

Water

Quality, innovation and efficiency for the benefit of society and the environment



Tragsatec is a leading international consultancy firm in the development and implementation of innovative and technologically advanced solutions for the integrated management and control of the water cycle, from water planning to sustainable resource management.

management
CONTROL
of the **water cycle**

WATER planning

resource SUSTAINABILITY

Our main values

The principles that define us in water management:

- | We ensure the highest standards of quality in all our projects.
- | We invest in R&D&I to develop innovative technological solutions that enable us to give our clients cutting-edge answers.
- | We work to achieve water management that is sustainable and environmentally responsible.
- | We have over 1,200 experts in all water management disciplines and 25 years of experience behind us.



Products and services

Water planning

1. Water plans, drought and flood plans.
2. Water resources monitoring networks (meteorology, capacity, piezometry, volume quality and control).
3. Information management and promotion of public participation.
4. Environmental assessment.

Key projects

| Preparation and revision of the **water management plans of the inter-community river basin districts**, which cover 85% of the total surface area of Spain.

| Provision of technical assistance for the **transformation of the Action Plans of four Turkish water basins into Management Plans** so that they could be applied in the rest of the country.

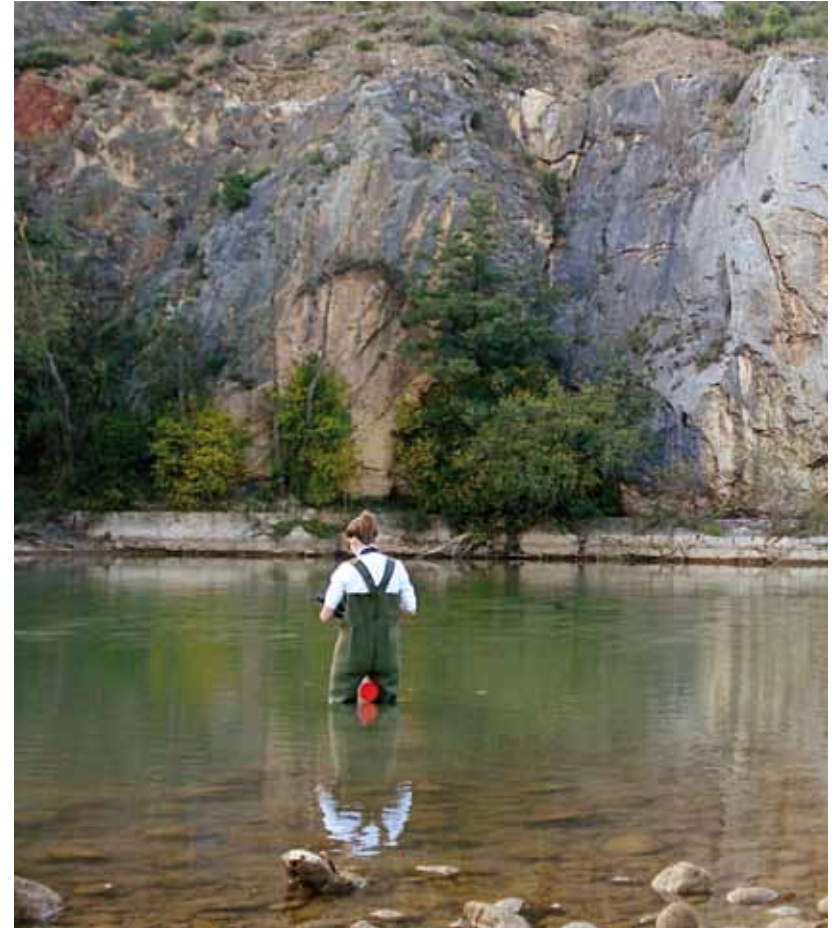


Integrated water resources management

1. Legal and administrative management of water use rights.
2. Water quality control and discharge authorisation management.
3. Public Water Domain Monitoring.
4. Groundwater: research and forecasting. Managed or artificial aquifer recharge.
5. Development of Information Systems for the management of water resources.

Key projects

- | Design of the works needed to **convert the Portaje Reservoir into a source of drinking water** for the city of Cáceres and 13 other localities.
- | Study of the feasibility of **improving supply in the Volta Region** (Ghana) to boost water sanitation and safety.
- | Investigation of water resources for the **supply of drinking water in Damongo** (Ghana), which has about 30,000 inhabitants.





Hydrology and waterworks

1. Water supply and distribution system projects.
2. Hydrologic and hydraulic studies.
3. Project management. Control of infrastructure security.
4. Consulting and water sanitation and purification projects.
5. Forest-hydrology restoration.

Key projects

- | Preparing the necessary actions to **end the destructive potential of the Remáscaro Stream** (Huesca) in areas concentrating populations, roads, crops, etc., via works to restore the vegetation cover and correct the watercourses.
- | Executing the necessary works to **improve safety against floods affecting urban areas, infrastructure and agricultural areas** in the region of Benavente-Los Valles (Zamora).
- | Carrying out the **integrated management of the Oued el Khairat basin in the Gouvernorat de Zaghouan** (Tunisia) where factors such as geology, climate, rainfall torrents, etc., give rise to desertification, deteriorating infrastructure and a high risk of floods.

Irrigation

1. Irrigation plans and projects.
2. Modernisation programmes: saving water and energy. Remote control and remote management systems.
3. Inventories, water economics and resource management in the field of irrigation.
4. Training the irrigators.
5. Expropriation in hydraulic and irrigation works.

Key projects

| Defining the works required to **transform into irrigation some areas in the Los Monegros Irrigation Zone** (Huesca) with a view to boosting their performance.

| Development of the **Regional Irrigation Plan for the Kayes Region** (120,000 km², Mali) as a methodological pilot to be extrapolated to the country's other regions.

plans PROJECTS
irrigation
modernisation programmes
savings training



SECTORAL plans
resources MANAGEMENT
ENGINEERING
HYDRAULICS
research
SOLUTION ACTION





We are experts

- | We prepare and integrate different types of sectoral plans.
- | In resource management, we draw up economic assessments and studies on the impact of climate change.
- | We develop **hydraulic engineering** projects for the prevention and control of flooding, erosion and the execution of storage and water transport infrastructure.
- | We investigate groundwater and come up with advanced solutions for reversing the problems caused by overexploitation and pollution, such as artificial groundwater recharge actions.
- | We are the European company that has planned, designed and projected the most new irrigation and existing system modernisation actions in both Spain and abroad.



R&D&I

A company's **research, technological development and innovation** activities contribute to increased productivity, competitiveness and economic growth and employment. Fully aware of this, the Tragsa Group reinvests part of its resources in R&D&I projects that serve to **boost its ability to respond** to current and future technological demands.

A few references

| The project “**Demonstration of Groundwater Recharge Management as a solution to water scarcity and drought (MARSOL)**”.

Demonstration that Groundwater Recharge Management is a real, safe and sustainable strategy to increase the availability of water, even in times of drought, with a view to persuading industry to support this technique (www.marsol.eu).

| The project “**Standard Water Management Model (MEGA)**”.

The development of a Standard Water Management Model, applied to irrigation, allows for a more efficient exchange of information and administrative management; reducing investment costs for remote installations and reducing the cost of operating and maintaining them (www.gestiondelagua.es).



Grupo Tragsa

Head office
C/ Maldonado, 58
28006 Madrid

www.tragsa.es

