AGUA

YOUR PARTNER IN THE WATER CYCLE

acciona
Agua

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ACCIONA, profitability, development and sustainability

ACCIONA is a leader in providing sustainable solutions for infrastructure and renewable energy projects across the world. Its offer covers the whole value chain, from design and construction to operation and maintenance. With a presence in more than 30 countries, the Group develops its business activities based on the desire to contribute to economic and social development in the communities in which it operates.

ACCIONA executes its sustainability strategy through a Sustainability Master Plan, a road map containing all the initiatives of the Company in this field. The aim of ACCIONA is to lead the transition towards a low-carbon economy, bringing quality criteria and innovation processes to all projects in order to optimize the efficient use of resources and respect the environment, with the ambition and determination to become a carbon-neutral company from 2016 onwards.

This commitment has been ratified by the inclusion of ACCIONA in the world's top sustainability indexes, such as the Dow Jones Sustainability World Index, FTSE4Good, the 2015 MSCI Global Climate Index, 2015 CDP Climate A List, 2015 CDP 125 Iberia Climate Disclosure Leadership Index and The Supplier Climate A List, among others.

sustainability and welfare

Keys to generate H_2O in ACCIONA Agua

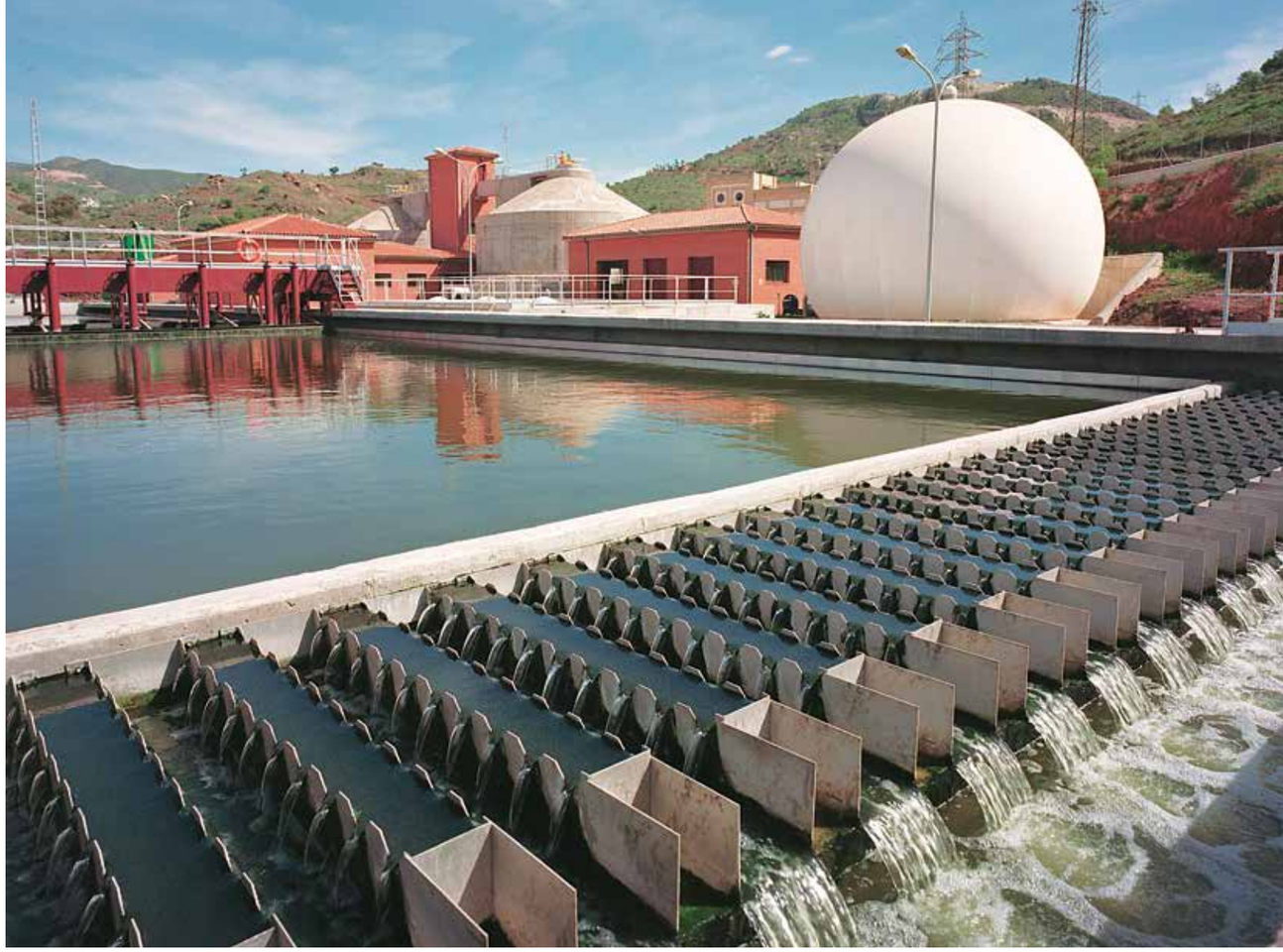
ACCIONA Agua is the ACCIONA business division responsible for managing the complete water cycle to serve end users in areas ranging from water collection and water purification —including desalination— to wastewater treatment and return to the environment.

Thanks to innovation in the design, implementation and operation of water treatment, purification and desalination plants, the company is a leader in global solutions which contribute to sustainable development in the water industry.
ACCIONA Agua's strategy is to maintain its presence in the complete water cycle –construction, operation and services– both in Spain and in international markets.

Today, ACCIONA Agua serves the supply needs of a total population of 90 million people in more than 25 countries across the world. In 2015 it had a backlog valued at 9.4 billion euros and a turnover of 451 million euros. Its main business activities are:

Design and Construction of Water Treatment Plants

- Sea water and brackish water desalination plants.
- Drinking water treatment plants.
- Waste water treatment plants.
- Tertiary treatments and reuse.
- Treatment of waster from processing plants.



Managing the Complete Water Cycle Services

- Water Infrastructure Concessions.
- Operation and Maintenance Contracts.

The company has branches on five continents and a significant presence in several markets, including Latin America, Middle East, North Africa, Spain, Italy, Portugal and Australia. The company's professionals are also highly experienced and knowledgeable in all stages of the water life cycle:

- Research and development.
- Design.
- Detail engineering.
- Construction.
- Commissioning.
- O&M.

Technological innovation

Protecting the environment has become a priority for ACCIONA Agua in every one of its projects. The aim is to minimise the consumption of resources while reducing the amount of waste.

The company's strategy pivots on two axes —sustainability and social welfare— to promote wealth, environmental improvement and social progress.

ACCIONA Agua is certified to the ISO 14001environmental management standard, the OHSAS 18001 occupational health and safety standard, the ISO 50001 energy management standard and the ISO 9001 quality management in all its O&M activity, and in the management of drinking water supply services.

ACCIONA Agua focuses on:

- Optimising the use of natural resources.
- Minimising the production of polluting waste.
- Achieving environmental management standards suitable for wastewater, waste and water treatment by-products.
- Organising training for personnel and awareness-raising campaigns.
- Carrying out internal audits in process improvement.

The R&D Department's support in all phases of the water cycle sets ACCIONA Agua apart from its competitors. In desalination, the Company works with the state-of-the-art membrane models and new energy recovery devices. In addition, this department is continuously researching new water treatment techniques. The R&D team provides fundamental technical support and is responsible for the first steps in designing large-scale desalination plants.

ACCIONA Agua cooperates with universities and public research centres in national and international research projects, positioning the company at the forefront of technology and attach it as a leader in the sector.

ACCIONA Agua has developed various R&D projects which have been selected by the European Commission to form part of the LIFE+ programme, such as OFREA, aimed at improving the quality of treated water to foster reuse in coastal areas, implemented together with ESAMUR. ACCIONA Agua is also partnering with this agency on the RENEWAT project. This project aims to adapt several sources of renewable energy such as solar panels and small wind farms to a wastewater treatment plant and integrate them with a smart management system to coordinate water treatment processes with available energy. Another LIFE+ project coordinated by the R&D centre is BRAINYMEM, which focuses on reducing the energy dependence of the wastewater treatment plants by 20% to 50% through advanced biological process control systems.

The research carried out has resulted in more than 19 patents related to desalination technologies, membrane bioreactors and reuse, including:

- ELFA (Treatment).
- SEPAFLOC (Desalination/ Pretreatment).
- BIOFILPAS (Drinking Water).
- MEMPACK (Wastewater).
- ENERGY OPTIMIZATION BLIND SPLIT (Desalination).
- ACTIDAFF/ULTRAFLOT (Desalination).

ACCIONA Agua has a highly qualified team with more than 30 years' experience in applying R&D to water treatment and the use of membranes, from the most basic laboratory techniques to industrial-scale studies in pilot plants.

Nereda®
a product of Royal HaskoningDHV

Nereda® is an innovative, advanced biological wastewater treatment technology that purifies water using the unique features of aerobic granular biomass. Unlike conventional processes, the purifying bacteria concentrates naturally in compact granules, with excellent settling properties. As a result of the large variety of biological processes that simultaneously take place in the granular biomass.

Nereda® is capable of meeting stringent effluent quality requirements. Extensive biological phosphorus and nitrogen reduction is an intrinsic attribute of this technology, resulting in chemical free operation.

The technology is also highly recommended for performance and capacity upgrades of existing SBR facilities.

FARO-OLHÀO WWTP
Algarve, Portugal
The Faro-Olhão WWTP will be the first one in which ACCIONA Agua will use Nereda® technology.

Thanks to this new technology it has been possible to reduce the plant's carbon footprint by 50%, and an energy saving of between 20% and 30% in the energy consumed in the water treatment process is expected. The plant also has solar panels that, with an installed capacity of 50 kW, will produce energy for use by auxiliary services.

automation and control

In response to new technological needs posed by plant operation and design, ACCIONA Agua created a department for automation and control projects.

Water cycle process automation is what sets the company apart from competitors, and one of the company's know-how repositories.

Automation and Control systems are fundamental in all ACCIONA Agua projects. Every process and installation is carried out by the control and automation teams who require specialised maintenance, updates, and ongoing relations to optimise plants and processes.

They work horizontally with many departments in the company in order to support specialist services or to give an added value to proposals in order to help the competitiveness and optimisation of designs. In ACCIONA Agua external tenders are studied to be integrators of automation and remote control solutions. This creates a business line which is compatible with the company's business activities and starts to position it within the industry sector.

Adelaide Desalination Plant, Australia

Javea Desalination Plant, Alicante, Spain

the complete water cycle

For ACCIONA Agua, Customer Satisfaction is a key management goal. Taking care of water users and sorting out their queries and difficulties is a major management tool in our line of business.

So we make every effort to stay close to our clients, both when tackling problems and when we design in detail the best solution, development, implementation operation or maintenance, because we are certain that cooperation is essential in fully meeting our clients' needs.

The complete water cycle begins by collecting water from nature. This is followed by water purification or desalination, transport, and supply to users and ends with wastewater treatment and its return to nature in the same condition it was collected.

design and constructions of water treatment plants

ACCIONA Agua is a water treatment industry leader which designs, builds and operate drinking water treatment plants, wastewater treatment plants, tertiary treatments for water reuse and reverse-osmosis desalination plants. ACCIONA Agua is firmly committed to innovation and the application of state-of-the-art technologies, as well as to quality in all its activities.

Its Design and Construction (D&C) activities are deployed in two business models:

- Municipal.
- Industrial.

Torrevieja Desalination Plant, Alicante, Spain

DRINKING WATER TREATMENT PLANTS FOR MUNICIPAL USE

From the beginning, ACCIONA has applied innovative solutions to the numerous problems posed by drinking water treatment. ACCIONA Agua built the first facilities in Spain with chlorine preoxidation processes and also pioneered the use of intermediate ozonation, decanting and filters.

In total, ACCIONA Agua has built more than 115 drinking water treatment plant with a total capacity of 8,2 million m^3/day to supply more than 30 million people.
The Alcantarilha drinking water treatment plant, built by ACCIONA Agua, located in the Algarve region in southern Portugal is one of the largest in the Iberian Peninsula, with a capacity of 259,200 m^3/day.
ACCIONA is currently building drinking water treatment plants in the Dominican Republic, Morocco, Philippines and Central America.

Sollano DWTP, Biscay, Spain

//// CONSTRUCTION: DRINKING WATER TREATMENT PLANTS

PLANT	COUNTRY	CAPACITY (m^3/day)	POPULATION
Valmayor Extension (Madrid)	Spain	1,036,800	2,960,000
Torrelaguna (Madrid)	Spain	518,400	1,728,000
New Cairo	Egypt	500,000	3,000,000
Oum Azza	Morocco	432,000	2,000,000
Pu-Dong , Shanghai	China	400,032	1,800,000
El Bodonal Extension (Tres Cantos, Madrid)	Spain	345,600	100,000
Santillana (Madrid)	Spain	345,600	100,000
Canal Bajo (Madrid)	Spain	345,600	100,000
Alcantarilha	Portugal	259,200	1,050,000
Esmeraldas	Ecuador	276,000	200,000
Amerya	Egypt	200,000	2,000,000
Casablanca (Zaragoza)	Spain	172,800	690,000
Mundaring	Australia	165,000	100,000
Putatan 2	Philippines	150,000	1,000,000
Gabon, Libreville	Gabon	140,000	1,000,000
Zaragoza	Spain	144,288	912,072
Sollano Fluoración (Zalla - Vizcaya)	Spain	129,600	450,000
El Cuartillo (Jérez de la Frontera - Cádiz)	Spain	114,912	400,000
Marbella (Málaga)	Spain	110,592	124,333
Mostorod - El Cairo	Egypt	110,000	1,200,000
Regio di Calabria	Italy	108,000	360,000
Rod el Farag, El Cairo	Egypt	100,224	900,000
Campotéjar (Murcia)	Spain	100,000	1,000,000
North Helwan I	Egypt	100,000	1,000,000
North Helwan II	Egypt	100,000	1,000,000
El Perelló (Tarragona)	Spain	95,904	383,616
Peravia	Dominican Republic	86,400	138,000
Albacete (Albacete)	Spain	86,400	345,600
Carambolo (Sevilla)	Spain	76,032	253,440
Saint John	Canada	75,000	70,000
Akashat	Iraq	71,712	
Pedramaiore	Italy	64,800	259,200
Arenillas (Cádiz)	Spain	64,800	259,200
87 additional plants		1,195,035	4,659,997
TOTAL		8,218,510	31,027,275

Mundaring DWTP, Perth, Australia

Outstanding Projects

MUNDARING DRINKING WATER TREATMENT PLANT

Perth. Australia

// **Capacity:** 165,000 m³/day expandable to 240,000 m³/day.
// **Client:** Water Corporation.
// **Type of contract:** public-private funded project (PPP).

ACCIONA Agua forms part of the Helena Water Consortium together with Trility. The Consortium has built, designed and is operating (under a 35 year concession) the plant. The plant supplies the Goldfield and Agricultural Water System (G&AWS), including Kalgoorlie.The plant was given recognition as Best Contract of the Year by GWI magazine in 2011.

SAINT JOHN DRINKING WATER TREATMENT PLANTS

Saint John, Canada

// **Capacity:** 75,000 m³/day.
// **Inhabitants:** 70,000
// **Client:** City of Saint John.

The project, involves the renewal of part of the water distribution system in the city (the largest city in the Province of New Brunswick and the oldest in the country) and consists of a drinking water plant with a capacity of 75 million liters per day and storage capacity of 33 million liters.

OUM AZZA DRINKING WATER TREATMENT PLANT

Coastal Zone
Rabat-Casablanca.
Morocco

// **Client:** Moroccan National Electricity and Drinking Water Office.
// **Capacity:** 432,000 m³/day.

The project is part of the drinking water supply improvement plan for the Rabat-Casablanca coastal zone. The plant is located in the municipality of Oum Azza at about 30 km from Rabat. It will reinforce drinking water supply in one of the areas with fastest population growth in the country which already has more than five million inhabitants.

PUTATAN 2 DRINKING WATER TREATMENT PLANT

Muntinlupa, Manila

// **Capacity:** 150,000 m³/day.
// **Client:** Maynilad Water Services Inc. (MWSI).
// **Type of contract:** design, build and operate

The plant is situated in Muntinlupa, in the south of the metropolitan area of Manila, next to an existing Water Treatment Plant (Putatan 1). The new plant will provide drinking water to almost 6 million people. The Plant will have a capacity of 100,000 m³ per day, extendable to 150,000 m³ per day.

One of the main characteristics of the new plant is the advanced treatment of raw water from Laguna de Bay, the biggest lake in the Philippines and the second-biggest inland freshwater lake in South-East Asia, to deliver clean drinking water with a very low carbon footprint.

The treatment plan for the new plant includes a number of advanced technical processes to ensure clean potable water. These techniques include Dissolved Air Flotation (DAF), Biological Aerated Filter (BAF), Ultrafiltration (UF), Reverse Osmosis (RO) and disinfection in different stages through the oxidation of particular compounds.

ACCIONA Agua has been a pioneer in the development of reverse osmosis (RO) desalination of both seawater and brackish water. The R&D department plays a fundamental role in each stage of the project: Plant design, construction, commissioning and operation and maintenance (O&M).

Port Stanvac desalination plant, Adelaide, Australia

DESALINATION PLANTS FOR MUNICIPAL AND INDUSTRIAL USE

ACCIONA Agua has more than 75 reference plants in this sector, with an installed capacity of 2.7 million m^3/day supplying more than 13.4 million people. Many of the technological innovations that are included in today's designs of this type of plants have been developed and implemented by ACCIONA Agua.

///// DESALINATION PLANT REFERENCES

PLANTS	COUNTRY	CAPACITY (m^3/day)	POPULATION	TYPE OF CONTRACT	
				EPC	BOO/BOOT
Port Stanvac. Adelaide	Australia	300,000	2,000,000	■	
Umm Al Houl **(U/C)**	Qatar	284,000	1,800,000	■	
Torrevieja. Alicante	Spain	240,000	1,600,000	■	
El Prat de Llobregat	Spain	200,000	1,333,000		
Ras Abus Fontas A3 **(U/C)**	Qatar	165,000	1,000,000	■	
Beckton phase 1 & 2 - London	UK	150,000	1,000,000	■	
Fujairah 1 Extension	UAE	137,000	900,000	■	
Fouka	Algeria	120,000	800,000	■	■
Carboneras. Almería	Spain	120,000	800,000	■	
Tampa Bay. Florida	U.S.	108,831	733,000	■	
Al Jubail	Saudi Arabia	100,000	666,000	■	
Paraguana **(U/C)**	Venezuela	75,000	500,000	■	
Cartagena Canal Phase I, Murcia	Spain	65,000	433,000	■	■
Cartagena Canal Phase II, Murcia	Spain	65,000	433,000	■	
Alicante canal Alicante	Spain	65,000	380,000	■	■
Tordera. Girona	Spain	57,600	400,000	■	■
Copiapó	Chile	51,840	340,000	■	
Almería Capital	Spain	50,000	333,000	■	■
Las Palmas III. Las Palmas	Spain	42,750	285,000	■	
South-east of Gran Canaria	Spain	33,000	220,000	■	
Ibiza and San Antonio	Spain	29,800	200,000	■	
Javea. Alicante	Spain	26,000	185,000	■	■
Reggio Calabria	Italy	25,000	166,000	■	
Lanzarote V **(U/C)**	Spain	24,000	160,000	■	
Santa Cruz de Tenerife	Spain	20,000	133,000	■	
Campo de Dalias. Almería	Spain	20,000	130,000	■	
Majis Ro I (Port of Sohar)	Oman	20,000	130,000		
Ceuta. Ceuta	Spain	16,000	105,000	■	
Almuñécar. Granada	Spain	16,000	105,000	■	
Denia. Alicante	Spain	16,000	105,000	■	
Teide Phase II. Las Palmas	Spain	16,000	105,000	■	
Martos (Jaén)	Spain	15,552	103,000	■	
Arucas & Moya. Las Palmas	Spain	15,000	100,000	■	■
Bocabarranco and Roque Prieto. Las Palmas	Spain	15,000	100,000		
Cape Verde	Cape Verde	10,000	100,000	■	
Ciutadella. Minorca	Spain	10,000	66,000	■	■
Jacarilla. Alicante	Spain	9,000	60,000	■	
Damm Brewery. Barcelona	Spain	7,200	55,000	■	
Lampedusa and Linosa	Italy	6,576	6,600		
Cap Milano	Italy	6,480	50,000	■	
Praia	Cape Verde	5,000	40,000	■	
Sataria	Italy	3,014	3,849		
Maggiuluvedi	Italy	3,014	3,849		
Talara	Peru	2,200	25,000	■	
37 additional smaller plants		51,444	333,000		
TOTAL CAPACITY		2,7 M	13,4 M	2,2 M	409,000

U/C Under Construction
■ **EPC** Engineering, Procurement and Construction
■ **BOO / BOOT** Build Own Operate / Build Own Operate and Transfer

Outstanding projects in municipal use

PORT STANVAC DESALINATION PLANT

Adelaide, Australia

// **Capacity:** 300,000 m³/day.
// **Type of contract:** design, construction, operation and maintenance (for 20 years).
// **Client:** SA Water.

ACCIONA Agua and the Australian company Trility joined forces in the AdelaidaAqua project to built the Port Stanvac plant in Adelaide, South Australia. The plant meets a quarter of the annual water requirements of the city of Adelaide, with a population of more than one million inhabitants.

TAMPA DESALINATION PLANT

Tampa, Florida, USA

// **Capacity:** 108,831 m³/day.
// **Type of contract:** design, construction, operation and maintenance (for 18 years).
// **Client:** Tampa Bay Water.

ACCIONA Agua partnered with American Water to rebuild the desalination plant in Tampa Bay (Florida). It is the largest facility of this type in the United States, built to cover 10% of the drinking water demand in the region. From 2005 to 2008, both companies rebuilt the unit so that it would have a fully automated operation. Older designs were improved upon and processes and systems were corrected and optimised. It was chosen Best Desalination Plant of the Year by *Global Water Intelligence* magazine in 2008.

TORREVIEJA DESALINATION PLANT

Torrevieja, Alicante, Spain

// **Capacity:** 240,000 m³/day.
// **Client:** Spanish Ministry of the Environment.

The aim of the project is to install a plant to cover an irrigation deficit in the Tajo-Segura transfer irrigation area of 60 hm³/year and a supply shortage in the Vega Baja Oeste area of 20 hm³year. The Torrevieja complex is the largest plant in Europe.

CAPE VERDE DESALINATION PLANTS

Sal and São Vicente islands, Cape Verde

// **Capacity:** 10,000 m³/day.
Type of contract: construction and commissioning.
// **Client:** ELECTRA-Empresa de Electricidade e Água.

The desalination plant in Sal island, with a capacity of 5,000 m³, will serve the resorts in the area; and the desalination plant in the island of São Vicente, also 5,000 m³, will serve the city of Mindelo, the second largest in the Cape Verde archipelago.

They will provide service to more than 100,000 inhabitants in total.

FUJAIRAH DESALINATION PLANT

Fujairah, United Arab Emirates

// **Capacity:** 137,000 m^3/day.
// **Type of contract:** design, construction and operation for 7 years.
// **Client:** Emirates Sembcorp Water & Power Company.

ACCIONA Agua in consortium with ACCIONA Infrastructure, were awarded the design, build, commission and Operate (7 years) for the enlargement of the Fujairah desal plant. The elnagerment risen to 137,000 m^3/day additional capacity to serve a population of 600,000 inhabitants

AL JUBAIL DESALINATION PLANT

Jubail, Saudi Arabia

// **Capacity:** 100,000 m^3/day.
// **Type of contract:** design, construction and commissioning.
// **Client:** Marafiq Power & Water Utility Company for Jubail & Yanbu.

The plant produces drinking water from seawater using reverse osmosis technology and supply both the city and its associated industrial complex located in the Eastern Province on the Saudi coast of the Persian Gulf. The plant, with a capacity of 100,000 m^3/d double the combined capacity of all five desalination plants in existence today.

RAS ABU FONTAS A3 DESALINATION PLANT

Al Wakra, Qatar

// **Capacity:** 164,000 m^3/day.
// **Type of contract:** design, construction and operation for 10 years.
// **Client:** Qatar General Electricity & Water Corporation (KAHRAMAA).

The plant represent a real milestone in the world of desalination, as it is the first time that reverse osmosis technology will be used on a large scale in Qatar. To date, only evaporation technology was used to desalinate water.

UMM AL HOUL DESALINATION PLANT

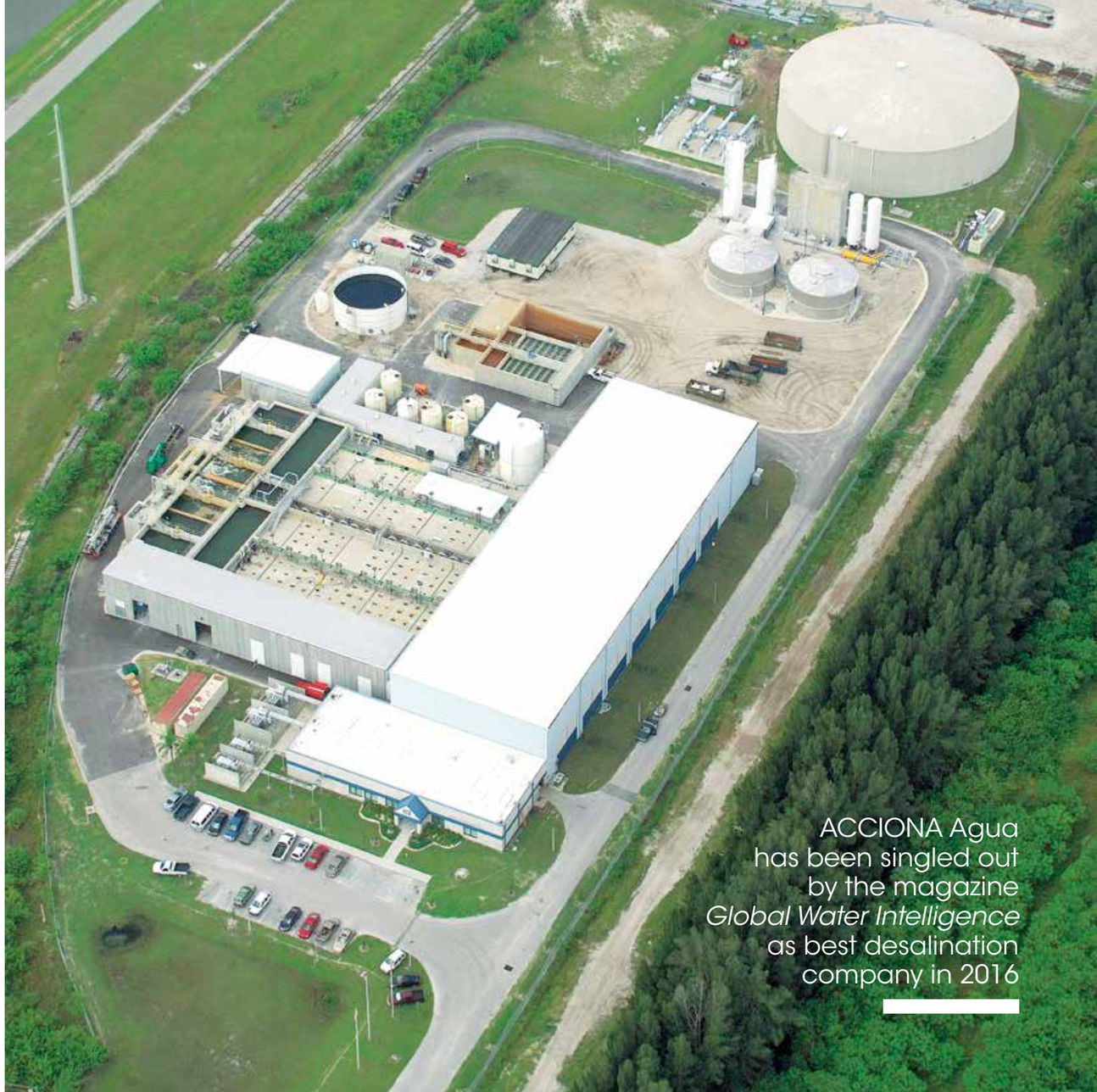
Doha, Qatar

// **Capacity:** 284,000 m^3/day.
// **Type of contract:** design, construction and operation for 10 years.

Umm Al Houl will produce 284,000 m^3 per day as part of a large-scale Independent Water & Power Project (IWPP) that will produce around 2,500 MW of electric power and will reach 614,000 m^3 per day after the start-up of the new facility. The contract covers the design, construction and later operation and maintenance of the facility.

The plant represent a real milestone in the world of desalination, as it is the first time that reverse osmosis technology will be used on a large scale in Qatar. To date, only evaporation technology was used to desalinate water.

Tampa SWRO, USA



ACCIONA Agua has been singled out by the magazine *Global Water Intelligence* as best desalination company in 2016

Outstanding projects in industrial use

COPIAPÓ DESALINATION PLANT

Copiapó, Chile

// **Capacity:** 51,840 m^3/day.
// **Type of contract:** design, construction, commissioning and operation.
// **Client:** Grupo Cap Minería.

The plant was built in Cerro Negro Norte, in the Copiapó Valley, Atacama, III Region, Chile. This project aims to meet water requirements in the region's mining operations. The plant uses reverse osmosis technology and is subject to stringent environmental and quality standards. The commissioning of a desalination plant in the area is a significant water solution as the mineral-rich Atacama desert is considered the driest in the world.

PARAGUANÁ REFINERY DESALINATION PLANT

Paraguaná, Venezuela

// **Capacity:** 75,000 m^3/day.
// **Type of contract:** design and construction.
// **Client:** Petróleos de Venezuela.

The contract allowed for the ACCIONA team to work closely with the PDVSA engineering teams, recognised for their technical excellence in the implementation of systems for industrial processes at the Cardon refinery.

The project is of a mixed nature and falls within the resource optimisation and management excellence programmes.

TALARA DESALINATION PLANT

Talara, Peru

// **Capacity:** 2,200 m^3/day.
// **Type of contract:** design, construction, operation and maintenance.
// **Client:** PETROPERU.

It's the first industrial reverse osmosis desalination plant to be built in Peru.

The north of Peru is an arid area with a dearth of water resources, leading to a generalised water shortages.

Copiapó desalination plant, Chile

WASTEWATER TREATMENT PLANTS

Atotonilco WWTP, Mexico

ACCIONA Agua has provided solutions to the broad and diverse problems arising in the wastewater treatment. Towns of very different sizes, urban domestic water or water with high industrial load, highly seasonal populations, plants located with limited space available or high visual and/or environmental impact issues, as well as different discharge levels are some of the challenges that the company has faced.

ACCIONA Agua has built plants for small towns and big cities like Barcelona, Santander, Leon, Huelva, Malaga and Almería in Spain, as well as plants in Portugal, Italy, Morocco, Brazil, Peru and Colombia. It has also implemented more than 300 wastewater treatment projects with a total capacity of more than 13.5 million m^3/day, serving a population more than to 55 million people.

ACCIONA Agua has a thorough knowledge of the various processes involved and the necessary technology to provide solutions for different problems, combining minimum capital outlay with optimised operation and maintenance.

ACCIONA has recently built the world's largest wastewater treatment plant (42 m^3/s) in the State of Mexico, which is to be self-sufficient in electricity using the gases from sludge digestion.

///// WASTEWATER PROJECTS

PLANTS	COUNTRY	CAPACITY (m^3/day)	POPULATION EQUIVALENT
Atotonilco	Mexico	4,320,000	10,500,000
El Besos (Barcelona)	Spain	525,000	3,199,220
La Chira	Peru	544,320	2,500,000
Gabal El Asfar	Egypt	500,000	2,000,000
Bello	Colombia	432,000	3,880,000
Butarque (Madrid)	Spain	432,000	1,980,000
Baix Llobregat (Barcelona)	Spain	420,000	2,275,000
Arrudas (Minas Gerais)	Brasil	388,800	1,600,000
La China (Madrid)	Spain	300,000	1,400,000
Cagliari (Sardinia)	Italy	260,000	1,150,000
Los Tajos	Costa Rica	242.784	1.490.000
Guadalhorce (Málaga)	Spain	210,000	700,000
Santander (Cantabria)	Spain	194,400	428,294
Arroyo Culebro (Madrid)	Spain	172,800	1,353,600
Temuco, Angol y Villarica	Chile	158,232	443,722
Maqua (Asturias)	Spain	123,811	214,979
Katameya	Egypt	120,000	800,000
León (León)	Spain	107,100	330,000
Guadalquivir Extension	Spain	105,665	665,000
Jerez de la Frontera (Cádiz)	Spain	103,680	691,200
Alcantara	Brazil	103,680	250,000
Kutahya	Turkey	100,000	450,000
Las Rejas (Madrid)	Spain	92,000	250,000
Bens - Emisario submarino de A'Coruña (A'Coruña)	Spain	89,000	250,000
Casaquemada (Madrid)	Spain	83,199	211,492
Abnoub & el Fath	Egypt	80,000	750,000
Ampliación Lugo (Lugo)	Spain	76,500	200,000
Torrejón de Ardoz (Madrid)	Spain	75,000	450,000
Alcalá de Henares	Spain	74,818	374,090
Albacete	Spain	74,356	371,280
Montcada Extension (Barcelona)	Spain	72,600	423,500
L'Horta Nord Extension (Valencia)	Spain	72,000	400,000
Entremuros (Doñana - Huelva)	Spain	72,000	240,000
4th Line Arroyo de la Vega (Madrid)	Spain	65,000	
Zarandona (Murcia)	Spain	62,500	200,000
Santillana (Madrid)	Spain	60,667	13,992
Fuengirola (Málaga)	Spain	60,000	350,000
Huelva (Huelva)	Spain	58,500	180,000
Almería (Almería)	Spain	54,000	250,000
Peñón del Cuervo (Málaga)	Spain	51,840	100,000
Itapecerica (Divinopolis)	Brasil	51,840	212,598
Albacete Extension	Spain	49,500	200,000
Trinidad & Tobago	Trinidad & Tobago	45,000	111,600
Ibarra	Ecuador	43,200	197,809
280 Additonal Plants		2,208,633	11,378,443
TOTAL		13,551,425	55,480,819

Outstanding projects

ALCANTARA WASTEWATER TREATMENT PLANT

São Gonçalo, Brazil

// **Capacity:** 103,680 m^3/day.
// **Equivalent population** 250,000 inhabitants.
// **Client:** State Secretariat for the Environment in Rio de Janeiro.

The action foresees the construction of a comprehensive sanitation system which includes the plant and relevant pumping station with a flow rate of 1.99 m^3/second, as well as collector networks, collectors, a Yamagata 1,560 l/s pumping station, 8 small pumping stations and house connections.

ATOTONILCO WASTEWATER TREATMENT PLANT

Hidalgo. Mexico

// **Capacity:** 3,024,000 m^3/day.
// **Equivalent population** 10,500,000 inhabitants.
// **Client:** CONAGUA (National Water Commission).

The Atotonilco WWTP has an average rated treatment capacity of 35 m^3/s and a maximum of 50 m^3s, including the final disposal of solid waste and sludge. The plant is also equipped with a cogeneration system to take advantage of the biogas produced in the digester for maximum energy savings. The plant is the largest in the world and one of the largest works in the Mexico Valley Basin Water.

2011: *Global Water Intelligence* award for Best Contract of the Year.

DIVINOPOLIS WATER SYSTEM

Divinopolis, Minas Gerais, Brazil

// **Client:** COPASA.

ACCIONA Agua is carring out the design, construction and start-up of two wastewater treatment stations, 16 pumping stations for the system and the construction of a wastewater pipe network for the city. The contract covers the operation and maintenance of the system for the next 26 years.

The biggest plant, which will have an initial capacity of 400 liters per second, will be increased over the concession period to 600 liters per second to provide a service to a population of 228,600. The installation will also have 67.8 kilometers of sewers and 6.1 kilometers of collector pipes.

BELLO WASTEWATER TREATMENT PLANT

Medellin. Colombia

// **Capacity:** 432,000 m³/day.
// **Type of contract:** construction, design, operation and maintenance.
// **Client:** Aguas Nacionales EPM de Medellín.

The objective is for the river to surpass the levels of dissolved oxygen which are globally accepted as indicators of decontaminated rivers. By reducing the organic load received by the river, the water quality established by the metropolitan area of the Aburrá Valley will be achieved. The goal is to raise dissolved oxygen levels to a minimum average of 5 mg/l.

LUGO WASTEWATER TREATMENT PLANT

Lugo, Spain

// **Capacity:** 76,500 m³/day.
// **Equivalent population** 200,000 inhabitants.
// **Client:** Ministry of the Environment Confederación Hidrográfica del Norte.

The construction of the new WWTP is one of the activities included in the Lugo Sanitation Improvement Project. The installation will treat urban and industrial wastewater from the municipality of Lugo.

Arequipa, WWTP, Peru

LA CHIRA WASTEWATER TREATMENT PLANT

Chorrillos, Lima, Peru

// **Capacity:** 544,320 m³/day.
// **Equivalent population** 2.5 millions inhabitants.
// **Client:** SEDAPAL.

ACCIONA Agua has designed, built and is operating (25 years) the La Chira WWTP as well as the construction of an underwater discharge pipeline.

The WWTP contribute to solving Lima's sanitary and environmental problems caused by the effluent of the Surco and Circunvalación collectors which discharge directly into the sea without prior treatment.

The new plant aids in the environmental recovery of the existing beach areas that are currently polluted, in order for their increased use as recreational areas and for tourism, and for tourism projects to be promoted in the area of influence.

ESCALERILLA WASTEWATER TREATMENT PLANT

Arequipa, Perú

// **Capacity:** 34,800 m³/day.
// **Equivalent population** More than 150,000 people.
// **Client:** SEDAPAR.

ACCIONA Agua has designed, built and is operating the Escalerilla WWTP.

The project will help solve the sewage and environmental problems affecting the Northern cone of the metropolitan area of Arequipa, ensuring the integral service of the area, as well as to improve the quality life for locals.

The project boundary encompasses the Cerro Colorado and Yura areas, covering the Arequipa Metropolitan Area.

SAN FERNANDO WASTEWATER TREATMENT PLANT

San Fernando, Trinidad and Tobago

// **Capacity:** 45,000 m³/day.
// **Equivalent population** 111,600 inhabitants.
// **Client:** Water and Sewerage Authority (WASA).

The installation will consist of 16.3 km of collectors of which 12.5 km will be maintained through a microtunnel, with 11,964 service connections and seven pumping stations with flow rates of 7 L/s to 203 L/s. The project also provides includes the dismantling and remodelling of the existing WWTP and pumping stations.

GABAL EL ASFAR WASTEWATER TREATMENT PLANT

Cairo, Egypt

// **Capacity:** 500,000 m³/day.
// **Equivalent population** 2,000,000 inhabitants.
// **Client:** Construction Authority for Potable Water and Wastewater (CAPW).

The contract includes the design, construction, operation and maintenance and commissioning of the WWTP. After the construction of this new facility, the Gabal El Asfar complex will have a treatment capacity of 2.5 million cubic meters per day, which will make the largest treatment complex in the Middle East and Africa and the third-largest in the world.

The growing demand for water for agriculture, urban parks, golf courses and for refilling aquifers against saline intrusion, has led ACCIONA Agua to research, develop, and carry out innovative technologies for tertiary treatment of wastewater, so that it can be recycled to many different uses.

Bakio WWTP, Biscay, Spain

TREATMENT PLANTS AND REUSE OF WASTEWATER

The company has extensive expertise in both the design and implementation of tertiary treatment, using the following processes:

- Conventional gravity or lamellar decanting.
- Monolayer, bilayer, suspended bed filtering.
- Filter aid precoat filters, microfiltration and ultrafiltration.
- Disinfection with ozone, UV or chlorine.
- Reverse osmosis for removing salts.

Tertiary treatment of waters from the WWTP in Campo Dalias, Almería, Spain

Outstanding Projects

TERTIARY TREATMENT OF WATER FROM THE WWTP IN SOUTH-EAST

Gran Canaria, Spain

The tertiary treatment of the South-east WWTP was built in 1999 because of a need to condition the water treated in the wastewater treatment plant belonging to Mancomunidad Intermunicipal del Sureste employing reverse osmosis, so it could be used for irrigation. The plant was a pioneer in using a precoat microfiltration system prior to reverse osmosis for urban wastewater treatment.

TERTIARY TREATMENT OF WATER FROM LA CHINA WWTP

Madrid, Spain

The tertiary treatment plant for reuse of water from La China WWTP has a production capacity of up to 24,498 m^3/day of regenerated water. The treated water is stored in a 5,700 m^3 tank before being transported through five pumping stations to water the gardens of Madrid's main parks. This water is also used for street cleaning in the city, as well as internal use at the WWTP itself.

To obtain the water quality required by law for these uses, the reuse plant employs a physical-chemical lamellar decanting treatment, followed by sand filtration using rapid pulsed bed filters and disinfection through ultraviolet radiation, before sodium hypochlorite is added.

WASTE TREATMENT: THERMAL DRYING AND COMPOSTING

Increasingly stringent national and international laws on the disposal of urban waste and sludge from urban wastewater treatment plants has accelerated the integration of new technologies for waste treatment.

The aim of these new devices is to minimise the volume of waste while they are neutralised.
The processes employed by ACCIONA Agua include mechanising, sanitising, thermal drying and composting.

///// SEWAGE TREATMENT. THERMAL DRYING

	CAPACITY (m^3/day)
Loeches (Madrid)	10,320
Guadalhorce (Málaga)	7,250
Quart Benager (Barcelona –2 units–)	4,000
Fuengirola (Málaga)	2,350
Montornés Vallés (Barcelona)	2,000
Maqua (Asturias)	2,000
Leon	1,940
Tropical coast of Granada (Motril WWTP)	1,200
Watershed Media of the river Guadarrama (Madrid)	1,000
Baiña (Asturias)	500
TOTAL	32,560

///// WASTE TREATMENT

	TREATED WASTE (Tm/year)
Ecoparque (La Rioja)	75,000
Loeches (Madrid)	50,000
TOTAL	125,000

Managing Complete Water Cycle Services

Serving citizens is a maxim for ACCIONA Agua.

Research and a commitment to technological innovation back efficient management and sustainable development. Comprehensive service management covers all the stages involved in treating water to make it suitable for human consumption.

Once the water has been treated, it is supplied to the population and subsequently collected and transported to urban and industrial wastewater treatment plants.

The different stages of the water cycle are:

- Collection.
- Purification.
- Distribution.
- Sanitation.
- Treatment.
- Reuse.

To check the condition of water and ensure the highest quality at the tap of the end user, ACCIONA Agua performs continuous tests in their laboratories.

Also, in order to achieve high performance in the municipalities where the company manages water, supply and sanitation networks are systematically assessed. ACCIONA Agua uses the latest technologies available in the market to detect and repair leaks and minimise possible losses.

The tasks of a technical office, such as processing and approving projects related to new supplies and facility maintenance are also carried out.

The cycle closes with the treatment of the wastewater when it arrives at a WWTP. Suitable treatment can make it possible to return it to the natural environment or reuse it in irrigation with minimal environmental impact.

ACCIONA Agua is developing the complete water cycle in five continents, managing and operating drinking water and sanitation services. It currently provides services in over 180 municipalities in Spain and Peru, serving a population in excess of 15.3 million users.

SUSTAINABLE MANAGEMENT AND CARE OF THE ENVIRONMENT

Good, sustainable management of the water cycle contributes significantly to improving the environment:

- By collecting the minimum necessary resource to meet the needs of the citizens. This is achieved by increasing technical efficiency, i.e., reducing losses and leaks.
- With the use of the latest technologies to provide the necessary treatment to return the water to nature in better condition than it was collected.

ACCIONA Agua is present in the water cycle in five continents

ATLL
Concessionària de la Generalitat de Catalunya, SA

Water Infrastructure Concessions

ATLL CONCESSIONÀRIA

The Ter Llobregat system is a complex network of water collection facilities, water treatment plants, tanks, pumping stations and distribution networks that allow water from the Ter and Llobregat rivers to reach municipalities with optimum quality for human consumption.

Upstream water supply includes collection at source (rivers Ter and Llobregat and desalination plants) to the delivery to municipal tanks. From there, the local council or the utility company distribute the water downstream to consumers. ATLL manages a number of facilities, including four large treatment plants —the Abrera and Cardedeu drinking water plants which process water from the Llobregat and Ter, and the Prat de Llobregat and La Tordera desalination plants— several booster stations and pumping stations and more than nine hundred kilometres of water pipeline. The scope of ATLL Concessionària includes upstream water supply to the city of Barcelona, its metropolitan area and nine districts with a combined population of close to 5 million people.

ATLL Concessionària is supplied from water which is regulated in six reservoirs: la Baells, la Llosa del Cavall and Sant Ponç in the Llobregat basin and Sau, Susqueda and Pasteral in the Ter basin.

ATLL Concessionària works in the following areas:

- Optimisation of available water resources.
- Improvements in water treatment, including studies of new reagents to adapt to European regulations, pilot plant tests and application of new technologies.
- Automation of the facilities involved in the treatment process.
- Increase and improvement of water analytical control methods.
- Treatment of sludge by-product from water purification processes to maximise the amount of water produced.

El Prat de LLobregat Desalination Plant, Barcelona, Spain

VALENCIA

// **Client:**
Valencia City Council - Complete Water Cycle.
// **Population served:**
800,469 inhabitants.

ACCIONA Agua is present in the City of Valencia since 2007, managing the Operation, Cleaning and Conservation Service of the Municipal Sanitation System. It manages and supervises the sanitation network and all related facilities, including wastewater and rainwater pumping stations, wastewater treatment plants, underpass pumping and sluice gates. Behind all these facilities is a team consisting of more than 250 professionals, 50 vehicles equipped with the most advanced technological systems and an organizstional structure that works in a coordinated manner to ensure the proper functioning of the Valencia sanitation system.

MADRID

// **Client:** Canal de Isabel II Management.
// **Population served:**
803,300.

ACCIONA Agua is present in Madrid since 2009, managing the City of Madrid Sewer Network Operation Service, serving a population of more than 940,000 inhabitants. ACCIONA Agua is in charge of managing and operating the sewer network as well as storm tanks in the area of influence. The sewer service consists of a team of more than 100 professionals, 30 vehicles equipped with the most advanced technological systems and an organisational structure that works in a coordinated manner to ensure the proper functioning of the Madrid sewer network.

The Madrid sewer service is provided with a system of on-call teams available 24 hours a day and 365 days a year.

///// SERVICES

SERVICES	POPULATION	TYPE OF CONTRACT					
		TREATMENT	BULK WATER SUPPLY	WATER SUPPLY	SEWERAGE	WASTEWATER	COMMERCIAL MGMT
ATLL	4,500,000	●	●				
Lot 1 Sedapal. G. Management North (Lima, Peru)	3,580,353						●
Lot 2 Sedapal. G. Management Centre (Lima, Peru)	3,437,116						●
Corrective Maintenance Lot 1 Z. South (Lima, Peru)	1,309,410				●	●	
Madrid sewer system Lot B	803,300					●	
Sanitation in Valencia	797,028					●	●
SOMAJASA (Jaén 34 municipalities)	228,894	●	●	●	●	●	●
Costa Tropical, Granada	122,996	●	●	●	●	●	●
Getafe (road maintenance)	171,280					●	
Molina de Segura (SERCOMOSA)	67,382				●	●	●
Úbeda (Jaén)	35,784				●	●	●
Ames (Galicia)	30,267				●	●	●
Pilar de la Horadada (Alicante)	23,403				●	●	
Manzanares (Ciudad Real)	19,237		●		●	●	●
La Unión (Murcia)	19,009				●	●	
Archena (Murcia)	18,496				●	●	
Osuna (Seville)	17,973		●		●	●	
Zafra (Badajoz)	16,753				●		●
Santomera (Murcia)	15,709				●	●	
Villafranca de los Barros (Extremadura)	13,329				●		
Andratx (Majorca)	12,149				●		
Villarrubia de los Ojos (Ciudad Real)	11,116				●	●	●
Ceutí (Murcia)	10,881				●	●	
Yuncos (Toledo)	10,587				●	●	

SERVICES	POPULATION	TYPE OF CONTRACT					
		TREATMENT	BULK WATER SUPPLY	WATER SUPPLY	SEWERAGE	WASTEWATER	COMMERCIAL MGMT
Toro (Zamora)	9,627		●	●	●	●	●
Suances (Cantabria)	8,451		●	●	●		●
Cabezón de la Sal (Cantabria)	8,353			●	●		●
Arévalo (Ávila)	8,118			●	●	●	●
Dolores (Alicante)	7,362			●	●		●
Moraleja (Cáceres)	7,182			●	●	●	●
Lorqui (Murcia)	6,983			●	●		●
Almodóvar del Campo (Ciudad Real)	6,685			●	●		●
Montefrío (Granada)	6,054		●	●			●
Villanueva de Algaidas (Málaga)	4,485			●	●		●
Paguera (Majorca)	3,880			●			●
Orba (Alicante)	2,604			●	●		●
Alfoz de Lloredo (Cantabria)	2,514			●	●	●	●
Favara (Valencia)	2,456			●	●		●
Villanueva del Río Segura (Murcia)	2,445			●	●		●
Sierra de Fuentes (Cáceres)	2,056			●	●	●	●
Ricote (Murcia)	1,452			●	●		●
Llaurí (Valencia)	1,333			●	●		●
Corrales del Vino (Zamora)	1,088			●	●		●
Ulea (Murcia)	926			●	●		●
Fontiveros (Ávila)	828			●	●	●	●
Deià (Majorca)	747			●			●
Ojos (Murcia)	562			●	●		●
TOTAL	15,370,592						

Other Projects

GOTA PROJECT

The GOTA Project, ACCIONA Agua's work management system, supported by the latest technology, is the fruit of the company's knowledge and experience in maintaining water supply and sanitation networks worldwide.

The project concerns the introduction of a global information technology solution to manage the receipt, delegation and execution of orders for work in a planned and efficient way, based on the two-way transmission of information in real time, which allows the client and the end user to know the status of the work in progress at any moment.

The system has been installed on ACCIONA Agua's corporate infrastructure, from where the company can supply services worldwide through an Operations Center that provides support 24 hours a day, 7 days a week.

In 2015, ACCIONA Agua was awarded its first tender in Peru. It was to carry out the maintenance service networks in Lima, the drinking water and sewer systems in Gerencia de Servicios Sur, comprising eight districts in the Peruvian capital, grouped in the so-called Centro de Servicios Surquillo. The work to be carried out includes replacing 61 km of water supply and sewer piping, replacing more than 17,300 house connections and maintaining valves, fire hydrants and bulk water meters.

The corrective maintenance service is intended to assure the operability of the secondary drinking water supply and sewer systems and contributes to the SEDAPAL's strategic objective of "improving business management", which contributes to the efficient optimisation and reliability of the operation of the complete water cycle.

GESBA

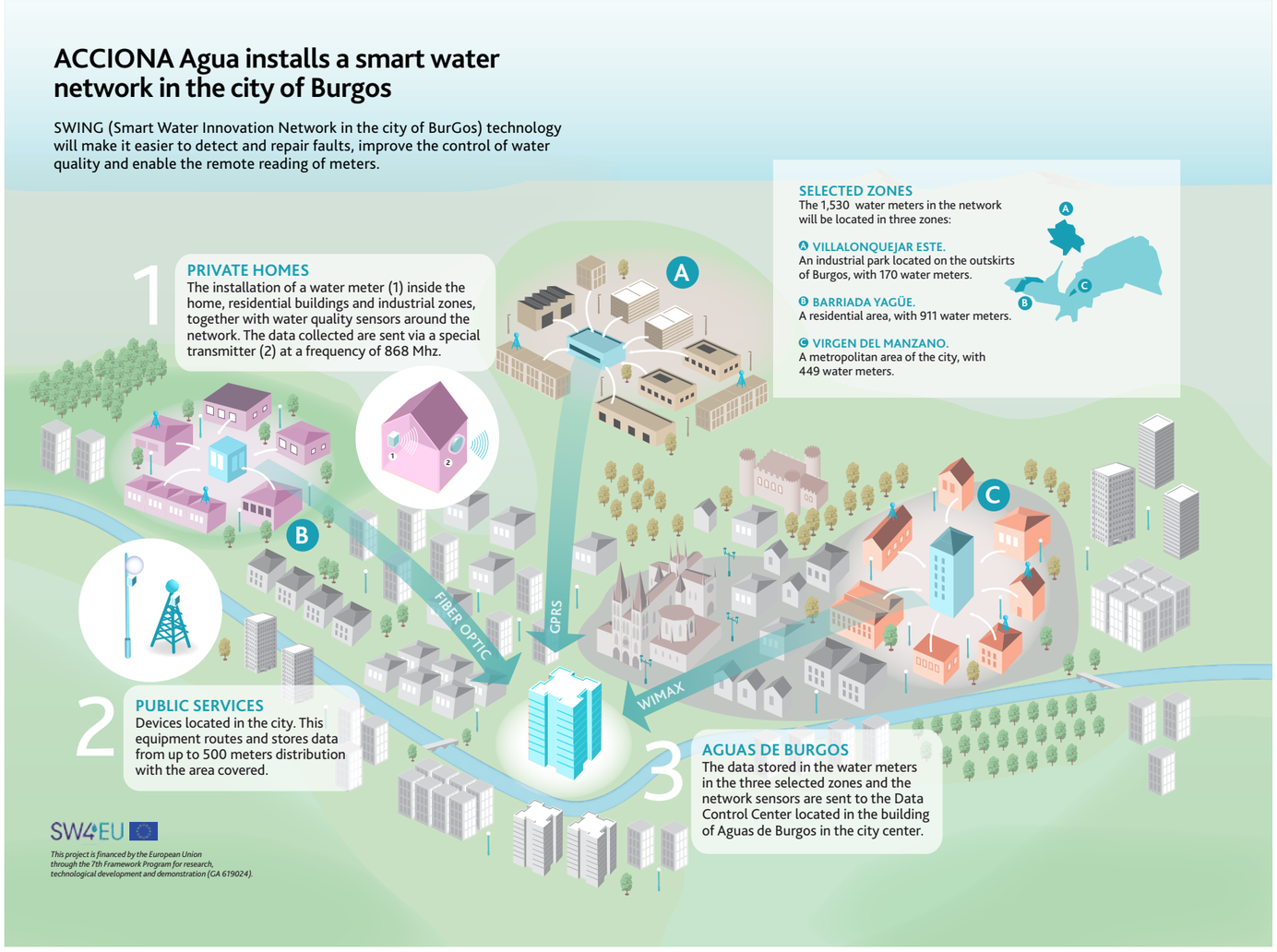
The company has been providing drinking water and sanitation services to the municipalities of Andratx, Deià and Paguera (Calvià. Majorca) since 1994 through its subsidiaries GESBA, S.A. and company of waters Paguera, S.L., serving a population of 23,000 people in low season and 70,000 in high season.

AGUAS Y SERVICIOS

Since 1996, it manages the complete water cycle for the consortium of municipalities of the Costa Tropical in Granada. The service covers an area of 1,400 km^2 and serves a population of 110,000 inhabitants in the low season and 330,000 in high season. In 2016 Aguas y Servicios celebrated its 20th anniversary of contract.

SOMAJASA

Thanks to the alliance reached in 2007 with the Jaén provincial government, ACCIONA Agua manages all the complete water cycle services in 34 villages in the province. The agreement means managing the water supply to more than 250,000 inhabitants in these towns for a period of 25 years.



Smart Water Burgos, Spain

SMART WATER BURGOS

This project, called SWING ("Smart Water Innovation Network in the city of BurGos"), is part of SmartWater4Europe, a European research involving 21 entities, including water companies, technology companies, universities and research centres.

ACCIONA Agua has begun to implement a management system in the drinking water supply network which allows for instant remote supervision of water quality, meter consumption and the condition of the network. A single software platform will integrate daily remote readings of user meters, the geographical information system (GIS), remote information, algorithms for prediction of demand and a large number of sensors to monitor the water quality.

The management system will be governed by a Business Intelligence platform to detect in real time any fault, jam or leak and know the point in which it occurs, which will reduce the time required to locate and repair.

Another new feature brought by the project is remote meter reading and detection of abnormal consumptions, which will immediately alert consumers if there is a suspected water leak in their homes. Non-domestic consumers will also benefit from the new system, since they can consult their accumulated consumption through a website.

These innovations will also result in environmental benefits, since early detection of leaks will reduce the amount of water used for final consumption.

The project will also incorporate a new real time network monitoring system to ascertain water composition at any time for better quality assurance.

In addition, the company will improve its service management models and optimise investment plans to actual needs.

ACCIONA Agua works in the digital transformation of all areas of the company

Operation and Maintenance Contracts

In the field of service management, ACCIONA Agua seeks:

- To optimise processes by minimising energy consumption.
- To ensure treatment yields.
- To test water quality.
- Proper environmental management of waste and by-products generated in the treatment processes.

The total management of a plant includes conservation and preventative maintenance activities. The strategy of the company regarding maintenance focuses on minimising operational costs and maximising the life of the facilities.

O&M

Today, ACCIONA Agua has more than 160 operation and maintenance contracts for conventional and industrial water treatment plants.

Total capacity amounts to:
WWTP: 6.6 million m^3/d.
DWTP: 1.8 million m^3/d.
SWRO: 2.1 million m^3/d.

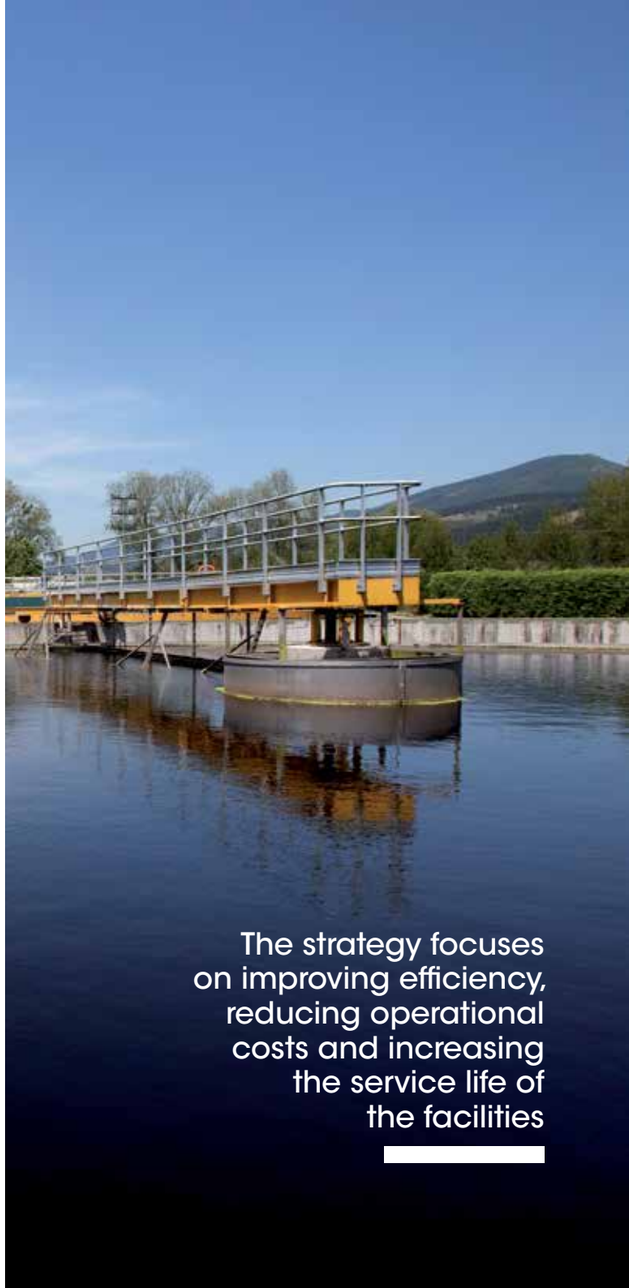
///// DRINKING WATER PROJECTS (O&M)

	COUNTRY	CAPACITY (m^3/day)	INHABITANTS
Cardedeu	Spain	691,200	
Abrera	Spain	345,600	
Mundaring	Australia	160,000	1,066,667
Sollano, Biscay	Spain	129,600	263,000
Simbirizzi Nuovo	Italy	120,960	604,000
Peravia	Dominican Republic	86,400	138,000
San Michele Cagliari	Italy	66,528	302,000
Donori	Italy	51,840	259,000
Simbirizzi Vecchio	Italy	51,840	259,000
Martos	Spain	28,500	35,000
Tudela, Navarre	Spain	23,328	40,863
Lotto Sarrabus	Italy	19,872	99,360
Lotto Anglona	Italy	17,280	86,400
Pelagian Islands	Italy	12,600	20,000
Lotto Parteola	Italy	12,960	64,800
Lekue, Biscay	Spain	7,000	2,700
Yesa, Navarre	Spain	5,760	7,700
Sanguesa, Navarre	Spain	5,184	7,000
Valtierra-Arguedas, Navarre	Spain	5,184	4,700
Arévalo, Ávila	Spain	3,974	10,000
Garaizar, Biscay	Spain	3,600	3,600
Basatxu, Biscay	Spain	3,333	16,000
San Cristobal, Biscay	Spain	3,333	720
Lekue, Biscay	Spain	2,678	7,307
Iparraguirre, Biscay	Spain	2,000	780
Orduña, Biscay	Spain	1,900	480
Salinillas, Biscay	Spain	1,400	720
Pantano de las Adelfas, Melilla	Spain	1,178	44,000
Arratoz, Navarre	Spain	518	1,000
Mendaur, Navarre	Spain	346	2,300
TOTAL		1,865,897	3,347,597

///// O&M: DESALINATION PLANTS

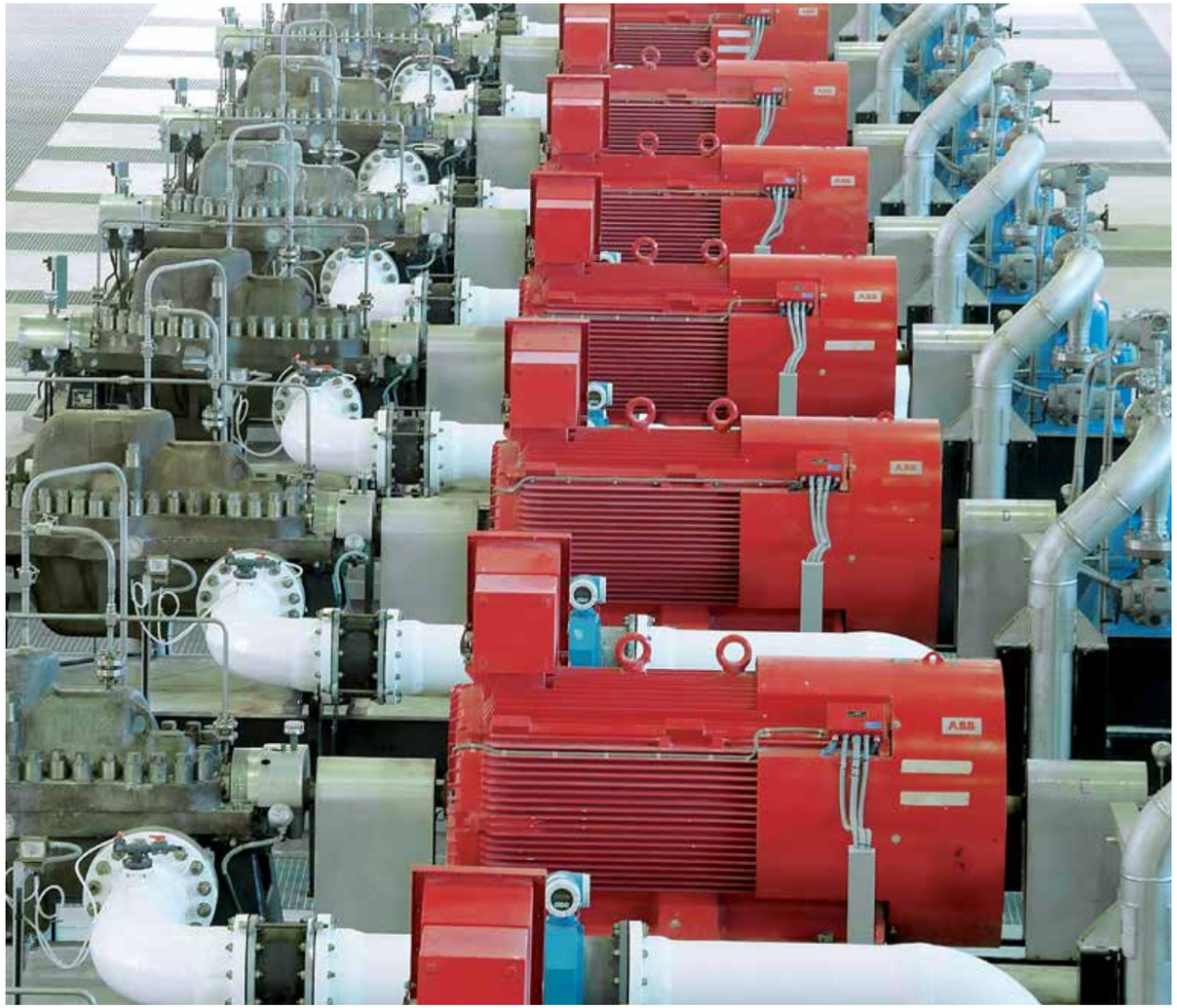
PLANTS	COUNTRY	CAPACITY (m^3/day)
Port Stanvac. Adelaide	Australia	300,000
Umm Al Houl **(U/C)**	Qatar	284,000
Torrevieja. Alicante	Spain	240,000
El Prat de Llobregat	Spain	200,000
Ras Abus Fontas A3 **(U/C)**	Qatar	165,000
Fujairah 1 Extension	UAE	137,000
Fouka	Algeria	120,000
Tampa Bay. Florida	U.S.	108,831
Paraguana **(U/C)**	Venezuela	75,000
Cartagena C. Phase I Murcia	Spain	65,000
Cartagena Canal Phase II, Murcia	Spain	65,000
Alicante canal Alicante	Spain	65,000
Tordera. Girona	Spain	57,600
Copiapó	Chile	51,840
Almería Capital	Spain	50,000
South-east of Gran Canaria	Spain	33,000
Ibiza and San Antonio	Spain	29,800
Javea. Alicante	Spain	26,000
Reggio Calabria	Italy	25,000
Majis Ro	Oman	20,000
Arucas & Moya. Las Palmas	Spain	15,000
Bocabarranco and Roque Prieto. Las Palmas	Spain	15,000
Ciutadella. Minorca	Spain	10,000
Cape Verde	Cape Verde	10,000
Lampedusa and Linosa	Italy	6,576
Sataria	Italy	3,014
Maggiuluvedi	Italy	3,014
Talara	Peru	2,200
Franke	Chile	1,200
TOTAL O&M		2,184,075

U/C Under Construction



The strategy focuses on improving efficiency, reducing operational costs and increasing the service life of the facilities

WWTP in Güeñes, Biscay, Spain



Desalination plant in Alicante, Spain

Outstanding O&M Projects

DESALINATION

MAJIS RO I DESALINATION PLANT

Sohar, Oman

// **Capacity:** 20,000 m³/day.
// **Type of contract:** O&M.
// **Client:** Majis Industrial Services.

The plant expects to produce 20,000 m³ of water per day —both drinking water and water intended for industrial processes— and includes two stretches of water line and two booster pumping stations for desalinated water.

WASTEWATER TREATMENT

SAN JERÓNIMO WASTEWATER TREATMENT PLANT

Seville, Spain

// **Capacity:** 90,500 m³/day.
// **Type of contract:** O&M.
// **Client:** EMASESA.

In addition, it will take charge of the San Jerónimo I and II and El Manchon Rainwater Pumping Stations, the Waste Water and Rainwater Pumping Stations on the right bank (El Muro, Guadalajara, San Juan Norte and San Juan Sur), the CEFORA WWTP and chlorinating facility and the WWTP and WWPS at El Ronquillo. In total, service will be provided to an equivalent population of 240,000 people in the area north of Seville.

ABBANOA WASTEWATER TREATMENT PLANTS

Sardinia, Italy

// **Capacity:** 300,000 m³/day.
// **Type of contract:** transport, supervision, control and maintenance services.
// **Client:** Abbanoa Spa.

The duration of the operation contract is 36 months and comprises more than 200 wastewater treatment plants and more than 500 pumping stations grouped into three lots.

The Nuoro-Oristano lot, through 104 wastewater treatment plants and 241 pumping stations; the Sassari-Olbia lot, through 109 wastewater treatment plants and 240 pumping stations; and Lanusei, with 16 wasewater treatment plants and 45 pumping station. As a whole, the plants have a capacity of almost 300,000 cubic meters per day to provide service to an estimated population of 500,000 equivalent inhabitants.

DRINKING WATER TREATMENT

SIMBIRIZZI DWTP

Sardinia, Italy

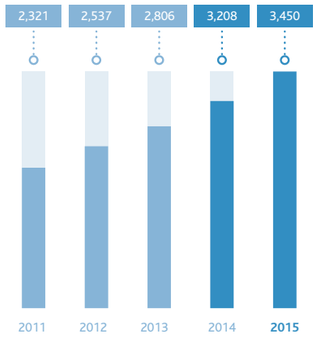
// **Capacity:** 120,960 m³/day.
// **Type of contract:** O&M.
// **Population:** 604,000
// **Client:** Construction Authority for Potable Water and Wastewater (CAPW).

ACCIONA operates and maintains the Simbirizzi drinking water treatment plant in Sardinia. it is Italy's second largest potable drinking water plant.

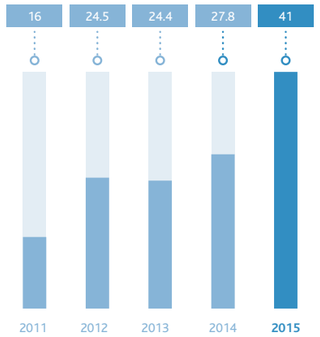
///// WASTEWATER PROJECTS (O&M)

PLANTS	COUNTRY	CAPACITY (m^3/day)	POPULATION EQUIVALENT
Atotonilco	Mexico	3,024,000	10,500,000
La Chira	Peru	544,320	2,500,000
Gabal El Asfar	Egypt	500,000	2,000,000
Bello	Colombia	432,000	3,880,000
Abbanoa plants	Italy	300,000	500,000
Los Tajos	Costa Rica	242,784	1,490,000
AQP-ATO Bari 4	Italy	220,000	1,060,000
ACCB	Spain	172,800	1,350,000
Cagliari is Arenas	Italy	164,000	1,150,000
San Gonzalo	Brazil	103,680	250,000
Lote III	Spain	89,655	446,400
San Jerónimo WWTP	Spain	90,500	240,000
Lote V, Madrid	Spain	74,932	358,950
Albacete	Spain	74,356	371,280
Pitesti	Romania	65,000	120,000
Baiña, Asturias	Spain	43,200	86,500
Grupo la Llagosta	Spain	40,000	180,000
Saint Juia de Lloira	Spain	35,300	100,000
Grupo Abrera	Spain	34,868	155,310
Arequipa	Peru	34,800	179,712
Rubí, Barcelona	Spain	27,000	135,000
Grupo Igualada, Barcelona	Spain	25,212	247,700
Aguilar de la Frontera, Cabra, Fernán-Núñez and Montemayor	Spain	25,000	85,000
Melilla	Spain	21,618	27,000
Grupo Anoia Nord	Spain	21,370	291,567
Tudela – Suroeste, Navarre	Spain	20,416	40,122
Güeñes, Biscay	Spain	20,000	57,143
Grupo Montsiá, Tarragona	Spain	17,600	89,500
Llucmajor, Majorca	Spain	15,000	79,500
Grupo Zona Media Pirineos	Spain	14,906	32,552
Soria, Soria	Spain	14,580	56,133
South-east of Gran Canaria	Spain	12,000	100,000
Scicli	Italy	11,800	45,000
La Almunia de Dª Godina	Spain	10,500	28,350
Villarrobledo, Albacete	Spain	9,500	41,000
Mairena del Alcor, Seville	Spain	9,220	43,025
Campotéjar, Granada	Spain	9,000	65,000
Cangas de Morrazo, Pontevedra	Spain	9,000	30,000
Manzanares, Membrilla, Ciudad Real	Spain	8,800	75,000
Calatayud, Saragossa	Spain	8,500	63,892
60 additional plants		124,918	649,451
TOTAL		6,695,080	29,225,587

→ **ACCIONA Agua**
Employees



→ **EBT**
(millions of euros)



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