Ebro | RINCÓN DE | 3,710 | 12,800 | 3,710 | Yes | Extended | Secondary | 3,600 | Ebro | None | |

| Tributary river | River | City | Permanent Population (2009) * | Population Equivalent treated by WWTP (2009) | Population served | Waste water Treatment Plant | Waste water Treatment Method | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Waste water | Waste water Untreated (m3/day) | Discharge of Untreated Wastewater |
|---------------------------------------|---|--------------------|-------------------------------|--|-------------------|-----------------------------|---------------------------------------|-----------------------------------|-----------------------------|----------------------------------|--------------------------------|-----------------------------------|
| | | SOTO | | | | | aeration | | | | | |
| Ebro | Ebro | ALDEANUEVA DE EBRO | 2,600 | 9,700 | 2,600 | Yes | Extended aeration | Secondary | 1,800 | Ebro | None | |
| Alhama | Ebro | ALFARO | 9,980 | 37,800 | 9,980 | Yes | Extended aeration | Secondary | 6,000 | Alhama | None | |
| Ebro | Ebro | BRIONES | 881 | 1,100 | 881 | Yes | Extended aeration | Secondary | 800 | Ebro | None | |
| Creek | Ebro | SAN ASENSIO | 1,316 | 2,900 | 1,316 | Yes | Extended aeration | Secondary | 1,100 | Barranco del Chorrillo | None | |
| Najerilla | Ebro | NÁJERA | 10,341 | 20,900 | 10,341 | Yes | Extended aeration | Secondary | 8,500 | Najerilla | None | |
| Nájera includes the following cities: | Huércanos (949), Uruñuela (910), Nájera (8,482) | | | | | | | | | | | |
| Ebro | Ebro | ALCANADRE | 816 | 1,700 | 816 | Yes | Extended aeration | Secondary | 500 | Ebro | None | |
| Ebro | Ebro | AUSEJO | 1,000 | 2,900 | 1,000 | Yes | Trickling filter | Secondary | 430 | Ebro | None | |
| Creek | Ebro | PRADEJÓN | 4,055 | 7,000 | 4,055 | Yes | Extended aeration and natural lagoons | Secondary | 1,800 | Barranco Costeras | None | |

Country: SYRIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Al-Qerdaha | 8690 | no | | | | 1303 | SS |
| Arab- Almulk | 3759 | no | | | | 563 | SO |
| Asqubeen | 6181 | no | | | | 972 | SO |
| Babda | 2811 | no | | | | 421 | SO |
| Bahloliah | 2298 | no | | | | 344 | SO |
| Baksa | 3433 | no | | | | 514 | SS |
| Banias city | 37000 | no | | | | 3,700 | SS |
| Bassa | 5382 | no | | | | 807 | SS |
| Beili Jeli | 2442 | no | | | | 366 | SO |
| Berjal | 4540 | no | | | | 681 | SO |
| Budi | 3713 | no | | | | 557 | SO |
| Burge Al-Qasab | 5304 | no | | | | 795 | SO |
| Burge Eslam | 5456 | no | | | | 808 | DI |
| Dalia | 4613 | no | | | | 691 | SS |
| Duairt Babda | 2879 | no | | | | 431 | SO |
| Ein Al-Sharqieah | 2746 | no | | | | 411 | SS |
| Ein Al-teenah | 7619 | no | | | | 1142 | DI |
| Ein Qabta | 3126 | no | | | | 468 | SO |
| Ein Shqaq | 4245 | no | | | | 363 | SS |
| Fadiu | 4147 | no | | | | 622 | SS |
| Hadan | 4132 | no | | | | 619 | SO |
| Hafeh | 7184 | no | | | | 1077 | SO |
| Hamimeem | 4206 | no | | | | 630 | SS |
| Hanadi | 4061 | no | | | | 609 | SS |
| Harf Al-mesietra | 7323 | no | | | | 1098 | SS |
| Harf Mesietra | 2741 | no | | | | 411 | SO |
| Huaiz | 2372 | no | | | | 355 | SS |
| Hwaez, Burg Islam | 7310 | no | | | | 731.30 | |
| Jableh | 58600 | no | | | | 5,859.50 | SS |
| Jandiriah | 2250 | no | | | | 337 | SO |
| Jubat Berghal | 7263 | no | | | | 1089 | SS |
| Karfis, Senao | 6800 | no | | | | 680 | |

| City | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| Kassab | 3625 | no | | | | 543 | DI |
| Kelmakho | 2662 | no | | | | 399 | SS |
| Kersana | 5700 | no | | | | 855 | SS |
| Lattakia | 387730 | no | | | | 38,772.70 | Ss |
| Mashkita | 2741 | no | | | | 411 | SO |
| Maten al Sahel | 3200 | no | | | | 320 | |
| Meshairfet Al-Samoot | 3832 | no | | | | 574 | DI |
| Qabu Awamiah | 2219 | no | | | | 332 | SO |
| Qalaie' | 2218 | no | | | | 332 | SO |
| Qanjera | 4825 | no | | | | 723 | SO |
| Qasmeen | 2223 | no | | | | 333 | SS |
| Qateilbieah | 3483 | no | | | | 522 | SS |
| Ra's Al-Ein | 4007 | no | | | | 601 | SS |
| Rawdet Benjaroo | 2456 | no | | | | 368 | SS |
| Saferqieah | 2024 | no | | | | 303 | SO |
| Saleeb Al-turkman | 3984 | no | | | | 597 | SO |
| Salma | 2288 | no | | | | 343 | SS |
| Seiano | 5975 | no | | | | 896 | SO |
| Senguan | 4044 | no | | | | 606 | SS |
| Shabatliah | 3283 | no | | | | 492 | SS |
| Shair | 2632 | no | | | | 394 | SO |
| Shalfatiah | 2059 | no | | | | 308 | SS |
| Shamiah Latakia | 3301 | no | | | | 495 | SO |
| Stmerkhu | 2389 | no | | | | 385 | SS |
| Sunober | 4198 | no | | | | 629 | SS |
| Tartous | 107000 | no | | | | 10,700 | SS |
| Zabadieh | 2016 | no | | | | 302 | SS |
| Zama | 2676 | no | | | | 401 | SO |

Remarks:

Country: TUNISIA

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION OVER 2,000

| WWTP Name | Location of WWTP | Date of Operation | Treatment Capacity (m3/day) | Biological Capacity Kg/BOD5/day | Total Population | Urban Population | Population in cities served by WWTP: | Population connected to sewage network | Degree of sewage network | Sewage Network : | Volume of water collected a year : | Volume of treated water a year : |
|--|-----------------------|-------------------|-----------------------------|---------------------------------|------------------|------------------|--------------------------------------|--|--------------------------|------------------|------------------------------------|----------------------------------|
| Gouvernorat de Nabeul (Avril 2010) | | | | | | | | | | | | |
| Station N° 1 | Hammamet | 1980 | 4208 | 1321 | 748 000 | 496 000 | 445 000 | 409 000 | 91.80% | 1412 km | 24.91 millions de m3 | 23.76millions de m3 |
| Station N° 3 | Nabeul | 1981 | 3500 | 720 | | | | | | | | |
| Station N° 4 | Dar Chaâbane El Fehri | 1979 | 9585 | 5870 | | | | | | | | |
| Yasmine Hammamet | Bouficha | 1995 | 11386 | 2722 | | | | | | | | |
| Korba | Oued Sidi Othman | 2002 | 7764 | 3146 | | | | | | | | |
| Kelibia | Kelibia | 1976 | 7742 | 3129 | | | | | | | | |
| Grombalia | Grombalia | 1993 | 2445 | 1050 | | | | | | | | |
| Menzel Bouzelfa | Menzel Bouzelfa | 1993 | 1395 | 700 | | | | | | | | |
| Soliman 1 | Soliman | 1983 | 2457 | 1900 | | | | | | | | |
| Soliman 2 | Borj Cédria | 2004 | 12300 | 3700 | | | | | | | | |
| El Haouaria | El Karaa | 2006 | 1523 | 700 | | | | | | | | |
| Bouargoub | Borj Gouiss | 2007 | 2735 | 1153 | | | | | | | | |
| Khanget El Hojjej | Khanget El Hojjej | 2002 | 96 | 50 | | | | | | | | |
| Mrissa | Mrissa | 2002 | 11.5 | 4.32 | | | | | | | | |
| Gouvernorat de Bizerte (Avril 2010) | | | | | | | | | | | | |
| Bizerte | Bizerte | 1997 | 26600 | 10740 | 545000 | 337 000 | 323 000 | 317 000 | 98,1% | 714 km | 11.09 | 10.41 |

| WWTP Name | Location of WWTP | Date of Operation | Treatment Capacity (m3/day) | Biological Capacity Kg/BOD5/day | Total Population | Urban Population | Population in cities served by WWTP: | Population connected to sewage network | Degree of sewage network | Sewage Network : | Volume of water collected a year : | Volume of treated water a year : |
|---|-----------------------------------|-------------------|-----------------------------|---------------------------------|------------------|------------------|--------------------------------------|--|--------------------------|------------------|------------------------------------|----------------------------------|
| Menzel Bourguiba | Menzel Bourguiba | 1997 | 11600 | 4700 | | | | | | | millions de m3 | millions de m3 |
| Mateur | Mateur | 2006 | 4100 | 2426 | | | | | | | | |
| Gouvernorat de Jendouba (Avril 2010) | | | | | | | | | | | | |
| Tabarka | Route de Ain Draham – Tabarka | 1991 | 5500 | 1825 | 423000 | 118 000 | 106 000 | 97 000 | 91.20% | 329 km | 4.90 millions de m3 | 4.90 millions de m3 |
| Tabarka Airport | Ras Rajel – Tabarka Aéroport | 1995 | 100 | 50 | | | | | | | | |
| Gouvernorat de Béja (Avril 2010) | | | | | | | | | | | | |
| Beja | Beja | 1994 | 14000 | 7800 | 305 000 | 126 000 | 116 000 | 117 000 | 99,3% | 344 km | 4.6 millions de m3 | 4.59 millions de m3 |
| Medjez El Bab | Medjez El Bab | 1994 | 4328 | 1971 | | | | | | | | |
| Testour | Testour | 2004 | 1180 | 720 | | | | | | | | |
| Téboursouk | Téboursouk | 2000 | 1050 | 719 | | | | | | | | |
| Nefza | Nefza | 2006 | 1500 | 680 | | | | | | | | |
| Gouvernorat de la Manouba (Avril 2010) | | | | | | | | | | | | |
| Tébourba | Route de Miana Chelch Tébourba | 2004 | 2825 | 1825 | 364 000 | 271 000 | 264 000 | 249 000 | 94.20% | 443 km | 8.85 millions de m3 | 8.11 millions de m3 |
| Gouvernorat d'Ariana (Avril 2010) | | | | | | | | | | | | |
| Chotrana | Route Sidi Salah km 5, Chotrana 1 | 1986 | 111000 | 40000 | 491 000 | 446 000 | 436 000 | 395 000 | 90.50% | 877 km | 20,78 millions de m3 | 20,78 millions de m3 |
| Kalaat El Andalous | Av. Sadok Belhaj | 1994 | 1500 | 680 | | | | | | | | |
| Chotrana II | Sidi Salah-Chotrana | 2007 | 40000 | 20000 | | | | | | | | |
| Gouvernorat de Tunis (Avril 2010) | | | | | | | | | | | | |
| Charguia | Charguia | 1958 | 60000 | 24000 | 1 000 000 | 1 000 000 | 1 000 | 955 000 | 95,5% | 2131 km | 47,75 millions de m3 | 47,75 millions de m3 |
| Côtière | La Marsa | 1981 | 15750 | 5000 | | | | | | | | |

| WWTP Name | Location of WWTP | Date of Operation | Treatment Capacity (m3/day) | Biological Capacity Kg/BOD5/day | Total Population | Urban Population | Population in cities served by WWTP: | Population connected to sewage network | Degree of sewage network | Sewage Network : | Volume of water collected a year : | Volume of treated water a year : |
|--|---------------------------|-------------------|-----------------------------|---------------------------------|------------------|------------------|--------------------------------------|--|--------------------------|------------------|------------------------------------|----------------------------------|
| Nord | | | | | | | | | | | | |
| Gouvernorat de Ben Arous (Avril 2010) | | | | | | | | | | | | |
| Sud Meliane I | Médina Jadida - Ben Arous | 1982 | 37500 | 15000 | 571 000 | 517 000 | 509 000 | 490 000 | 96.20% | 1262 km | 22.43 millions de m3 | 22.43 millions de m3 |
| Station grappée des eaux usées industrielles | Médina Jadida - Ben Arous | 2001 | 5000 | 3000 | | | | | | | | |
| Mornag | Zaouiet Mornag | 2004 | 3200 | 1700 | | | | | | | | |
| Sud meliane II | GP1-oued Meliane | 2007 | 40000 | 20000 | | | | | | | | |
| Gouvernorat de Zaghouan (Avril 2010) | | | | | | | | | | | | |
| Zeriba | Zeriba – Korba | 2002 | 2000 | 970 | 169 000 | 66 000 | 46 000 | 44 000 | 97,1% | 158 km | 1,38 millions de m3 | 1,38 millions de m3 |
| El Fahs | El Fahs | 2006 | 3350 | 2250 | | | | | | | | |
| Gouvernorat de Sousse (Avril 2010) | | | | | | | | | | | | |
| Sousse Nord | Hammam Sousse | 1978 | 17400 | 4350 | 605 000 | 490 000 | 483 000 | 466 000 | 96.40% | 1215 km | 23,87 millions de m3 | 23.27 millions de m3 |
| Sousse Sud | Sousse | 1980 | 18700 | 1300 | | | | | | | | |
| Kalat Sghira | Kalat Sghira | 1993 | 1450 | 500 | | | | | | | | |
| Sidi Bou Ali | Sidi Bou Ali | 1996 | 644 | 446 | | | | | | | | |
| Msaken | Msaken | 1996 | 7844 | 3800 | | | | | | | | |
| Gouvernorat de Monastir (Avril 2010) | | | | | | | | | | | | |
| Monastir - Dkhila | Monastir | 1979 | 3100 | 970 | 509 000 | 509 000 | 449 000 | 406 000 | 90.40% | 1126 km | 13.64 millions de m3 | 13.30 millions de m3 |
| Moknine | Moknine | 1986 | 6400 | 1600 | | | | | | | | |
| Sahline | Sahline | 1993 | 2560 | 750 | | | | | | | | |
| Ouardanine | Ouardanine | 1993 | 1500 | 600 | | | | | | | | |
| Sayyada | Sayyada | 1993 | 1660 | 600 | | | | | | | | |

| WWTP Name | Location of WWTP | Date of Operation | Treatment Capacity (m3/day) | Biological Capacity Kg/BOD5/day | Total Population | Urban Population | Population in cities served by WWTP: | Population connected to sewage network | Degree of sewage network | Sewage Network : | Volume of water collected a year : | Volume of treated water a year : |
|---|-------------------------------|-------------------|-----------------------------|---------------------------------|------------------|------------------|--------------------------------------|--|--------------------------|------------------|------------------------------------|----------------------------------|
| Monastir – Frina | Monastir | 1995 | 13500 | 5300 | | | | | | | | |
| Jammal | Jammal | 2000 | 6700 | 3127 | | | | | | | | |
| Moknine | Tanneurs | 2003 | 270 | 288 | | | | | | | | |
| Beni Hassen | Beni Hassen | 2007 | 1600 | 870 | | | | | | | | |
| Gouvernorat de Mahdia (Avril 2010) | | | | | | | | | | | | |
| El Jem | El Jem | 1994 | 1840 | 600 | 394 000 | 176 000 | 130 000 | 110 000 | 84.50% | 390 km | 4.82 millions de m3 | 4.82 millions de m3 |
| Ksour Essaf | Ksour Essaf | 1994 | 1500 | 500 | | | | | | | | |
| Mahdia | Mahdia | 1995 | 10220 | 4500 | | | | | | | | |
| Boumerdès | Boumerdès | 2003 | 700 | 350 | | | | | | | | |
| Chebba | Douira | 2007 | 3500 | 1700 | | | | | | | | |
| Gouvernorat de Sfax (Avril 2010) | | | | | | | | | | | | |
| Sfax Nord | Sfax Nord | 2004 | 17900 | 8800 | 924 000 | 596 000 | 544 000 | 392 000 | 71,9 % | 1135 km | 17.06 millions de m3 | 17.06 millions de m3 |
| Sfax Sud | Route de Gabès, km 5.5 | 1983 | 49500 | 21600 | | | | | | | | |
| Maharès | Maharès | 1994 | 780 | 400 | | | | | | | | |
| El hanha | El hanha | 2005 | 700 | 315 | | | | | | | | |
| Aguareb | El Ganna | 2006 | 2030 | 1080 | | | | | | | | |
| Jbeniana | zone de Derabla | 2006 | 1312 | 709 | | | | | | | | |
| Kerkenia | route sidi Fabkhal - El Ramla | 2007 | 2700 | 950 | | | | | | | | |
| Gouvernorat de Gabès (Avril 2010) | | | | | | | | | | | | |
| Metouia-Ouedhref | Metouia | 2007 | 2700 | 1375 | 359 000 | 247 000 | 238 000 | 209 000 | 87,6% | 553 km | 7.37 millions de m3 | 7.37 millions de m3 |
| Mareth-Zaraat | | 2007 | 2860 | 1510 | | | | | | | | |
| Gabès | Gabès | 1995 | 17300 | 9050 | | | | | | | | |

Country: TURKEY

MUNICIPAL WASTEWATER TREATMENT FACILITIES
MEDITERRANEAN COASTAL CITIES WITH POPULATION ABOVE 2,000

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|------------|-------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| HATAY | HATAY | EKİNCİ | 6686 | NO | | | Asi River | | |
| AYDIN | KUYUCAK | HORSUNLU | 2661 | NO | | | Büyük Menderes River | | |
| AYDIN | KUYUCAK | PAMUKÖREN | 3421 | YES | secondary | | Büyük Menderes River | | |
| ANTALYA | SERİK | ABDURRAHMANLAR | 2056 | NO | | | | | |
| ANTALYA | KUMLUCA | ADRASAN(ÇAVUŞKÖY) | 2521 | NO | | | | | |
| HATAY | HASSA | AKBEZ | 9009 | NO | | | | | |
| AYDIN | DİDİM | AKBÜK | 3841 | NO | | | Aegean Sea | | |
| HATAY | İSKENDERUN | AKÇALI | 4402 | NO | | | Mediterranean Sea | | |
| AYDIN | ÇİNE | AKÇAOVA | 2751 | NO | | | Helvacı Stream | | |
| ADANA | POZANTI | AKÇATEKİR | 3081 | NO | | | | | |
| HATAY | SAMANDAĞ | AKNEHİR | 2173 | NO | | | Asi River | | |
| ANTALYA | AKSEKİ | AKSEKİ | 3789 | NO | | | | | |
| HATAY | HASSA | AKTEPE | 7932 | NO | | | | | |
| MUĞLA | ULA | AKYAKA | 2612 | YES | tertiary | | | | |
| AYDIN | DİDİM | AK-YENİKÖY | 2585 | NO | | | Büyük Menderes River | | |
| İZMİR | ÇEŞME | ALAÇATI | 8952 | YES | primary | | | | |
| ADANA | ALADAĞ | ALADAĞ | 4269 | NO | | | | | |
| HATAY | DÖRTYOL | ALTINÇAĞ | 5212 | NO | | | | | |
| HATAY | ALTINÖZÜ | ALTINKAYA | 3008 | NO | | | | | |
| BALIKESİR | EDREMIT | ALTINOLUK | 6140 | YES | secondary | | | | |
| HATAY | ALTINÖZÜ | ALTINÖZÜ | 7458 | NO | | | Beykin Stream | | |
| HATAY | HASSA | ARDIÇLI | 4090 | NO | | | | | |
| MERSİN | SİLİFKE | ARKUM | 2273 | NO | | | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|-------------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| MERSİN | ERDEMLİ | ARPAÇBAHŞIŞ | 6068 | NO | | | | | |
| MERSİN | TOROSLAR | ARSLANKÖY | 3201 | CONNECTED | | | | | |
| HATAY | İSKENDERUN | ARSUZ | 2238 | NO | | | | | |
| MERSİN | SİLİFKE | ATAKENT | 6099 | YES | secondary | | | | |
| MERSİN | SİLİFKE | ATAYURT | 7143 | NO | | | | | |
| AYDIN | SÖKE | ATBURGAZI | 2228 | NO | | | Büyük Menderes River | | |
| AYDIN | SULTANHISAR | ATÇA | 7397 | YES | secondary | | Yağlıdere Creek | | |
| ANTALYA | ALANYA | AVSALLAR | 8515 | YES | tertiary | | | | |
| HATAY | HATAY | AVSUYU | 4816 | NO | | | | | |
| MERSİN | ERDEMLİ | AYAŞ | 2767 | NO | | | | | |
| MERSİN | AYDINCIK | AYDINCIK | 8004 | NO | | | | | |
| ÇANAKKALE | AYVACIK | AYVACIK | 7538 | YES | secondary | | | | |
| MERSİN | TOROSLAR | AYVAGEDİĞİ | 2375 | CONNECTED | | | | | |
| HATAY | İSKENDERUN | AZGANLIK | 3023 | NO | | | Mediterranean Sea | | |
| ANTALYA | DÖŞEMEALTI | BADEMAĞACI | 2045 | NO | | | | | |
| İZMİR | ÖDEMiŞ | BADEMLİ | 2798 | NO | | | Kelepir Stream | | |
| AYDIN | SÖKE | BAĞARASI | 6870 | NO | | | Büyük Menderes River | | |
| ADANA | KARATAŞ | BAHÇE | 2070 | NO | | | | | |
| MERSİN | TARSUS | BAHŞIŞ | 2482 | NO | | | | | |
| MUĞLA | MUĞLA | BAYIR | 3902 | NO | | | | | |
| MUĞLA | MİLAS | BEÇİN | 4166 | NO | | | | | |
| EDİRNE | KEŞAN | BEĞENDİK | 2590 | NO | | | | | |
| HATAY | İSKENDERUN | BEKBELE | 7329 | NO | | | | | |
| MUĞLA | MARMARİS | BELDİBİ | 8112 | CONNECTED | | | | | |
| ANTALYA | SERİK | BELEK | 6125 | YES | tertiary | | Acisu Stream | | |
| İZMİR | SELÇUK | BELEVİ | 2268 | NO | | | | | |
| İZMİR | BEYDAĞ | BEYDAĞ | 5710 | NO | | | | | |
| ANTALYA | KUMLUCA | BEYKONAK | 6682 | NO | | | | | |
| ANTALYA | DEMRE | BEYMELEK | 3832 | NO | | | | | |
| MUĞLA | KÖYCEĞİZ | BEYOBASI | 2743 | NO | | | | | |
| İZMİR | ÖDEMiŞ | BİRGİ | 2601 | NO | | | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|------------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| ANTALYA | SERİK | BOĞAZKENT | 2797 | YES | tertiary | | Acisu Stream | | |
| MUĞLA | YATAĞAN | BOZARMUT | 2168 | NO | | | | | |
| MUĞLA | MARMARİS | BOZBURUN | 2121 | NO | | | | | |
| ÇANAĞKALE | BOZCAADA | BOZCAADA | 2496 | NO | | | Aegean Sea | | |
| AYDIN | BOZDOĞAN | BOZDOĞAN | 9713 | YES | secondary | | Bozdoğan Stream | | |
| BALIKESİR | HAVRAN | BÜYÜKDERE | 2035 | NO | | | | | |
| MERSİN | GÜLNAR | BÜYÜKECELİ | 2292 | NO | | | | | |
| ADANA | CEYHAN | BÜYÜKMANGIT | 3046 | NO | | | | | |
| BALIKESİR | İVRİNDİ | BÜYÜKYENİCE | 2236 | NO | | | Kocadere | | |
| MUĞLA | FETHİYE | ÇAMKÖY | 3940 | NO | | | | | |
| MERSİN | ÇAMLIYAYLA | ÇAMLIYAYLA | 2861 | NO | | | | | |
| İZMİR | DİKİLİ | ÇANDARLI | 4858 | NO | | | | | |
| ANTALYA | SERİK | ÇANDIR | 2002 | NO | | | | | |
| MERSİN | ANAMUR | ÇARIKLAR | 3072 | NO | | | | | |
| MERSİN | ERDEMLİ | ÇEŞMELİ | 4285 | NO | | | | | |
| AYDIN | AYDIN | ÇEŞTEPE | 5565 | CONNECTED | | | | | |
| ANTALYA | AKSEKİ | CEVİZLİ | 2560 | NO | | | | | |
| MUĞLA | FETHİYE | ÇİFTLİK | 2620 | NO | | | | | |
| ANTALYA | ALANYA | ÇIKÇİLLİ | 9035 | CONNECTED | | | | | |
| ANTALYA | ALANYA | ÇIPLAKLI | 4598 | CONNECTED | | | | | |
| ANTALYA | MANAVGAT | ÇOLAKLI | 6064 | YES | secondary | | | | |
| ANTALYA | DÖŞEMEALTI | DAĞBELİ | 2177 | NO | | | | | |
| MUĞLA | ORTACA | DALYAN | 4619 | YES | tertiary | | | | |
| MUĞLA | DATÇA | DATÇA | 9958 | YES | secondary | | | | |
| AYDIN | KUŞADASI | DAVUTLAR | 9530 | NO | | | Aegean Sea | | |
| HATAY | SAMANDAĞ | DEĞİRMENBAŞI | 3455 | NO | | | | | |
| ANTALYA | ALANYA | DEMİRTAŞ | 3030 | NO | | | | | |
| ADANA | CEYHAN | DORUK | 2529 | NO | | | | | |
| HATAY | HATAY | DURSUNLU | 6398 | NO | | | | | |
| BALIKESİR | BANDIRMA | EDİNCİK | 4468 | NO | | | | | |
| MUĞLA | FETHİYE | EŞEN | 2531 | NO | | | | | |
| MERSİN | ERDEMLİ | ESENPINAR | 2192 | NO | | | | | |
| EDİRNE | İPSALA | ESETÇE | 2209 | NO | | | Gala Lake | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|------------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| ANTALYA | MANAVGAT | EVRENSEKİ | 2558 | NO | | | | | |
| MERSİN | MEZİTLİ | FINDIKPINARI | 3248 | NO | | | | | |
| ANTALYA | SERİK | GEBİZ | 2513 | NO | | | | | |
| ÇANAKKALE | EZİNE | GEYİKLİ | 2862 | YES | secondary | | DSI Canal | | |
| BALIKESİR | SUSURLUK | GÖBEL | 2195 | NO | | | Pıtırak Stream | | |
| MUĞLA | FETHİYE | GÖCEK | 4039 | YES | tertiary | | | | |
| ÇANAKKALE | GÖKÇEADA | GÖKÇEADA | 4971 | NO | | | Aegean Sea | | |
| İZMİR | TİRE | GÖKÇEN | 2569 | NO | | | | | |
| BALIKESİR | İVRİNDİ | GÖKÇEYAZI | 2175 | NO | | | Kocaçay | | |
| HATAY | İSKENDERUN | GÖKMEYDAN | 2068 | NO | | | | | |
| MUĞLA | ULA | GÖKOVA | 2060 | CONNECTED | | | | | |
| MERSİN | MUT | GÖKSU | 2426 | NO | | | | | |
| MUĞLA | BODRUM | GÖLTÜRKBÜKÜ | 4134 | YES | secondary | | | | |
| BALIKESİR | GÖMEÇ | GÖMEÇ | 4788 | YES | secondary | | | | |
| ANTALYA | KEMER | GÖYNÜK | 6121 | YES | secondary | | | | |
| HATAY | İSKENDERUN | GÖZCÜLER | 7963 | NO | | | | | |
| MERSİN | TOROSLAR | GÖZNE | 2685 | CONNECTED | | | | | |
| MERSİN | TARSUS | GÜLEK | 4078 | NO | | | | | |
| MUĞLA | MİLAS | GÜLLÜK | 4076 | NO | | | | | |
| MERSİN | GÜLNAR | GÜLNAR | 8357 | NO | | | | | |
| HATAY | HATAY | GÜMÜŞGÖZE | 4519 | NO | | | Asi River | | |
| MUĞLA | BODRUM | GÜMÜŞLÜK | 3696 | NO | | | | | |
| MUĞLA | BODRUM | GÜNDOĞAN | 5586 | YES | secondary | | | | |
| ANTALYA | MANAVGAT | GÜNDOĞDU | 3189 | NO | | | | | |
| ANTALYA | GÜNDOĞMUŞ | GÜNDOĞMUŞ | 2028 | NO | | | | | |
| ANTALYA | ALANYA | GÜZELBAĞ | 2882 | NO | | | | | |
| HATAY | HATAY | GÜZELBURÇ | 6191 | NO | | | Asi River | | |
| AYDIN | KUŞADASI | GÜZELÇAMLI | 5923 | NO | | | Aegean Sea | | |
| MERSİN | TOROSLAR | GÜZELYAYLA | 2671 | CONNECTED | | | | | |
| HATAY | ALTINÖZÜ | HACIPAŞA | 3587 | NO | | | | | |
| HATAY | HASSA | HASSA | 9207 | NO | | | | | |
| ANTALYA | FİNİKE | HASYURT | 6698 | NO | | | | | |
| EDİRNE | HAVSA | HAVSA | 8628 | NO | | | Havsa Stream | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|-------------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| ANTALYA | İBRADI | İBRADI | 2019 | NO | | | | | |
| ANTALYA | MANAVGAT | İLİCA | 6609 | NO | | | | | |
| ANTALYA | ALANYA | İNCEKUM | 3333 | CONNECTED | | | | | |
| EDİRNE | İPSALA | İPSALA | 8033 | NO | | | IP-1 Discharge Canal | | |
| AYDIN | NAZİLLİ | İSABEYLİ | 4354 | YES | secondary | | Büyük Menderes River | | |
| BALIKESİR | BİGADİÇ | İSKELE | 2117 | NO | | | Ayıklı Stream | | |
| BALIKESİR | İVRİNDİ | İVRİNDİ | 6514 | NO | | | Kocaçay | | |
| MUĞLA | FETHİYE | KADIKÖY | 2058 | NO | | | | | |
| ANTALYA | SERİK | KADRIYE | 4912 | NO | | | | | |
| ANTALYA | GAZİPAŞA | KAHYALAR | 3230 | NO | | | | | |
| BALIKESİR | GÖMEÇ | KARAAĞAÇ | 2251 | YES | secondary | | | | |
| HATAY | HATAY | KARAALİ | 3209 | NO | | | | | |
| İZMİR | KARABURUN | KARABURUN | 2785 | YES | secondary | | | | |
| AYDIN | KARACASU | KARACASU | 6154 | NO | | | Sarıcayar Stream | | |
| ANTALYA | SERİK | KARADAYI | 2474 | NO | | | | | |
| MUĞLA | FETHİYE | KARADERE | 3350 | NO | | | | | |
| ADANA | KARAIŞALI | KARAIŞALI | 7307 | YES | secondary | | | | |
| HATAY | DÖRTYOL | KARAKESE | 6205 | NO | | | | | |
| HATAY | YAYLADAĞI | KARAKÖSE | 2352 | NO | | | | | |
| ANTALYA | AKSU | KARAÖZ | 2596 | NO | | | | | |
| ADANA | KARATAŞ | KARATAŞ | 8504 | NO | | | | | |
| ANTALYA | ALANYA | KARGICAK | 2965 | CONNECTED | | | | | |
| HATAY | HATAY | KARLISU | 3993 | NO | | | | | |
| AYDIN | KARPUZLU | KARPUZLU | 2116 | NO | | | Çobanisa Creek | | |
| ANTALYA | KAŞ | KAŞ | 6857 | YES | secondary | | | | |
| MUĞLA | KAVAKLIDERE | KAVAKLIDERE | 2822 | NO | | | | | |
| BALIKESİR | İVRİNDİ | KAYAPA | 2006 | NO | | | | | |
| İZMİR | ÖDEMİŞ | KAYMAKÇI | 4523 | NO | | | | | |
| MUĞLA | FETHİYE | KEMER | 5384 | NO | | | | | |
| BALIKESİR | KEPSUT | KEPSUT | 5763 | NO | | | Simav Creek | | |
| ANTALYA | ALANYA | KESTEL | 6974 | CONNECTED | | | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|-------------|---------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| ANTALYA | KAŞ | KINIK | 5294 | NO | | | | | |
| İZMİR | KIRAZ | KIRAZ | 8469 | YES | secondary | | Küçük Menderes | | |
| EDİRNE | UZUNKÖPRÜ | KIRCASALIH | 3431 | NO | | | Aslıhan Stream | | |
| ANTALYA | MANAVGAT | KIZILOT | 2132 | NO | | | | | |
| BALIKESİR | BALIKESİR | KOCAAVŞAR | 2029 | NO | | | Kocaçay | | |
| MERSİN | ERDEMLİ | KOCAHASANLI | 6010 | NO | | | | | |
| MUĞLA | BODRUM | KONACIK | 9351 | YES | secondary | | | | |
| MERSİN | GÜLNAR | KÖSEÇOBANLI | 2847 | NO | | | | | |
| MUĞLA | KÖYCEĞİZ | KÖYCEĞİZ | 8677 | YES | tertiary | | | | |
| HATAY | SAMANDAĞ | KOYUNOĞLU | 4027 | NO | | | | | |
| HATAY | HATAY | KÜÇÜKDALYAN | 8701 | NO | | | | | |
| BALIKESİR | AYVALIK | KÜÇÜKKÖY | 8699 | NO | | | | | |
| ANTALYA | KORKUTELİ | KÜÇÜKKÖY | 2699 | NO | | | | | |
| ÇANAKKALE | AYVACIK | KÜÇÜKKUYU | 6580 | NO | | | Ilica Stream | | |
| MERSİN | ERDEMLİ | KUMKUYU | 2975 | NO | | | | | |
| HATAY | KUMLU | KUMLU | 5167 | NO | | | Afrin Creek | | |
| MUĞLA | FETHİYE | KUMLUOVA | 3620 | NO | | | | | |
| EDİRNE | MERİÇ | KÜPLÜ | 2847 | NO | | | Ergene River | | |
| HATAY | HASSA | KÜRECİ | 2734 | NO | | | Küreci Stream | | |
| HATAY | KIRIKHAN | KURTLUSOĞUKSU | 2396 | NO | | | | | |
| ADANA | CEYHAN | KURTPINARI | 2110 | NO | | | | | |
| HATAY | SAMANDAĞ | KUŞALANI | 5549 | NO | | | | | |
| MERSİN | GÜLNAR | KUSKAN | 2847 | NO | | | | | |
| HATAY | HATAY | KUZEYTEPE | 6005 | NO | | | Asi River | | |
| MERSİN | ERDEMLİ | LİMONLU | 3955 | NO | | | | | |
| HATAY | İSKENDERUN | MADENLİ | 4710 | NO | | | Eski Zilli Creek | | |
| HATAY | SAMANDAĞ | MAĞRACIK | 4746 | NO | | | | | |
| BALIKESİR | MANYAS | MANYAS | 6578 | NO | | | Kocaçay | | |
| HATAY | HATAY | MAŞUKLU | 4816 | NO | | | | | |
| ANTALYA | KUMLUCA | MAVİKENT | 8281 | NO | | | | | |
| MUĞLA | KAVAKLIDERE | MENTEŞE | 2496 | NO | | | | | |
| ADANA | CEYHAN | MERCİMEK | 3419 | NO | | | | | |
| HATAY | SAMANDAĞ | MIZRAKLI | 5388 | NO | | | Mızraklı Stream | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|------------|---------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| İZMİR | KARABURUN | MORDOĞAN | 3362 | NO | | | | | |
| MUĞLA | BODRUM | MUMCULAR | 2994 | NO | | | | | |
| HATAY | İSKENDERUN | NARDÜZÜ | 4636 | NO | | | | | |
| MERSİN | SİLİFKE | NARLIKUYU | 2843 | YES | secondary | | | | |
| ANTALYA | ALANYA | OKURCALAR | 4312 | YES | secondary | | | | |
| MUĞLA | FETHİYE | ÖLÜDENİZ | 4532 | YES | secondary | | | | |
| MERSİN | ANAMUR | ÖREN | 3898 | NO | | | | | |
| MUĞLA | MİLAS | ÖREN | 2991 | NO | | | | | |
| MUĞLA | BODRUM | ORTAKENTYAHŞI | 6262 | NO | | | | | |
| ANTALYA | KAŞ | OVA | 4514 | NO | | | | | |
| AYDIN | AYDIN | OVAEYMİR | 7034 | CONNECTED | | | | | |
| HATAY | HATAY | OVAKENT | 6722 | NO | | | | | |
| İZMİR | ÖDEMiŞ | OVAKENT | 2964 | NO | | | | | |
| ANTALYA | MANAVGAT | OYMAPINAR | 2177 | NO | | | | | |
| BALIKESİR | BALIKESİR | PAMUKÇU | 3183 | NO | | | Kille Creek | | |
| ANTALYA | ALANYA | PAYALLAR | 5707 | NO | | | | | |
| BALIKESİR | BURHANIYE | PELİTKÖY | 2278 | NO | | | Almalı and Ilıcapınar Stream | | |
| İZMİR | KINIK | POYRACIK | 5786 | NO | | | | | |
| ADANA | POZANTI | POZANTI | 9880 | NO | | | | | |
| ANTALYA | FİNİKE | SAHİLKENT | 8391 | NO | | | | | |
| ADANA | SAİMBEYLİ | SAİMBEYLİ | 3952 | NO | | | Saimbeyli Stream | | |
| BALIKESİR | BALIKESİR | ŞAMLI | 2097 | NO | | | Menekşe Stream | | |
| BALIKESİR | SAVAŞTEPE | SARİBEYLER | 2478 | NO | | | Köyiçi Stream | | |
| AYDIN | SÖKE | SARIKEMER | 3165 | NO | | | Büyük Menderes River | | |
| ANTALYA | MANAVGAT | SARILAR | 7416 | NO | | | | | |
| ADANA | CEYHAN | SARIMAZI | 3898 | NO | | | | | |
| HATAY | İSKENDERUN | SARİSEKİ | 4255 | NO | | | Mersin Creek | | |
| BALIKESİR | SAVAŞTEPE | SAVAŞTEPE | 9368 | NO | | | | | |
| AYDIN | SÖKE | SAVUCA | 8027 | NO | | | Büyük Menderes River | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Treatment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|------------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| AYDIN | SÖKE | SAZLI | 5532 | YES | secondary | | Büyük Menderes River | | |
| MERSİN | ÇAMLIYAYLA | SEBİL | 2608 | NO | | | | | |
| MUĞLA | MİLAS | SELİMİYE | 4670 | NO | | | | | |
| MERSİN | TOROSLAR | SOĞUCAK | 2015 | CONNECTED | | | | | |
| HATAY | HATAY | SUBAŞI | 3616 | NO | | | Asi River | | |
| EDİRNE | MERİÇ | SUBAŞI | 2109 | NO | | | Sarıyer Stream | | |
| EDİRNE | SÜLEOĞLU | SÜLEOĞLU | 3627 | NO | | | | | |
| HATAY | SAMANDAĞ | SUTAŞI | 6246 | NO | | | | | |
| ANTALYA | MANAVGAT | TAŞAĞIL | 4505 | NO | | | | | |
| MERSİN | SİLİFKE | TAŞUCU | 8700 | NO | | | | | |
| HATAY | SAMANDAĞ | TAVLA | 3102 | NO | | | | | |
| HATAY | SAMANDAĞ | TEKEBAŞI | 8733 | NO | | | | | |
| MERSİN | BOZYAZI | TEKELİ | 3336 | NO | | | | | |
| ANTALYA | KEMER | TEKİROVA | 3614 | YES | secondary | | | | |
| MERSİN | BOZYAZI | TEKMEN | 3022 | NO | | | | | |
| AYDIN | AYDIN | TEPECİK | 3782 | CONNECTED | | | | | |
| MERSİN | MEZİTLİ | TEPEKÖY | 2255 | NO | | | | | |
| HATAY | SAMANDAĞ | TOMRUKSUYU | 3220 | NO | | | Asi River | | |
| MUĞLA | KÖYCEĞİZ | TOPARLAR | 4009 | CONNECTED | | | | | |
| ANTALYA | ALANYA | TOSMUR | 5880 | CONNECTED | | | | | |
| HATAY | HATAY | TOYGARLI | 3100 | NO | | | Yoygarlı River | | |
| ADANA | TUFANBEYLİ | TUFANBEYLİ | 5512 | NO | | | | | |
| MUĞLA | YATAĞAN | TURGUT | 2119 | NO | | | | | |
| ANTALYA | ALANYA | TÜRKLER | 3524 | YES | secondary | | | | |
| HATAY | HATAY | TURUNÇLU | 4068 | NO | | | Asi River | | |
| ANTALYA | FİNİKE | TURUNÇOVA | 8350 | NO | | | | | |
| HATAY | İSKENDERUN | ÜÇGÜLLÜK | 3709 | NO | | | Zilli Creek | | |
| MUĞLA | ULA | ULA | 5602 | NO | | | | | |
| HATAY | SAMANDAĞ | UZUNBAĞ | 3499 | NO | | | | | |
| MERSİN | SİLİFKE | UZUNCABURÇ | 3267 | NO | | | | | |
| MUĞLA | BODRUM | YALI | 4160 | NO | | | | | |
| HATAY | YAYLADAĞI | YAYLADAĞI | 5843 | NO | | | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|-----------|------------|---------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| HATAY | SAMANDAĞ | YAYLICA | 3128 | NO | | | | | |
| AYDIN | BOZDOĞAN | YAZIKENT | 2162 | YES | secondary | | Gürelek Stream | | |
| HATAY | YAYLADAĞI | YEDİTEPE | 2043 | NO | | | | | |
| ANTALYA | KORKUTELİ | YELTEN | 2267 | NO | | | | | |
| MERSİN | TARSUS | YENİCE | 8247 | NO | | | | | |
| AYDIN | SÖKE | YENİDOĞAN | 5776 | NO | | | Büyük Menderes River | | |
| EDİRNE | İPSALA | YENİKARPUZLU | 3265 | YES | secondary | | | | |
| İZMİR | ALİAĞA | YENİŞAKRAN | 3630 | NO | | | | | |
| HATAY | DÖRTYOL | YENİYURT | 4415 | NO | | | | | |
| MUĞLA | MUĞLA | YERKESİK | 2266 | NO | | | | | |
| ANTALYA | KAŞ | YEŞİLKÖY | 3280 | NO | | | | | |
| MERSİN | SİLİFKE | YEŞİLOVACIK | 2351 | NO | | | | | |
| HATAY | HATAY | YEŞİLPINAR | 3702 | NO | | | Asi River | | |
| MERSİN | TARSUS | YEŞİLTEPE | 2369 | NO | | | | | |
| MUĞLA | FETHİYE | YEŞİLZÜMLÜ | 2414 | NO | | | | | |
| ANTALYA | FİNİKE | YEŞİLYURT | 3846 | NO | | | | | |
| MUĞLA | MUĞLA | YEŞİLYURT | 2660 | NO | | | | | |
| ANTALYA | SERİK | YUKARIKOCAYATAK | 2811 | NO | | | | | |
| ADANA | YUMURTALIK | YUMURTALIK | 5220 | YES | secondary | | | | |
| BALIKESİR | SINDIRGI | YÜREĞİL | 2197 | NO | | | Fıfıklı Stream | | |
| ANTALYA | ELMALI | YUVA | 2583 | NO | | | | | |
| MERSİN | GÜLNAR | ZEYNE | 2018 | NO | | | | | |
| İZMİR | BERGAMA | ZEYTİNDAĞ | 3276 | NO | | | Bakırçay | | |
| BALIKESİR | EDREMİT | ZEYTİNLİ | 3732 | CONNECTED | | | | | |
| MUĞLA | BODRUM | BİTEZ | 6978 | YES | SECONDARY | 3500 | | | |
| ANTALYA | KEMER | ÇAMYUVA | 4646 | YES | SECONDARY | 11860 | | | |
| MUĞLA | MARMARİS | İÇMELER | 5069 | CONNECTED ² | | | | | |
| ANTALYA | KAŞ | KALKAN | 3092 | YES | SECONDARY | 4000 | | | |
| | | Alanya | 94316 | YES | SECONDARY | | | | |
| | | Aliaga | 51108 | CONNECTED ¹ | | | | | |
| | | Anamur | 34227 | NO | | | | | |
| | | Antalya (main city) | 955573 | YES | TERTIARY | 75000 | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|---------|------------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Ayvalik | 35986 | NO | | | | | |
| | | Bodrum | 31590 | YES | SECONDARY | 10000 | | | |
| | | Burhaniye | 38156 | YES | SECONDARY | | | | |
| | | Canakkale | 96588 | NO | | | | | |
| | | Cesme | 20455 | YES | PRIMARY | | | | |
| | | Dalaman | 22956 | YES | SECONDARY | 9000 | | | |
| | | Dikili | 16269 | YES | PRIMARY | 33326 | | | |
| | | Dortyol | 69507 | NO | | | | | |
| | | Edremit | 10112 | YES | SECONDARY | 24000 | | | |
| | | Erdemli | 45241 | YES | SECONDARY | | | | |
| | | Fethiye | 72003 | YES | TERTIARY | 22477 | | | |
| | | Finike | 11199 | NO | | | | | |
| | | Gazipasa | 21730 | YES | SECONDARY | 4000 | | | |
| | | Iskenderun | 190279 | YES | SECONDARY | 86400 | | | |
| | | Izmir | 3276815 | YES | TERTIARY | 21600 | | | |
| | | Kemer | 20110 | YES | SECONDARY | 12800 | | | |
| | | Kızıltepe | 129745 | NO | | | | | |
| | | Kumluca | 30939 | YES | SECONDARY | 8760 | | | |
| | | Kusadası | 61648 | NO | | | | | |
| | | Manavgat | 81903 | YES | SECONDARY | 50000 | | | |
| | | Marmaris | 30101 | YES | SECONDARY | 51000 | | | |
| | | Mersin | 842230 | YES | TERTIARY | | | | |
| | | Samandag (Hatay) | 44137 | NO | | | | | |
| | | Sarigerme * | 25816 | YES | SECONDARY | 4500 | | | |
| | | | | YES | SECONDARY | 10000 | | | |
| | | Serik | 51119 | YES | SECONDARY | 9900 | | | |
| | | Side | | YES | SECONDARY | 9900 | | | |
| | | Silifke | 51684 | YES | SECONDARY | 21500 | | | |
| | | Tarsus | 233436 | YES | SECONDARY | | | | |
| | | Yakacik | | | | | | | |

| Province | Country | Municipality | Permanent Population | Wastewater Treatment Plant | Degree of Teratment of Wastewater | Wastewater Treated (m3/day) | Discharge of Treated Wastewater | Wastewater Untreated (m3/day) | Discharge of Untreated Wastewater |
|----------|---------|--------------|----------------------|----------------------------|-----------------------------------|-----------------------------|---------------------------------|-------------------------------|-----------------------------------|
| | | Yenihisar | | | | | | | |
| | | Akcay | 13800 | CONNECTED ³ | | | | | |
| | | Güre | 15850 | NO | | | | | |

Remarks:

- * There are two plants in the same district
Connected to İzmir Metropolitan Municipality Aliğa Wastewater Treatment Plant
- 1 Connected to Marmaris Municipalities Association Wastewater Treatment Plant
 - 2 Connected to Edremit Municipality Wastewater Treatment Plant

Country: TURKEY

MUNICIPAL WASTEWATER TREATMENT FACILITIES
CITIES WITH POPULATION MORE THAN 2,000 IN THE VICINITY OF BIG RIVERS
ENDING UP IN THE MEDITERRANEAN SEA

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treatment Capacity (m ³ /day) | Discharge of Treated Waste water | Waste water Untreated (m ³ /day) | Discharge of Untreated Wastewater |
|----------------|-------------|----------------------|----------------------------|-----------------------------|-----------------------------------|---|----------------------------------|---|-----------------------------------|
| Buyuk Menderes | Bekilli | 3481 | NO | | | | | | |
| Buyuk Menderes | Saraykoy | 18526 | NO | | | | | | |
| Buyuk Menderes | Buharkent | 6891 | NO | | | | | | |
| Buyuk Menderes | Kuyucak | 7701 | NO | Biological | Secondary | | | | |
| Buyuk Menderes | Nazilli | 109800 | YES | Biological (Oxidation pond) | Secondary | 15000 | | | |
| Buyuk Menderes | Yenipazar | 6609 | NO | Biological | Secondary | | | | |
| Buyuk Menderes | Sultanhisar | 6229 | NO | | | | | | |
| Buyuk Menderes | Kosk | 9854 | NO | | | | | | |
| Buyuk Menderes | Kocarli | 6822 | NO | | | | | | |
| Ceyhan | Ceyhan | 104572 | NO | | | | | | |
| Gediz | Gediz | 19546 | YES | Biological | Secondary | 4200 | | | |
| Gediz | Saphane | 3623 | NO | | | | | | |
| Gediz | Koprubasi | 5283 | NO | | | | | | |

| River | City | Permanent Population | Wastewater Treatment Plant | Wastewater Treatment Method | Degree of Treatment of Wastewater | Wastewater Treatment Capacity (m ³ /day) | Discharge of Treated Waste water | Waste water Untreated (m ³ /day) | Discharge of Untreated Wastewater |
|-------------|-----------------------|----------------------|----------------------------|-----------------------------|-----------------------------------|---|----------------------------------|---|-----------------------------------|
| Gediz | Salihli | 96503 | NO | | | | | | |
| Gediz | Ahmetli | 9916 | YES | Biological | Secondary | | | | |
| Gediz | Turgutlu | 115930 | NO | | | | | | |
| Gediz | Manisa ¹ | 291374 | YES | Biological | Secondary | | | | |
| Gediz | Menemen | 116147 | CONNECTED | | | | | | |
| Goksu | Taskent ² | 1701 | NO | | | | | | |
| Goksu | Basyayla | 2663 | NO | | | | | | |
| Goksu | Hadim | 3280 | NO | | | | | | |
| Goksu | Mut | 28966 | NO | | | | | | |
| Goksu | Silifke | 51684 | YES | Biological | Secondary | 21500 | | | |
| Lamas | Erdemli | 45241 | YES | Biological | Secondary | | | | |
| Manavgat | Manavgat ³ | 81903 | YES | Biological | Secondary | 50000 | | | |
| Meric/Evros | Edirne | 141570 | NO | | | | | | |
| Meric/Evros | Meric | 3168 | NO | | | | | | |
| Meric/Evros | Enez | 3820 | NO | | | | | | |
| Asi | Antakya | 202216 | YES | Biological | Secondary | 30672 | | | |
| Asi | Samandag | 44137 | NO | | | | | | |
| Seyhan | Feke | 4534 | NO | | | | | | |
| Seyhan | Adana ⁴ | 1563545 | YES | Biological | Secondary | 170940 | | | |
| | | | YES | Biological | Secondary | 227000 | | | |

Remarks:

1: The treatment plant is 20 years old. It is trickling filter. They are planning new biological treatment plant (Activated sludge).

2: The actual population of Taskent is below 2000

3: New biological treatment plant construction has been finished (Activated sludge) and infrastructure connection is being waited.

4: Adana has two treatment plants.

PART III

SUMMARY TABLES FOR EACH COUNTRY AND THE MEDITERRANEAN

| | country | Albania | Algeria | Croatia | Cyprus | Egypt | France | Greece |
|--|----------------------------------|----------------|----------------|----------------|---------------|--------------|---------------|---------------|
| | <i>number of cities</i> | 97 | 134 | 68 | 34 | 281 | 243 | 287 |
| | <i>permanent population</i> | 2,350,545 | 6,130,945 | 1,043,087 | 501,700 | 31,170,820 | 7,511,311 | 8,047,421 |
| | <i>cities served by WWTP</i> | 1 | 63 | 30 | 4 | 205 | 238 | 154 |
| Operating WWTP | <i>TOTAL</i> | 1 | 48 | 30 | 4 | 237 | 212 | 120 |
| | <i>pre-treatment</i> | 0 | 18 | 16 | 0 | 0 | 0 | 0 |
| | <i>primary treatment</i> | 0 | 3 | 3 | 0 | 49 | 30 | 0 |
| | <i>secondary treatment</i> | 1 | 27 | 11 | 0 | 184 | 151 | 63 |
| | <i>tertiary treatment</i> | 0 | 0 | 0 | 4 | 0 | 31 | 57 |
| | <i>not determined</i> | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| | <i>WWTPs out of order</i> | 1 | 2 | 0 | 0 | 0 | 0 | 8 |
| Treated wastewater | <i>Total treated m3/d</i> | - | 509,748 | 62,995 | 50,800 | 11,397,000 | 2,457,654 | 1,951,897 |
| | <i>pre-treatment m3/d</i> | - | 23,580 | 48,579 | - | - | - | - |
| | <i>primary m3/d</i> | - | 3,234 | 3,954 | - | 2,978,300 | 212,608 | - |
| | <i>secondary m3/d</i> | - | 482,934 | 10,462 | - | 8,352,700 | 1,684,076 | 1,736,693 |
| | <i>tertiary m3/d</i> | - | - | - | 50,800 | - | 560,970 | 215,204 |
| | <i>unknown m3/d</i> | - | - | - | - | 66,000 | - | - |
| Extension | <i>untreated wastewater m3/d</i> | 22,502 | 289,222 | 18,436 | 14,670 | 11,885 | 262 | 245,726 |
| | <i>under construction</i> | 0 | 4 | 0 | 0 | 0 | 3 | 0 |
| New plant | <i>in design phase</i> | 0 | 0 | 0 | 0 | 2 | 3 | 16 |
| | <i>under construction</i> | 3 | 3 | 0 | 0 | 26 | 6 | 18 |
| | <i>in design phase</i> | 4 | 14 | 0 | 0 | 0 | 3 | 3 |
| | <i>Consumption lt/cap/day</i> | 52 | 139 | 130 | 130 | 366 | 226 | 248 |
| Disposal treated | <i>No data</i> | 0 | 27 | 0 | 0 | 4 | 2 | 0 |
| | <i>Reuse</i> | 0 | 1 | 0 | 0 | 1 | 3 | 1 |
| | <i>River</i> | 0 | 9 | 0 | 0 | 198 | 125 | 6 |
| | <i>Sea</i> | 1 | 7 | 30 | 0 | 18 | 55 | 112 |
| | <i>Other</i> | 0 | 4 | 0 | 4 | 16 | 27 | 1 |
| Disposal untreated | <i>No data</i> | 88 | 29 | 0 | 0 | 1 | 0 | 0 |
| | <i>Reuse</i> | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| | <i>River</i> | 0 | 51 | 0 | 0 | 0 | 1 | 0 |
| | <i>Sea</i> | 8 | 8 | 6 | 0 | 0 | 2 | 9 |
| | <i>Other</i> | 0 | 2 | 0 | 30 | 12 | 0 | 124 |
| Coastal cities >10.000 & <100.000 | <i>Total</i> | 5 | 68 | 11 | 5 | 25 | 59 | 57 |
| | <i>Served by WWTP</i> | 1 | 25 | 8 | 3 | 9 | 57 | 48 |
| | <i>Not Served by a WWTP</i> | 4 | 43 | 3 | 2 | 16 | 2 | 9 |
| Coastal cities >100.000 | <i>Total</i> | 2 | 13 | 2 | 1 | 6 | 11 | 9 |
| | <i>Served by WWTP</i> | 0 | 6 | 2 | 1 | 6 | 11 | 9 |
| | <i>Not Served by a WWTP</i> | 2 | 7 | 0 | 0 | 0 | 0 | 0 |

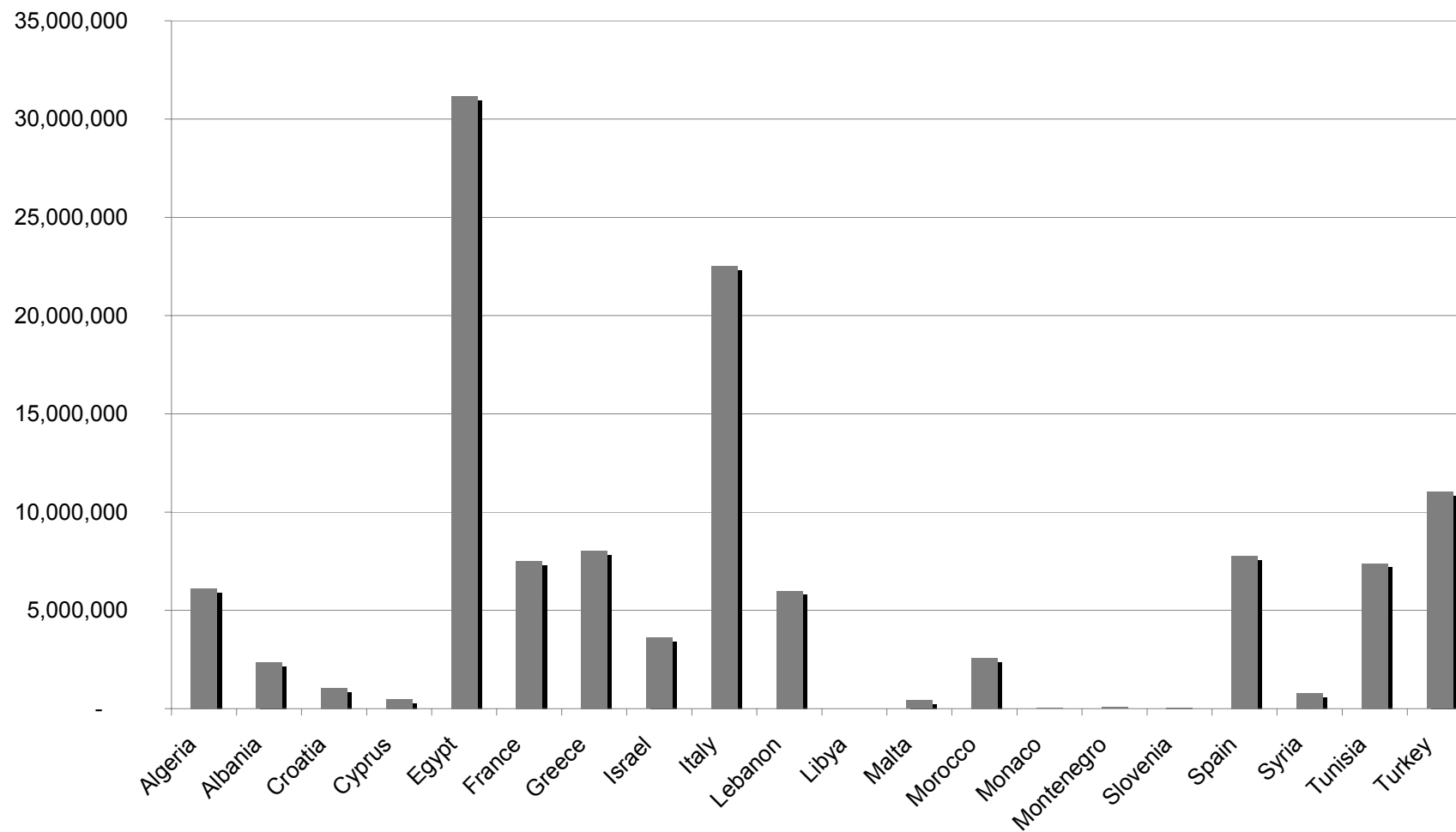
| | country | Israel | Italy | Lebanon | Libya | Malta | Monaco | Montenegro |
|--|----------------------------------|---------------|--------------|----------------|-----------------------------------|--------------|---------------|-------------------|
| | <i>number of cities</i> | 18 | 536 | 17 | 75 | 57 | 1 | 13 |
| | <i>permanent population</i> | 3,612,000 | 22,538,259 | 6,001,300 | - | 429,367 | 35,000 | 83,808 |
| | <i>cities served by WWTP</i> | 18 | 488 | 3 | 11 | 24 | 1 | 0 |
| Operating WWTP | <i>TOTAL</i> | 18 | 517 | 3 | 11 | 3 | 1 | 0 |
| | <i>pre-treatment</i> | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| | <i>primary treatment</i> | 2 | 306 | 3 | 0 | 0 | 0 | 0 |
| | <i>secondary treatment</i> | 10 | 109 | 0 | 11 | 0 | 1 | 0 |
| | <i>tertiary treatment</i> | 6 | 73 | 0 | 0 | 3 | 0 | 0 |
| | <i>not determined</i> | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| | <i>WWTPs out of order</i> | 0 | 5 | | 56 | 0 | 0 | 0 |
| Treated wastewater | <i>Total treated m3/d</i> | 646,900 | 2,959,774 | 435,000 | 82,850 | 12,191 | 17,500 | - |
| | <i>pre-treatment m3/d</i> | - | 7,898 | - | - | - | - | - |
| | <i>primary m3/d</i> | 13,400 | 1,519,343 | 435,000 | - | - | - | - |
| | <i>secondary m3/d</i> | 548,100 | 852,267 | - | 82,850 | - | 17,500 | - |
| | <i>tertiary m3/d</i> | 85,400 | 483,433 | - | - | 12,191 | - | - |
| | <i>unknown m3/d</i> | - | 96,833 | - | - | - | - | - |
| | <i>untreated wastewater m3/d</i> | - | 1,451,488 | 474,110 | - | - | - | 27,000 |
| Extension | <i>under construction</i> | | 0 | 1 | 0 | | 0 | |
| | <i>in design phase</i> | | 0 | | 0 | | 0 | |
| New plant | <i>under construction</i> | | 15 | 5 | 12 | 1 | 0 | |
| | <i>in design phase</i> | | 12 | 5 | 0 | 0 | 0 | |
| | <i>Consumption lt/cap/day</i> | 180 | 200 | 151 | | 100 | 233 | 189 |
| Disposal treated | <i>No data</i> | | 465 | 2 | 1 | | 0 | |
| | <i>Reuse</i> | 3 | 52 | | 0 | 1 | 0 | |
| | <i>River</i> | | 0 | | 0 | | 0 | |
| | <i>Sea</i> | 15 | 0 | 1 | 4 | 2 | 1 | |
| | <i>Other</i> | | 0 | | 6 | | 0 | |
| Disposal untreated | <i>No data</i> | | 513 | 11 | 0 | | 0 | |
| | <i>Reuse</i> | | 0 | | 0 | | 0 | |
| | <i>River</i> | | 0 | | 0 | | 0 | |
| | <i>Sea</i> | | 0 | 2 | 0 | 33 | 1 | 13 |
| | <i>Other</i> | | 0 | | 0 | | 0 | |
| Coastal cities >10.000 & <100.000 | <i>Total</i> | 11 | 187 | 8 | | 15 | 1 | 4 |
| | <i>Served by WWTP</i> | 11 | 162 | 0 | | 9 | 1 | 0 |
| | <i>Not Served by a WWTP</i> | 0 | 25 | 8 | | 6 | 0 | 4 |
| Coastal cities >100.000 | <i>Total</i> | 7 | 19 | 9 | Population data were not reported | 0 | 0 | 0 |
| | <i>Served by WWTP</i> | 7 | 19 | 3 | | 0 | 0 | 0 |
| | <i>Not Served by a WWTP</i> | 0 | 0 | 6 | | 0 | 0 | 0 |

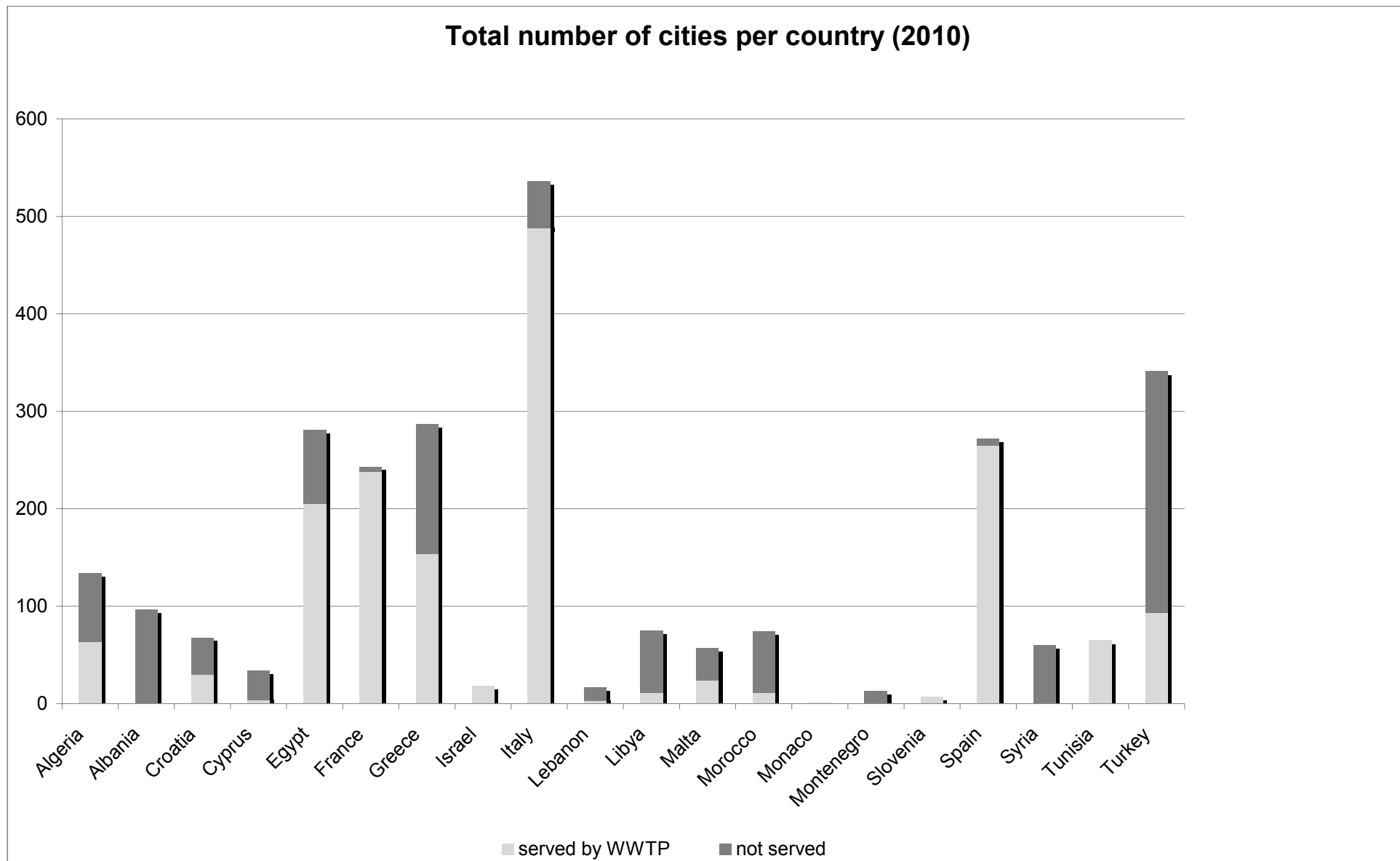
| | country | Morocco | Slovenia | Spain | Syria | Tunisia | Turkey | All |
|--|----------------------------------|----------------|-----------------|--------------|--------------|----------------|---------------|--------------------|
| | <i>number of cities</i> | 74 | 7 | 272 | 60 | 65 | 341 | 2680 |
| | <i>permanent population</i> | 2,600,762 | 52,028 | 7,784,161 | 813,416 | 7,407,000 | 11,031,926 | 119,144,856 |
| | <i>cities served by WWTP</i> | 11 | 7 | 265 | 0 | 65 | 93 | 1681 |
| Operating WWTP | <i>TOTAL</i> | 11 | 2 | 197 | 0 | 65 | 75 | 1555 |
| | <i>pre-treatment</i> | 1 | 0 | 2 | | 0 | 0 | 41 |
| | <i>primary treatment</i> | 1 | 0 | 2 | | | 3 | 402 |
| | <i>secondary treatment</i> | 6 | 0 | 164 | | 30 | 61 | 829 |
| | <i>tertiary treatment</i> | 3 | 2 | 29 | | 8 | 11 | 227 |
| | <i>not determined</i> | 0 | 0 | 0 | | 27 | 0 | 56 |
| | <i>WWTPs out of order</i> | 0 | 0 | 0 | | | 0 | 72 |
| Treated wastewater | <i>Total treated m3/d</i> | 88,380 | 18,204 | 2,320,276 | | 575,151 | 1,002,835 | 24,589,155 |
| | <i>pre-treatment m3/d</i> | 400 | - | 53,168 | | - | - | 133,625 |
| | <i>primary m3/d</i> | - | - | - | | - | 33,326 | 5,199,165 |
| | <i>secodary m3/d</i> | 25,880 | - | 2,017,934 | | - | 850,432 | 16,661,828 |
| | <i>tertiary m3/d</i> | 62,100 | 18,204 | 249,174 | | - | 119,077 | 1,856,553 |
| | <i>unknown m3/d</i> | - | - | - | | 575,151 | - | 737,984 |
| | <i>untreated wastewater m3/d</i> | 146,276 | | 6,488 | 91,392 | 9,644 | - | 2,809,100 |
| Extension | <i>under construction</i> | 1 | 0 | 0 | | | 0 | 9 |
| | <i>in design phase</i> | 0 | 0 | 0 | | | 0 | 21 |
| New plant | <i>under construction</i> | 5 | 0 | 0 | | | 0 | 94 |
| | <i>in design phase</i> | 18 | 0 | 0 | | | 0 | 59 |
| | <i>Consumption lt/cap/day</i> | 114 | 350 | 306 | 112 | 126 | 142 | 243 |
| Disposal treated | <i>No data</i> | 11 | 0 | 2 | | 65 | 65 | 644 |
| | <i>Reuse</i> | 0 | 0 | 42 | | | 0 | 104 |
| | <i>River</i> | 0 | 1 | 35 | | | 10 | 384 |
| | <i>Sea</i> | 0 | 1 | 80 | | | 0 | 327 |
| | <i>Other</i> | 0 | 0 | 38 | | | 0 | 96 |
| Disposal untreated | <i>No data</i> | 2 | 0 | 5 | 3 | | 0 | 652 |
| | <i>Reuse</i> | 0 | 0 | 0 | | | 0 | 2 |
| | <i>River</i> | 0 | 0 | 0 | | | 0 | 52 |
| | <i>Sea</i> | 1 | 0 | 0 | 57 | | 0 | 140 |
| | <i>Other</i> | 0 | 0 | 0 | | | 0 | 168 |
| Coastal cities >10.000 & <100.000 | <i>Total</i> | 24 | 3 | 77 | 2 | 14 | 27 | 603 |
| | <i>Served by WWTP</i> | 6 | 2 | 77 | 0 | 14 | 19 | 452 |
| | <i>Not Served by a WWTP</i> | 18 | 1 | 0 | 2 | 0 | 8 | 151 |
| Coastal cities >100.000 | <i>Total</i> | 4 | 0 | 8 | 2 | 4 | 6 | 103 |
| | <i>Served by WWTP</i> | 2 | 0 | 8 | 0 | 4 | 5 | 83 |
| | <i>Not Served by a WWTP</i> | 2 | 0 | 0 | 2 | 0 | 1 | 20 |

PART IV

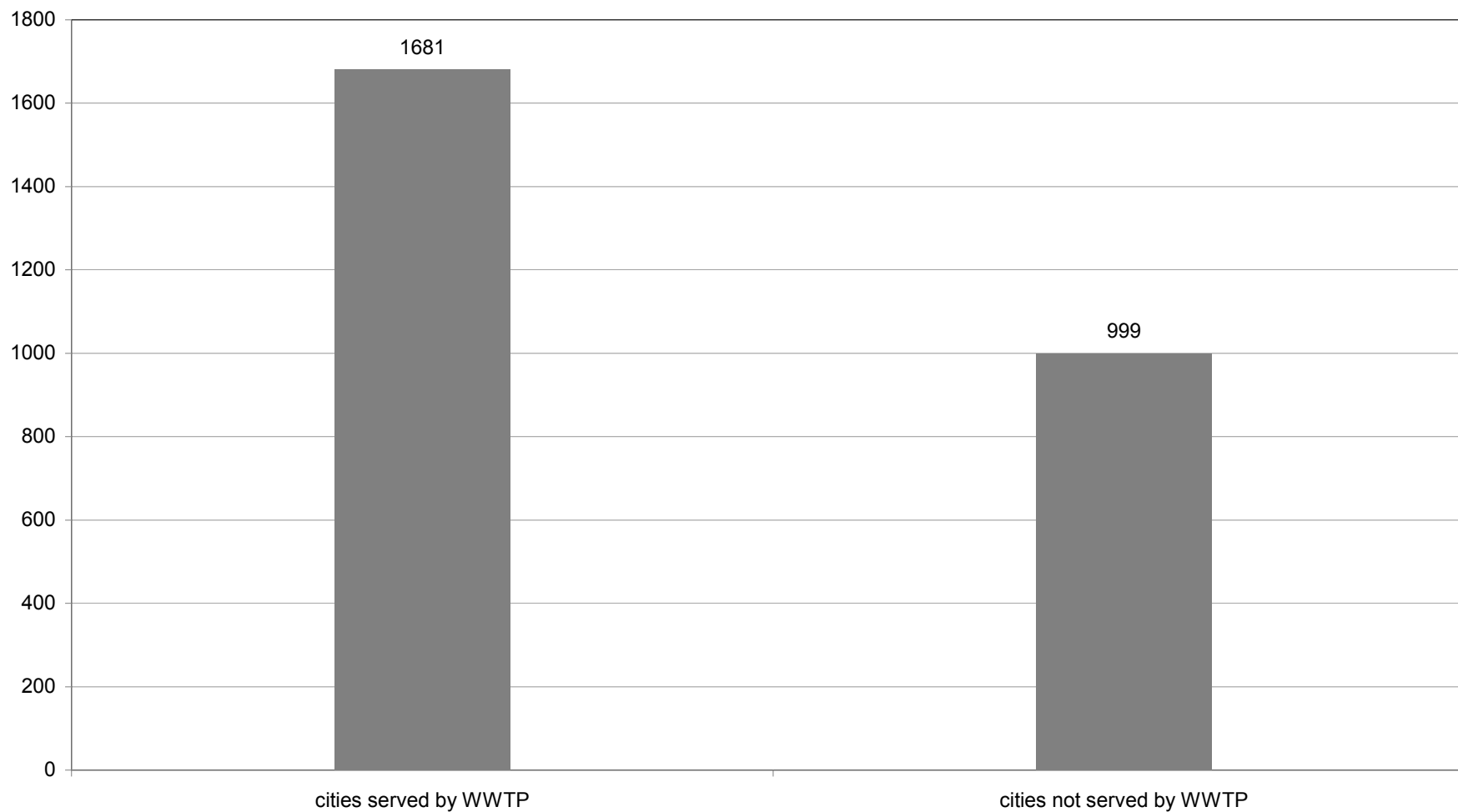
GRAPHS PRESENTING THE CURRENT SITUATION WITH RESPECT TO WASTEWATER TREATMENT PLANTS IN THE MEDITERRANEAN

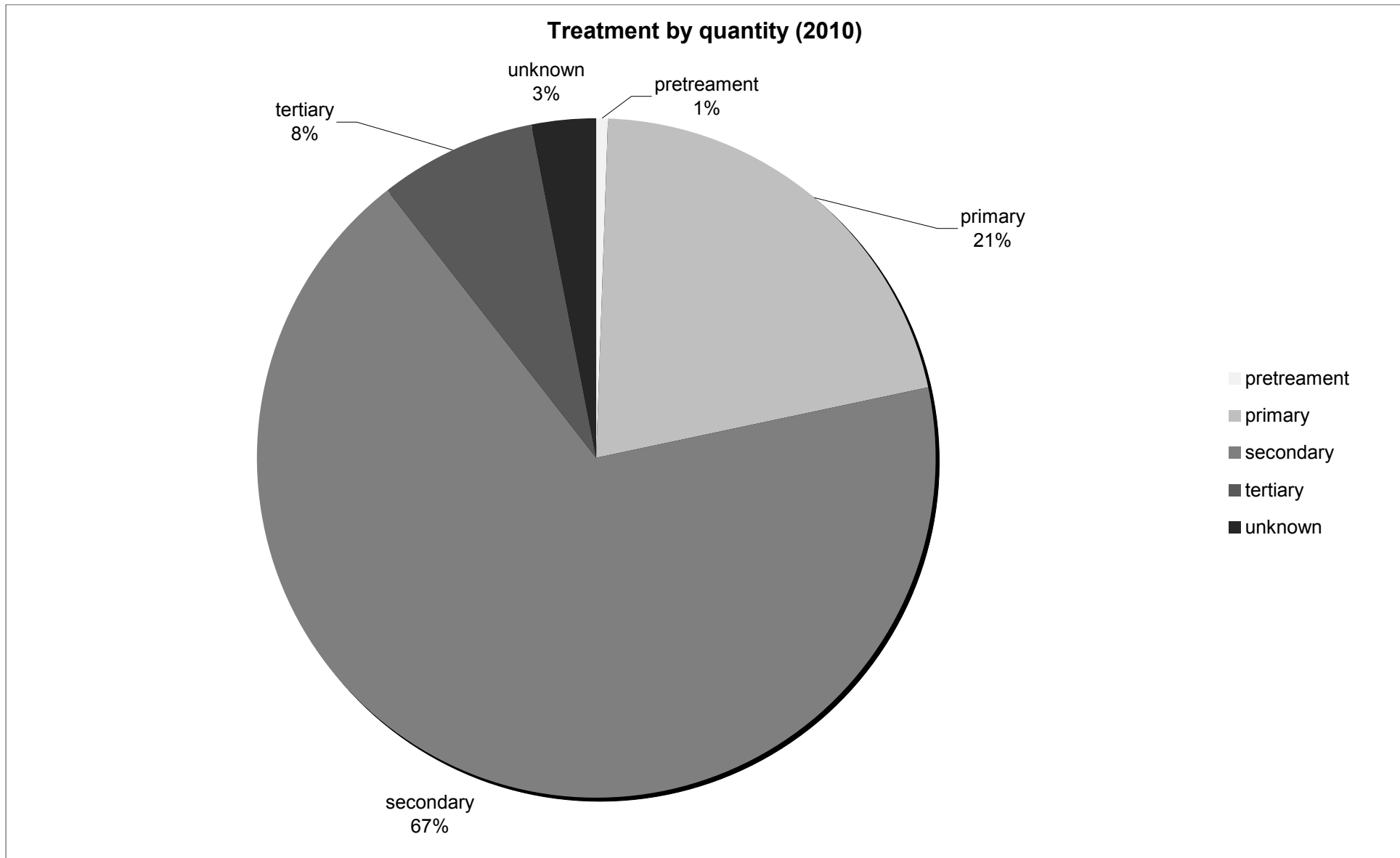
Population (2010)



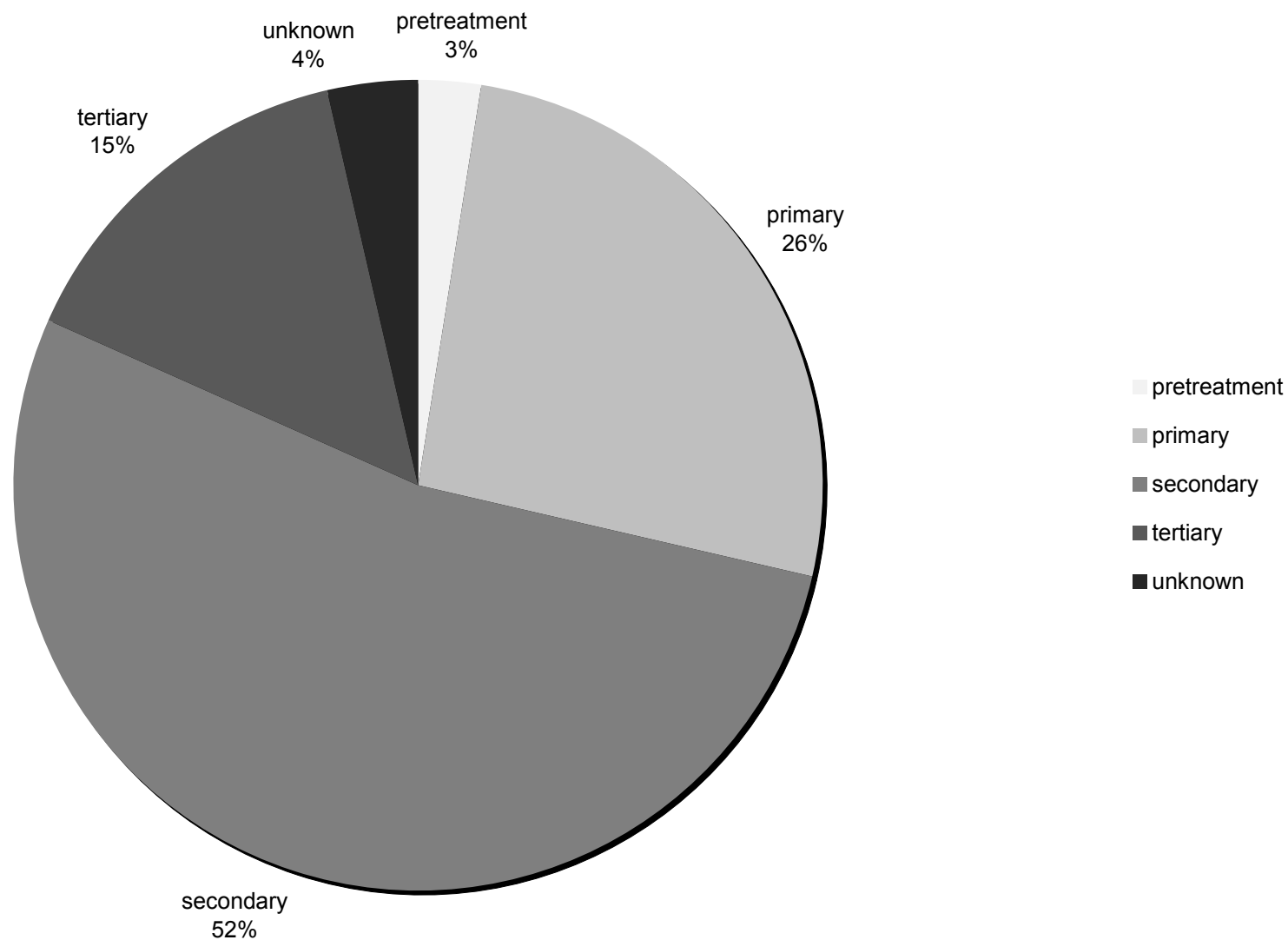


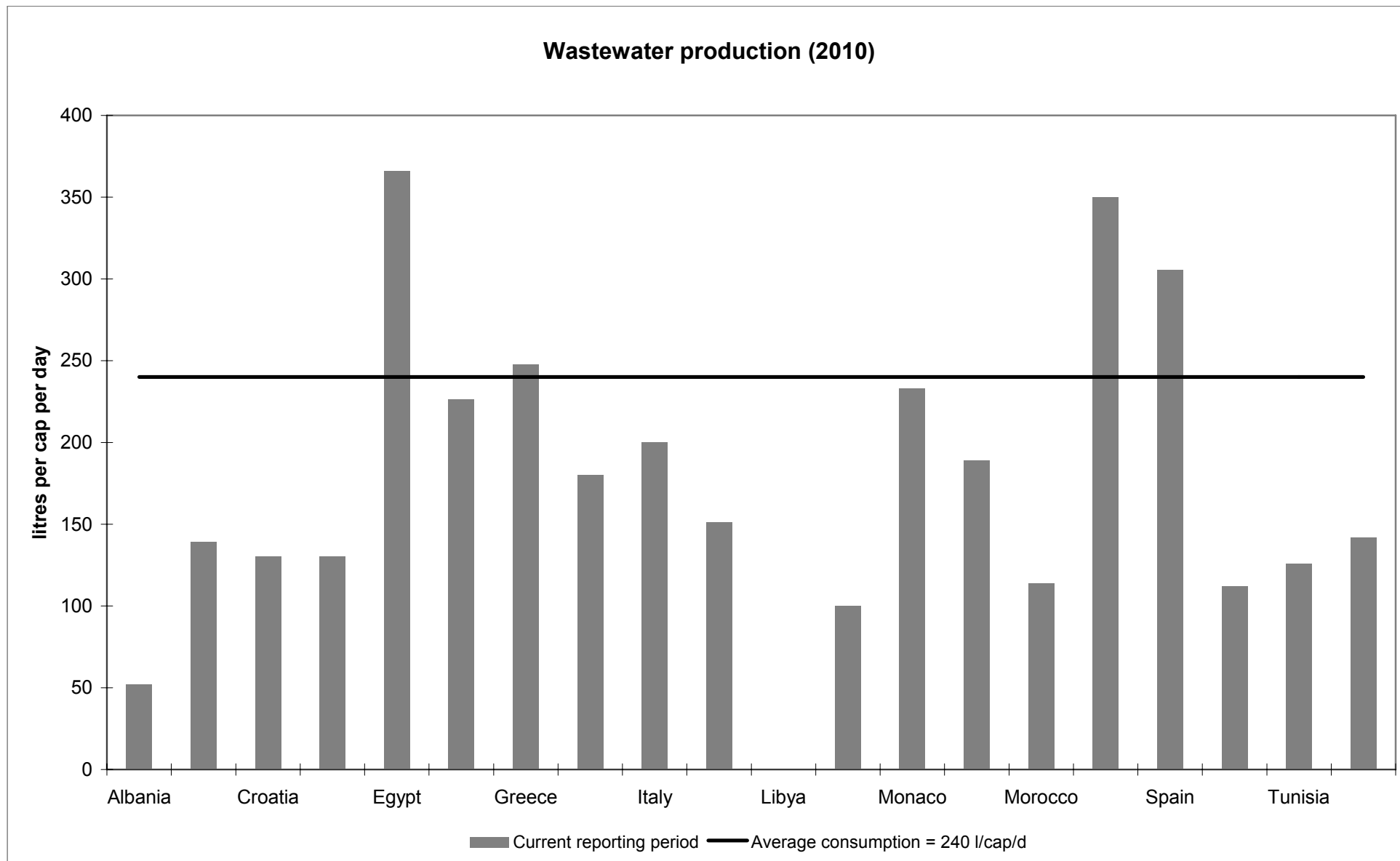
Total number of cities in the Mediterranean (2010)



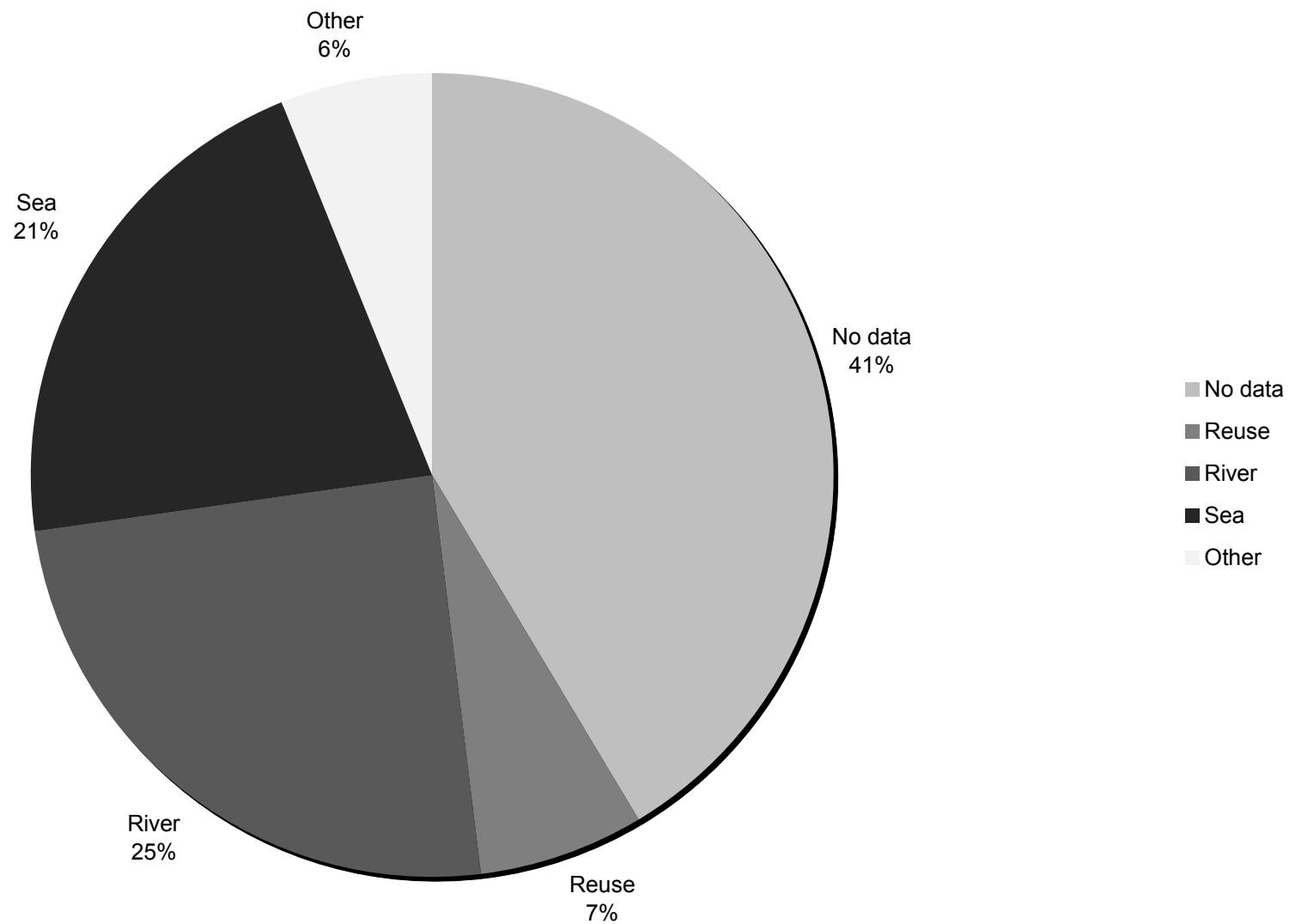


Treatment method by WWTP (2010)

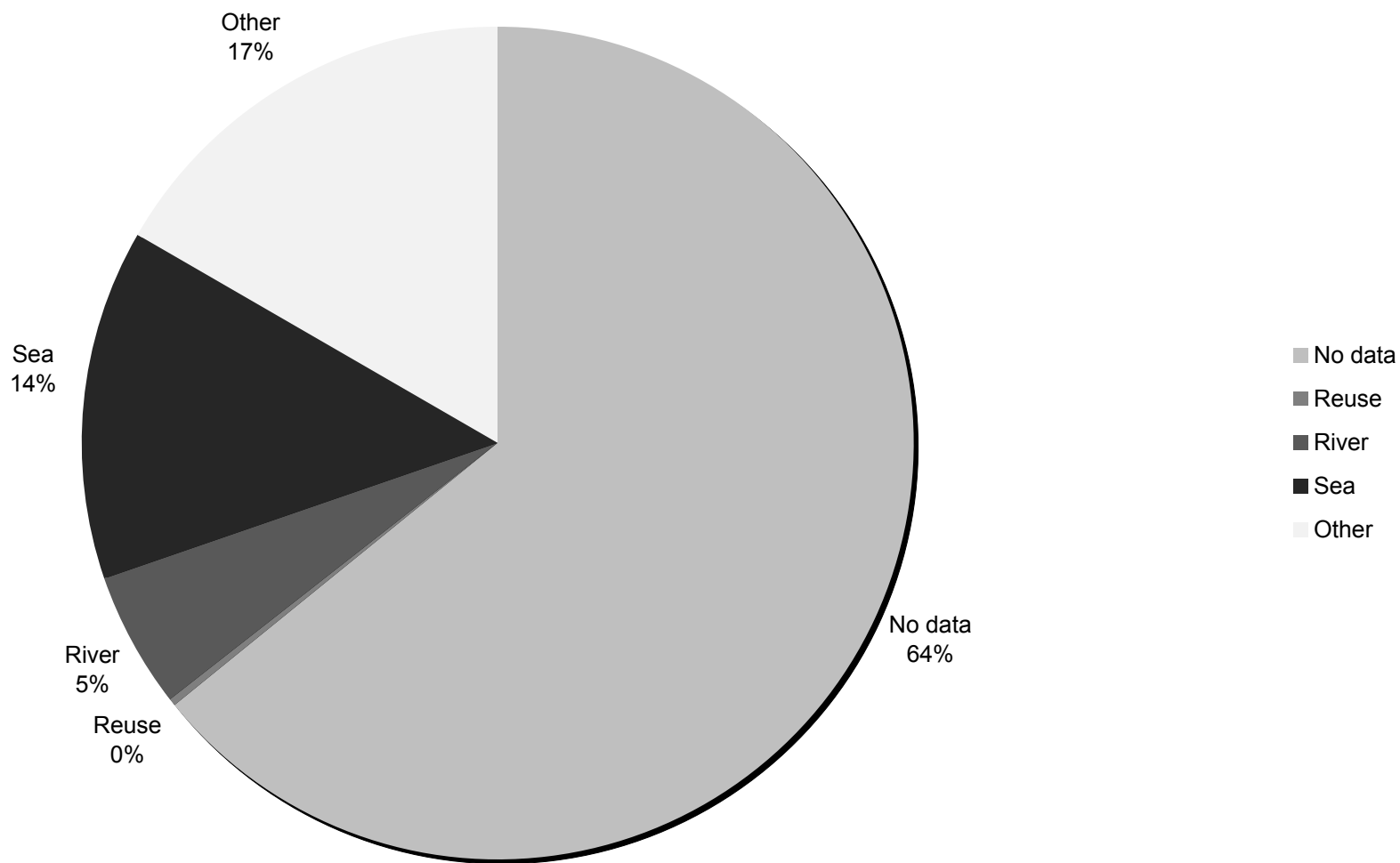




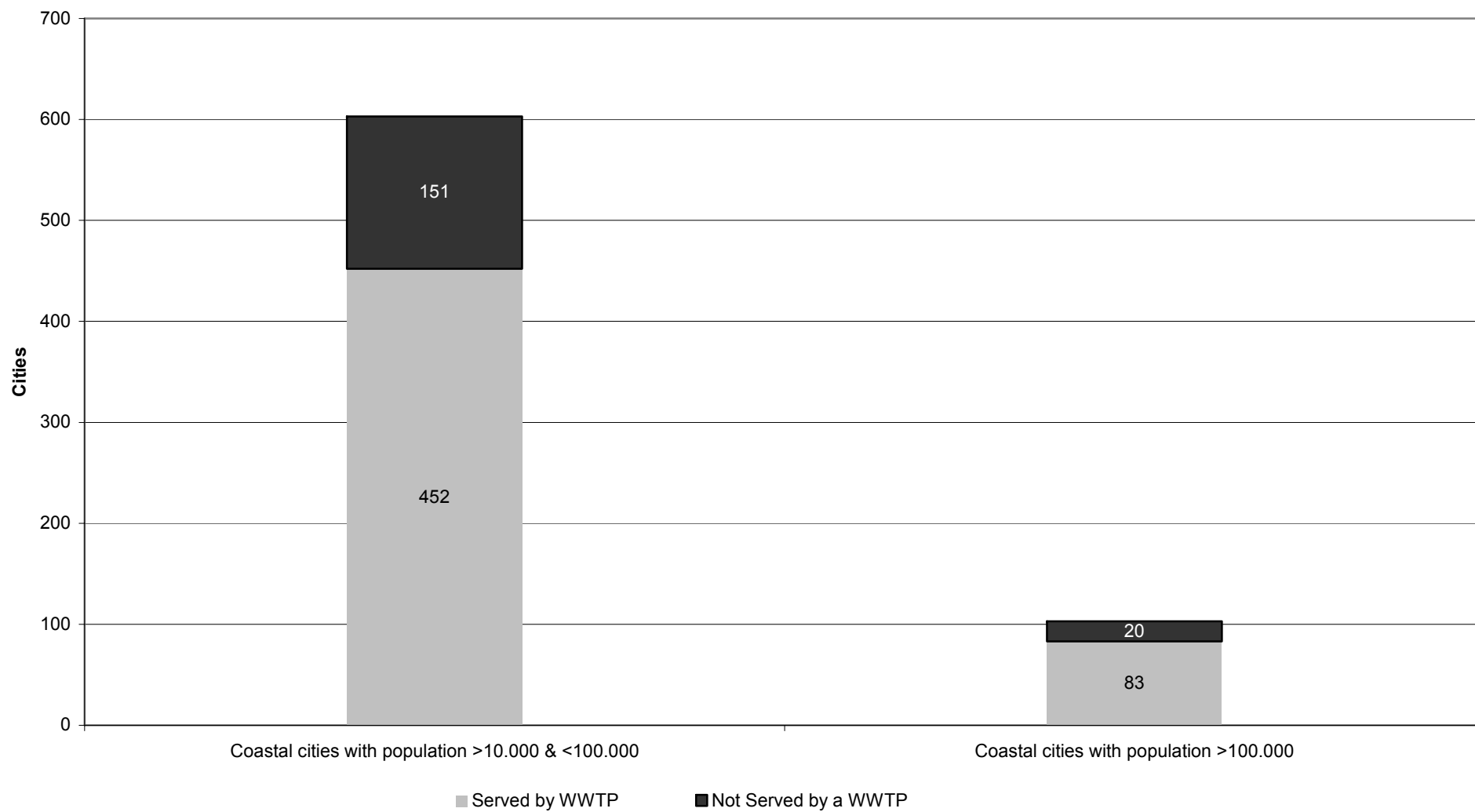
Disposal of treated wastewater (2010)

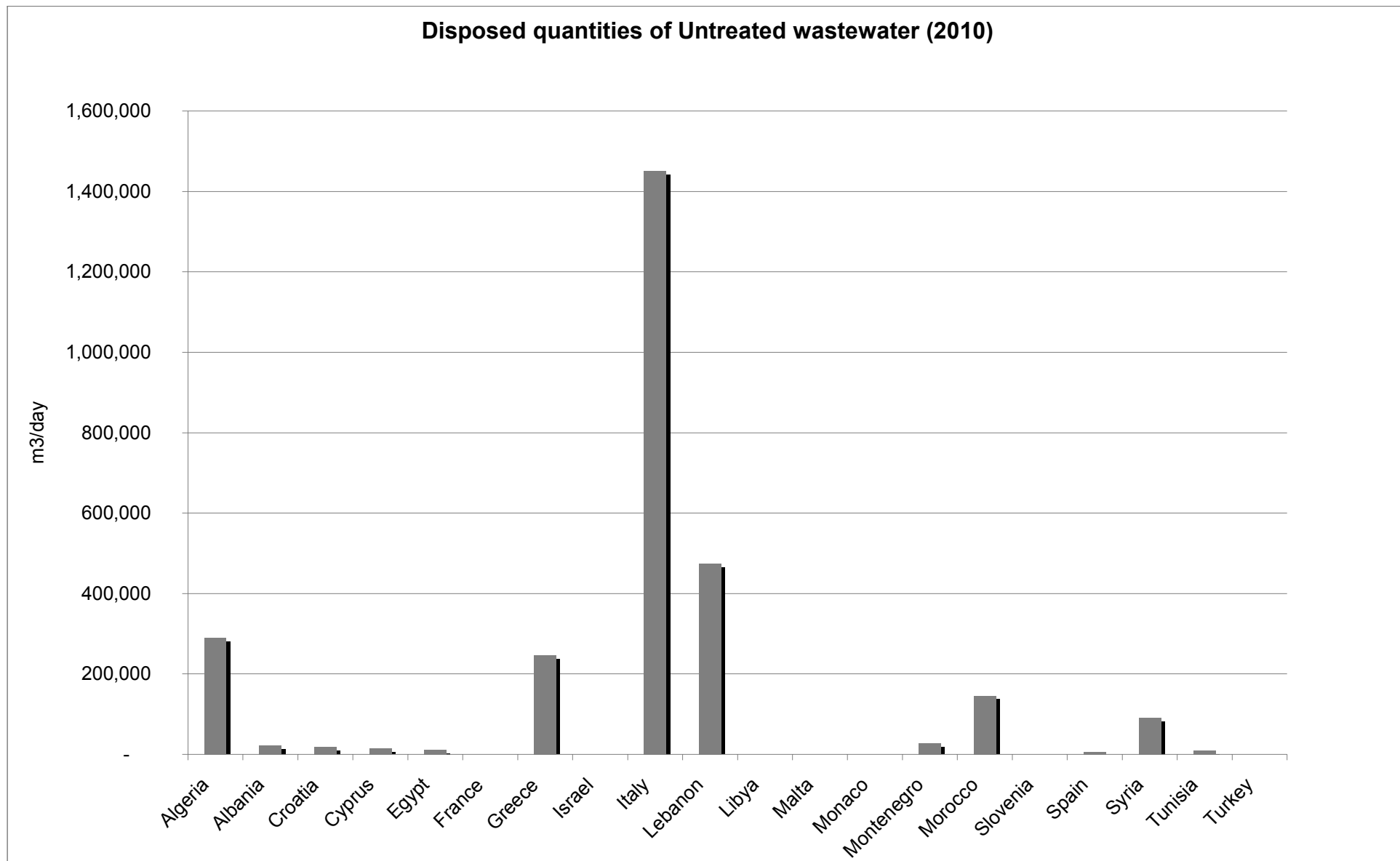


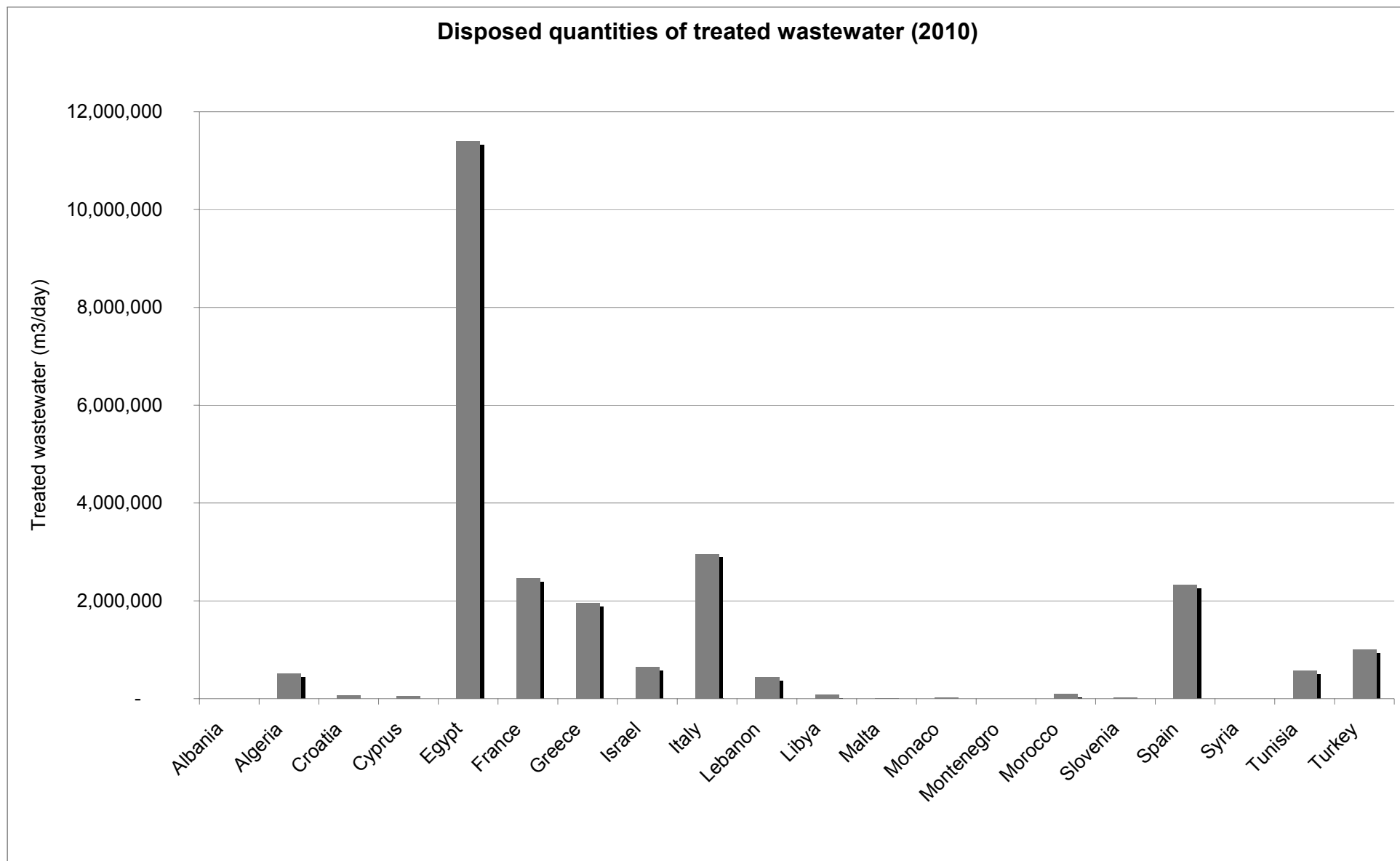
Disposal of untreated wastewater (2010)



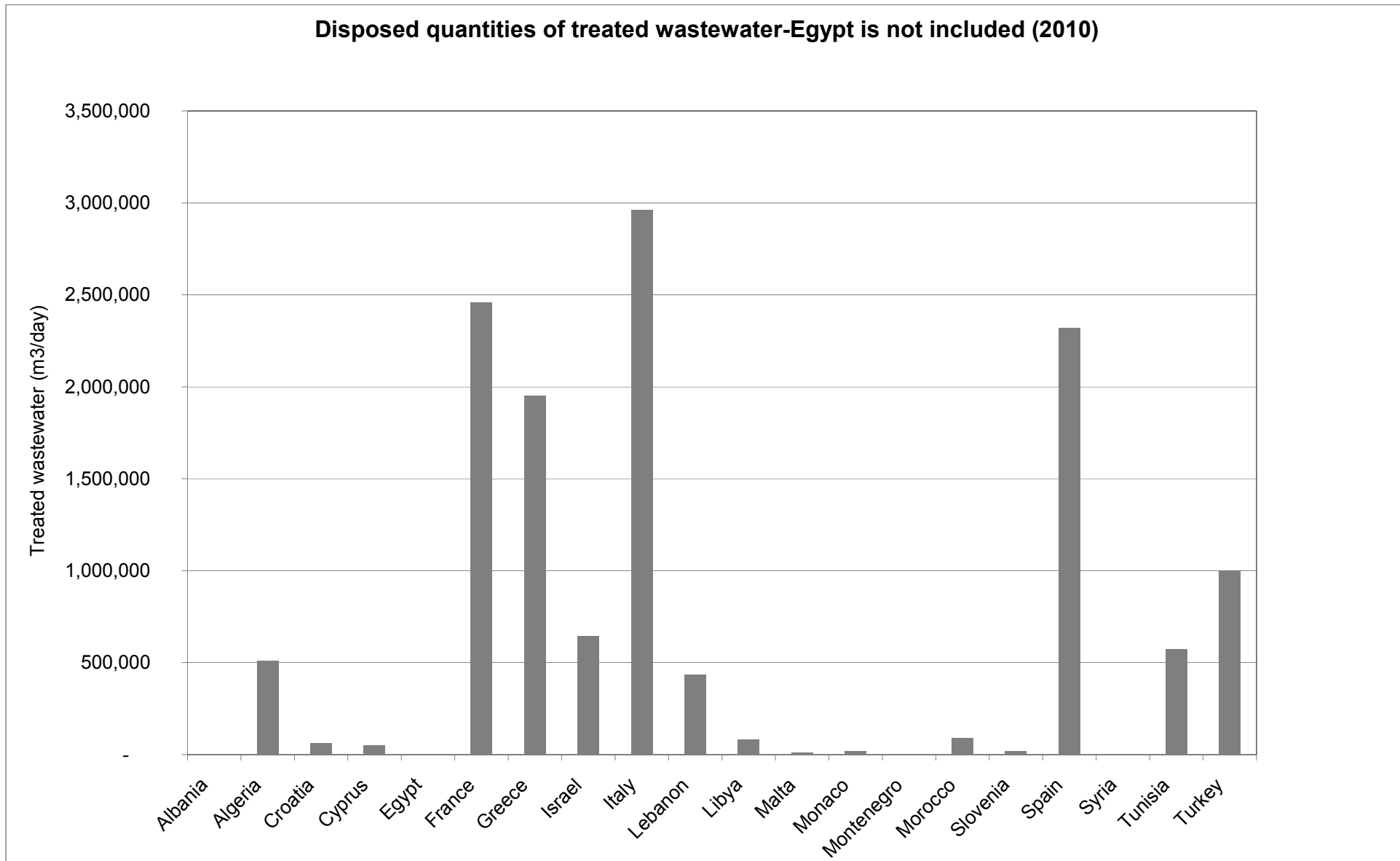
Genoa declaration Target (2010)





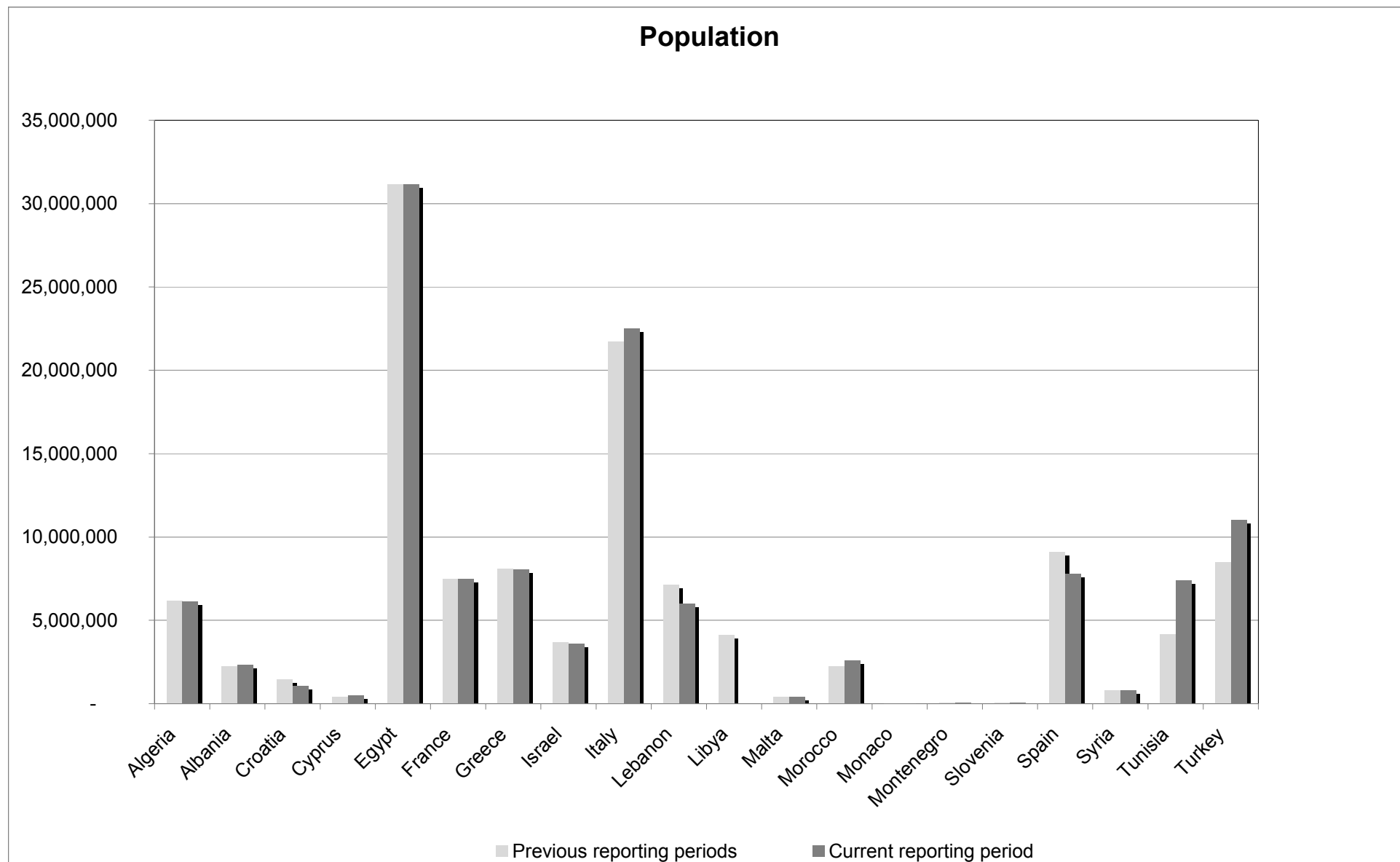


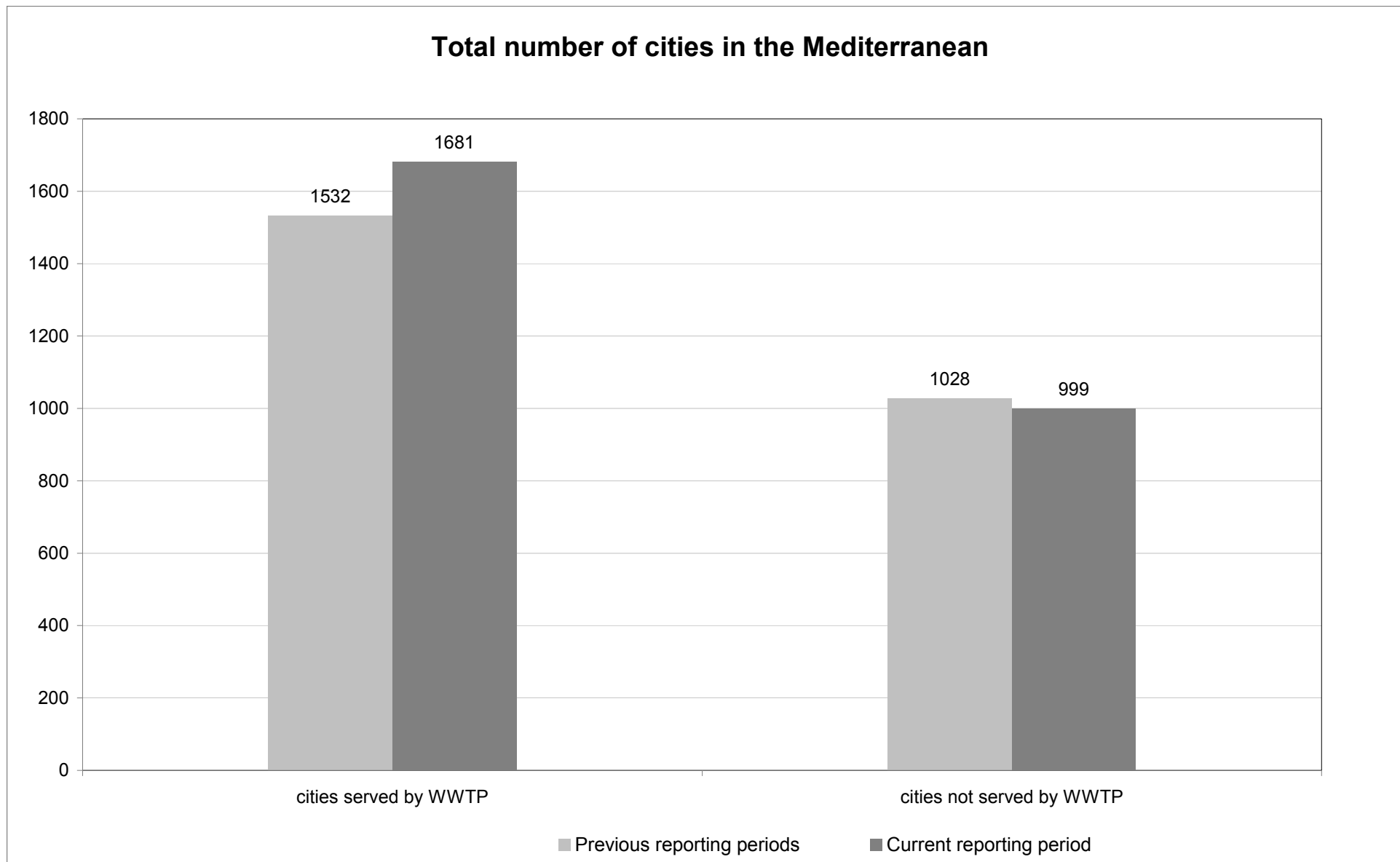
Disposed quantities of treated wastewater-Egypt is not included (2010)

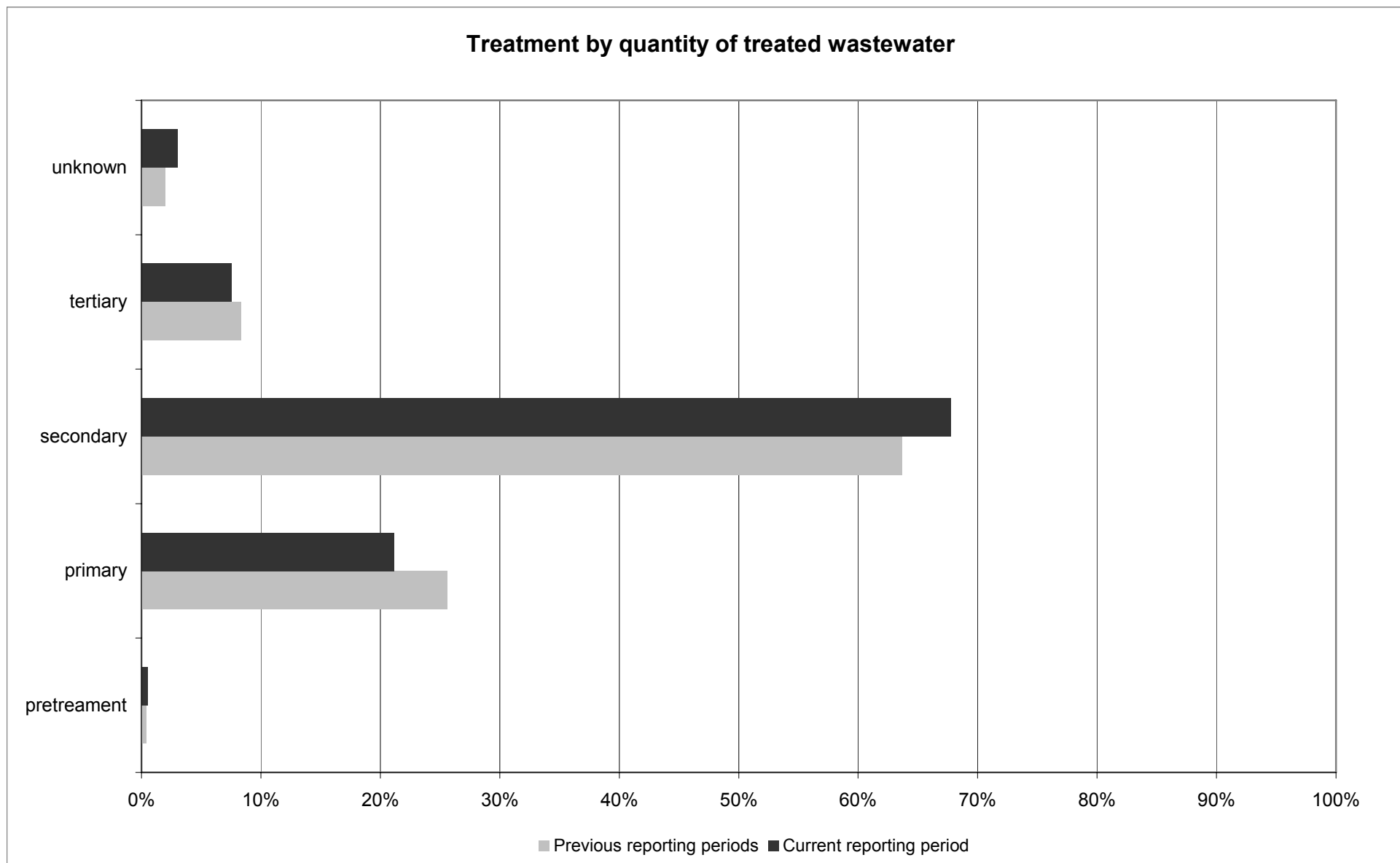


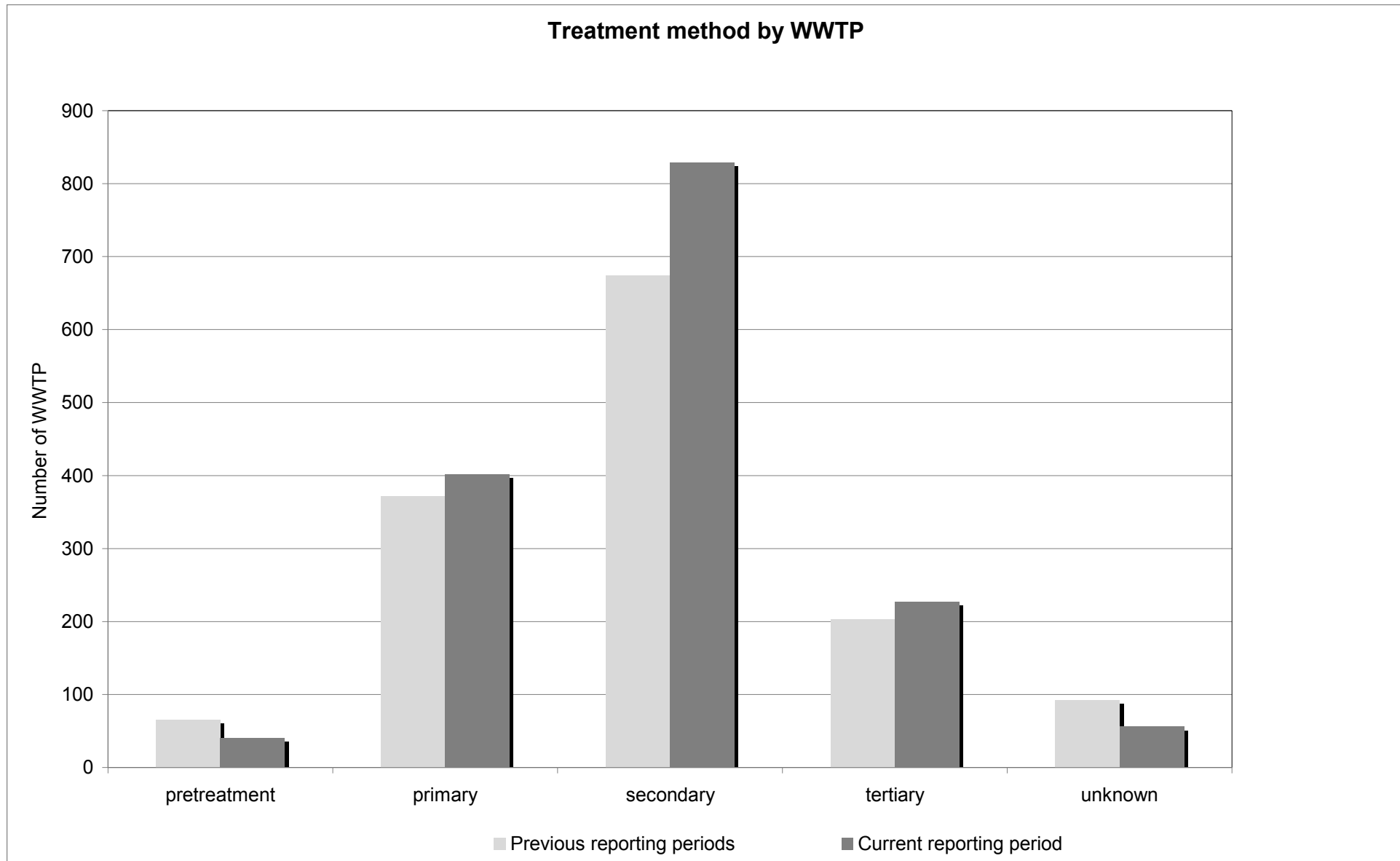
PART V

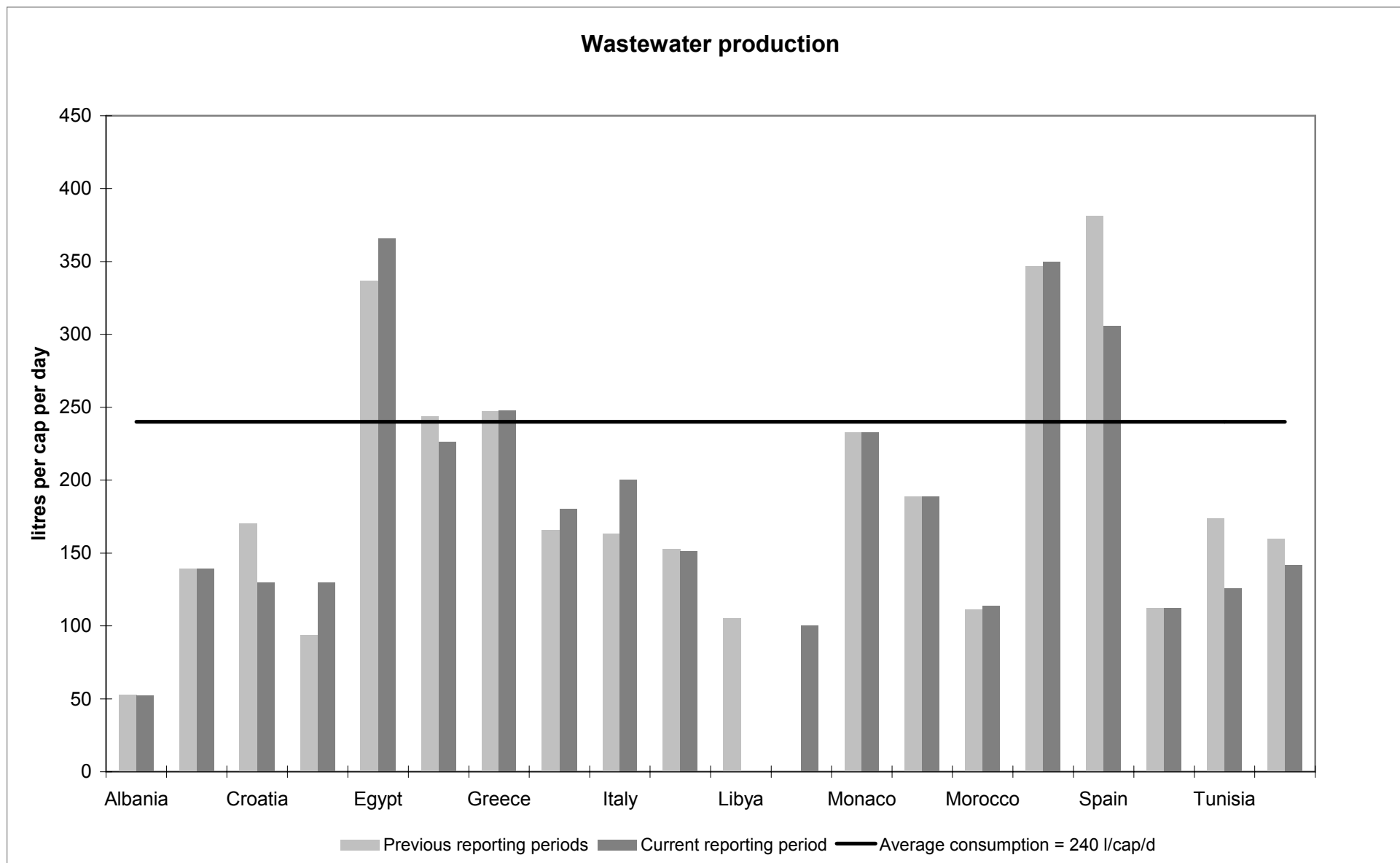
GRAPHS COMPARING THE DIFFERENT REPORTING PERIODS WITH RESPECT TO WASTEWATER TREATMENT PLANTS IN THE MEDITERRANEAN

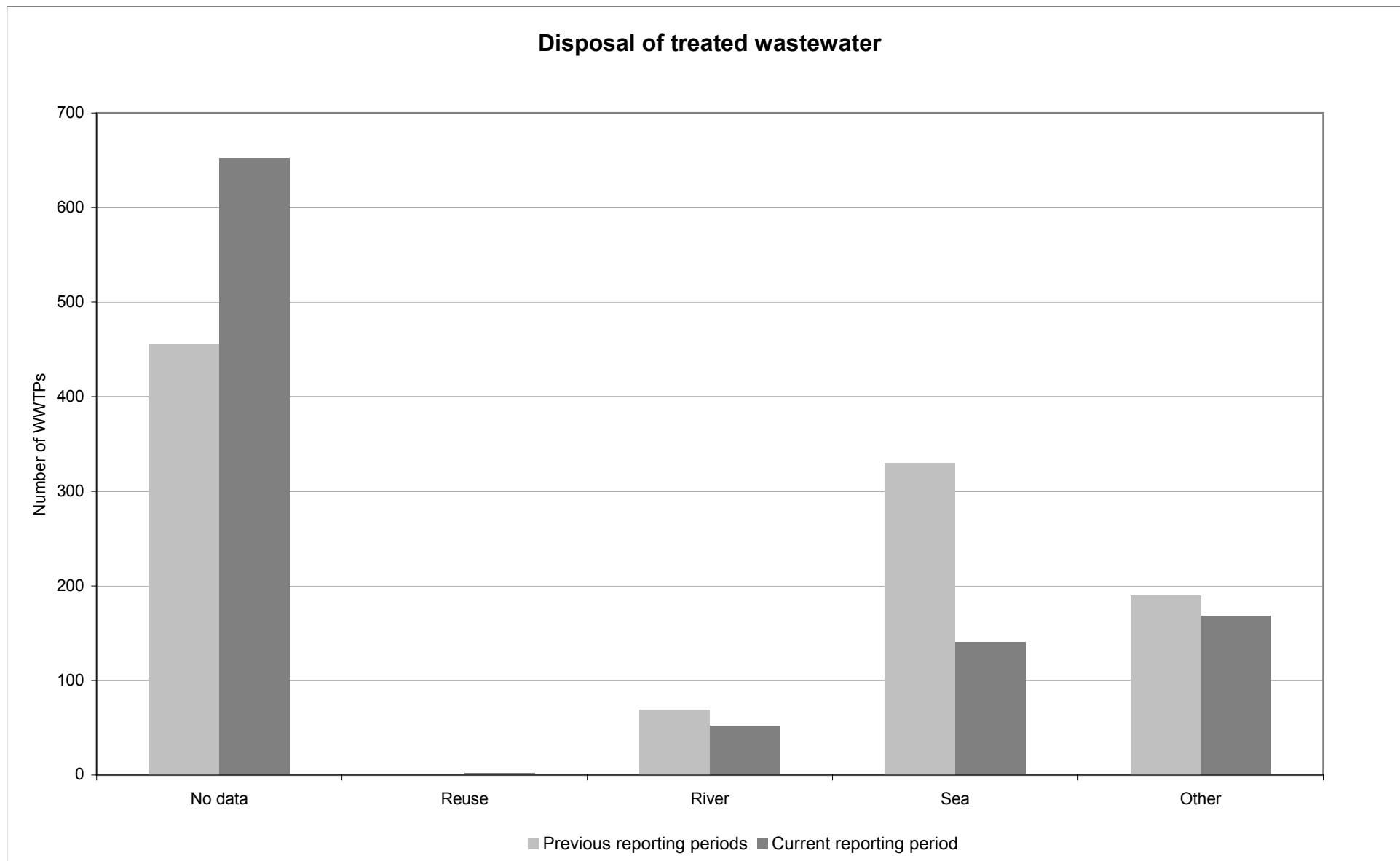


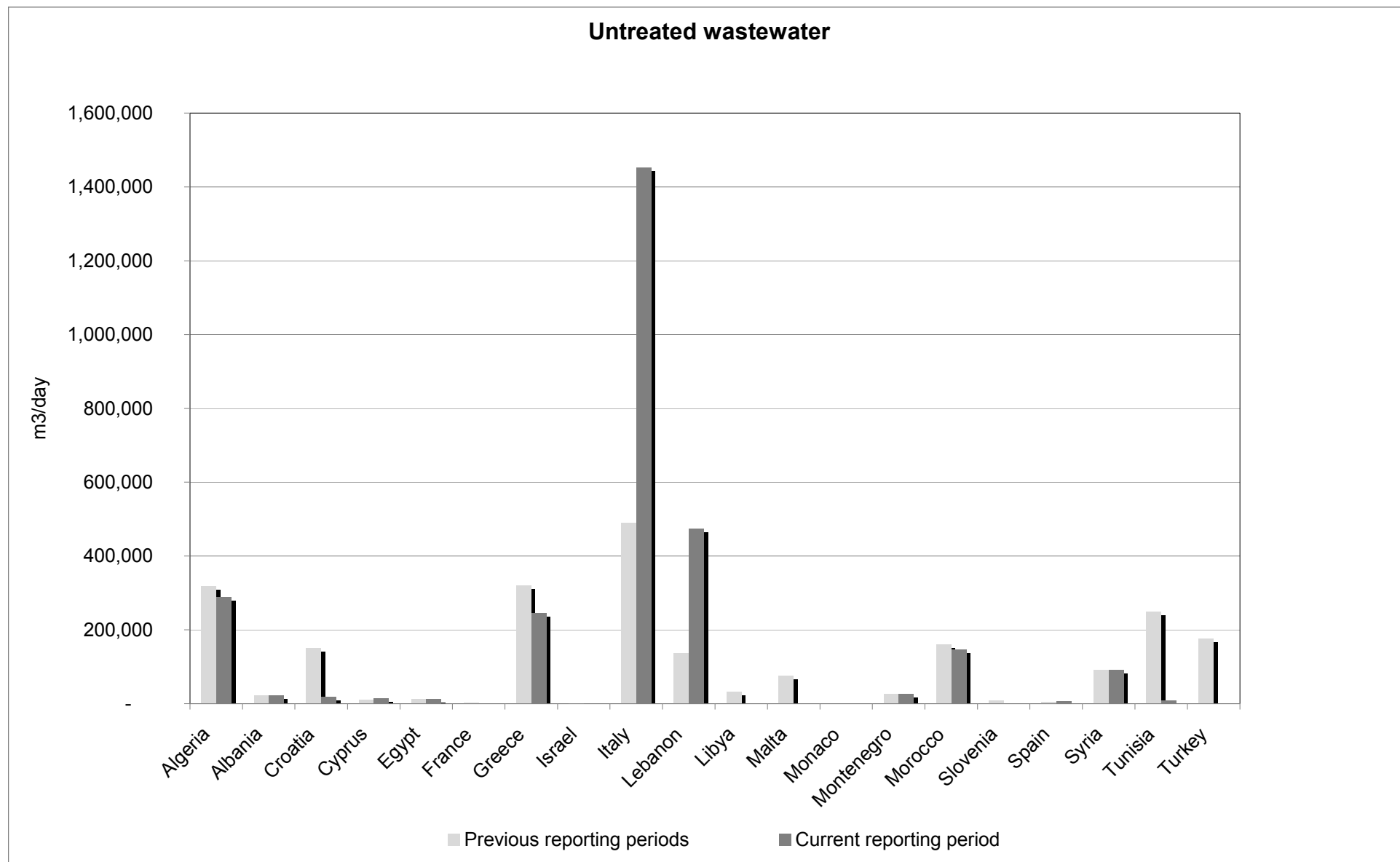


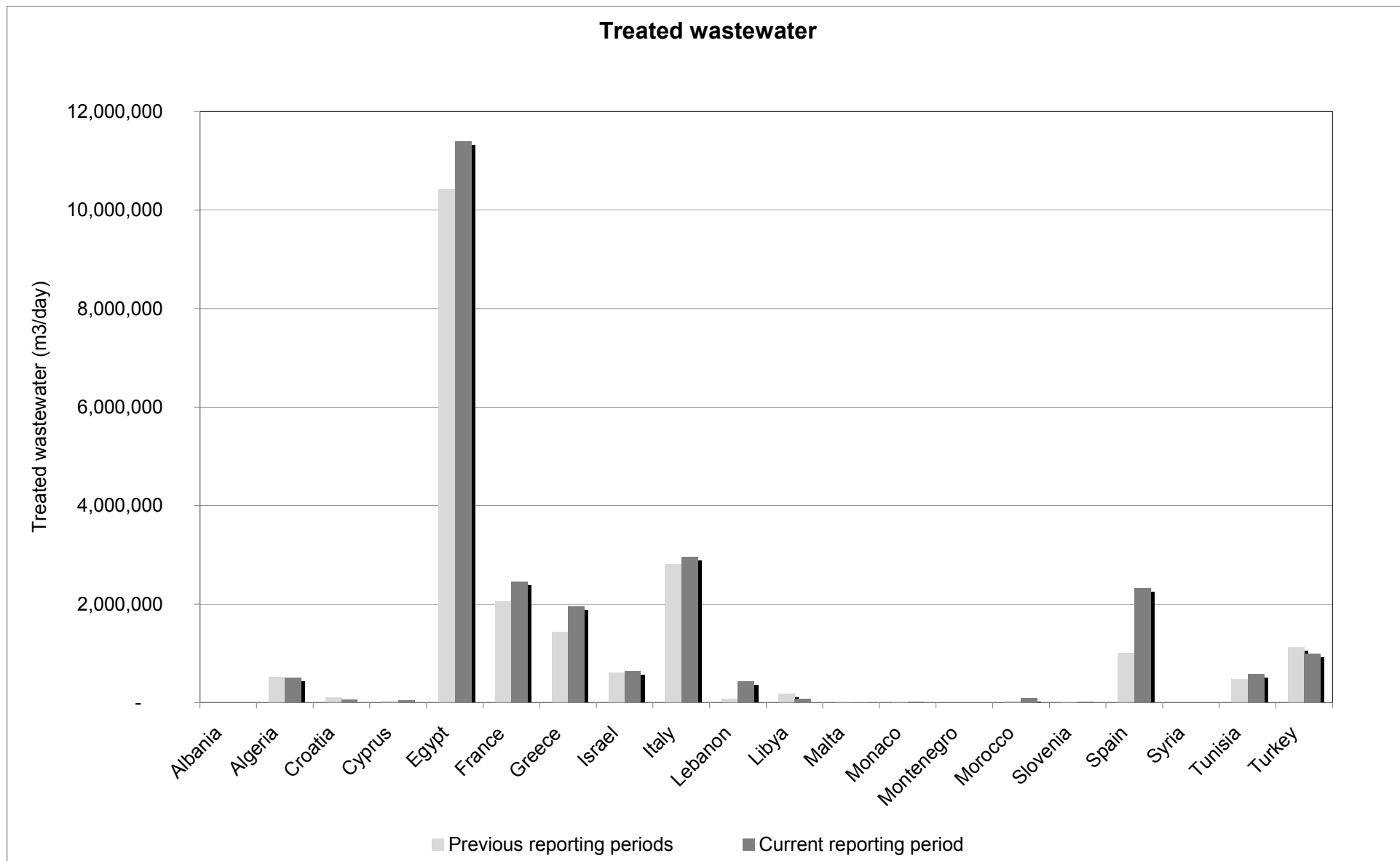












Disposed quantities of treated wastewater-Egypt is not included

