



PUBLIC PRIVATE PARTNERSHIP IRRIGATION IN SPAIN

October 2014

- **IRRIGATION IN SPAIN**
- **PUBLIC PRIVATE PARTNERSHIP IN IRRIGATION.**
- **CASE STUDY: SEGARRA-GARRIGUES PPP**
- **OTHER PPPs: CANAL DE NAVARRA**

Attaches population to rural environment reducing depopulation processes

Great capacity to generate direct employment, tripling the average rainfed employment

Promotes more qualified employment due to new technologies

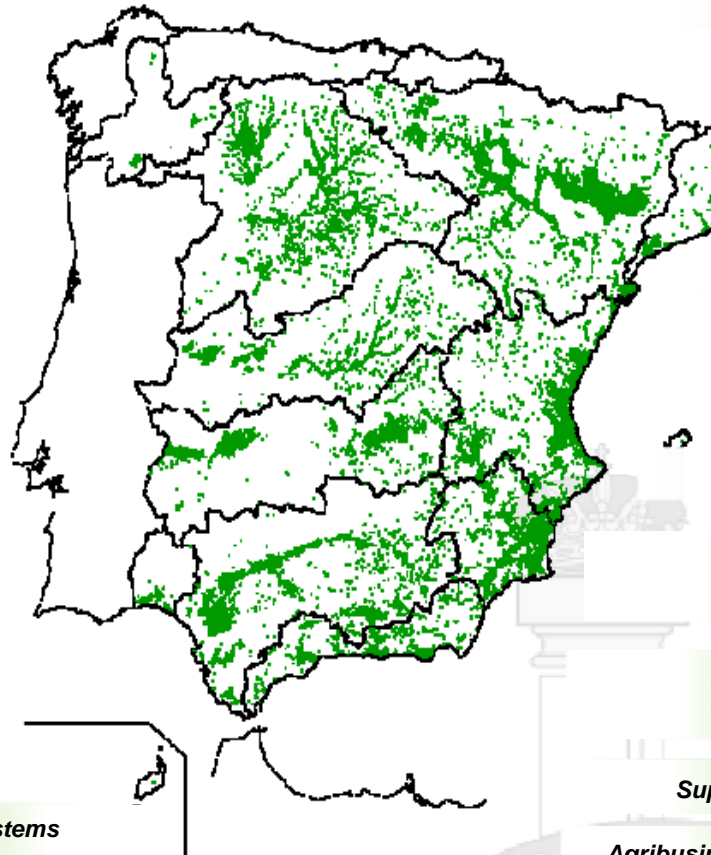
Development engine

Improves life quality in the rural area

From 3,4 to 3,5 million Ha irrigated on an annual basis

Associated ecosystems

Flows regulation



Water for irrigation represents around 60% of the total water used

Territory structuration

Nowadays irrigated production represents 55% of the final agricultural production, whilst only occupies 16% from the cultivated area

1 irrigated Ha produces 6 times more than 1 Ha rainfed

Incomes maintenance

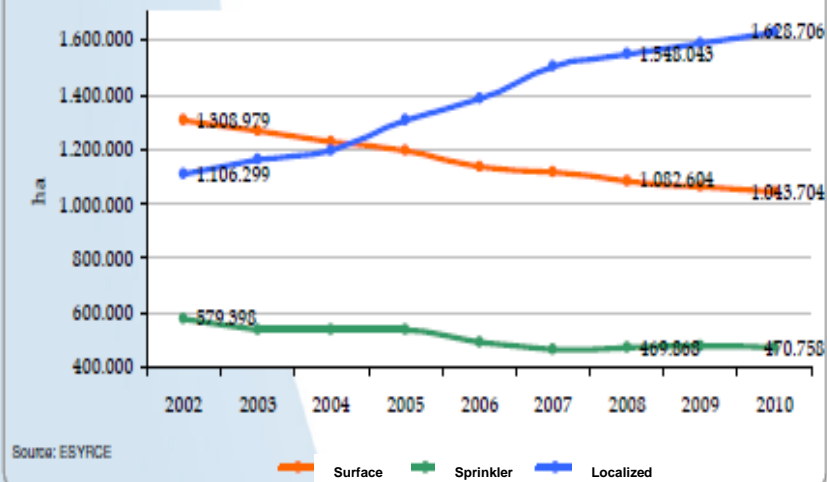
Diversify Incomes in allowing crops rotation

Prevents erosion & desertification

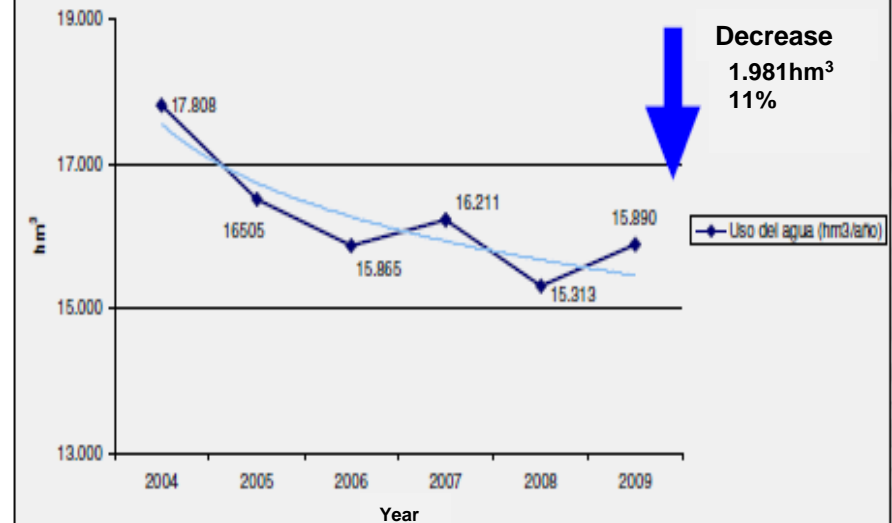
Supports agribusiness

Agribusiness represents 17% of the national business

Evolution of the irrigated area by irrigation techniques



Water use in agribusiness



Key points for a successful PPP

- A PPP must be articulated in a strategic project and must have a legal framework.
- Decentralization (corporatizing)
- Achieve an appropriate project funding = optimize budgetary efficiency .
- Search interest in relevant actors from key areas: construction, financing, investment.
- Project risk structure (expropriation, inflation, etc..)
- Option to reestablish the contract financial balance. Flexibility.
- Establish and appropriate remuneration mechanism.
- Contractual design adapted to investment requirements, according to the risk assumed by the private part.
- Financial plan for the feasibility analysis previous to tender, and updated according to market requirements..
- The previous feasibility study must be exhaustive and concluding.
- Incorporation of Management Best practices: Quality + Efficiency + financial feasibility.



Client advantages :

- **The cost to assume by the irrigation community users for the operation of the irrigated area includes:**
 - Operation, including energy costs
 - Maintenance
- **Improvement in the service quality, since the operation of a big irrigation scheme allows to have specialized equipment.**
- **The irrigation user and his communities become clients.**



Segarra-Garriga Irrigated scheme data:

Total area:	105.000 ha
Irrigated area:	68.151 ha
Water requirement (annual):	315 hm ³
Municipalities affected:	71 UT
Irrigation sectors:	16
Owners number:	16.000 prop.
Plots number:	70.000

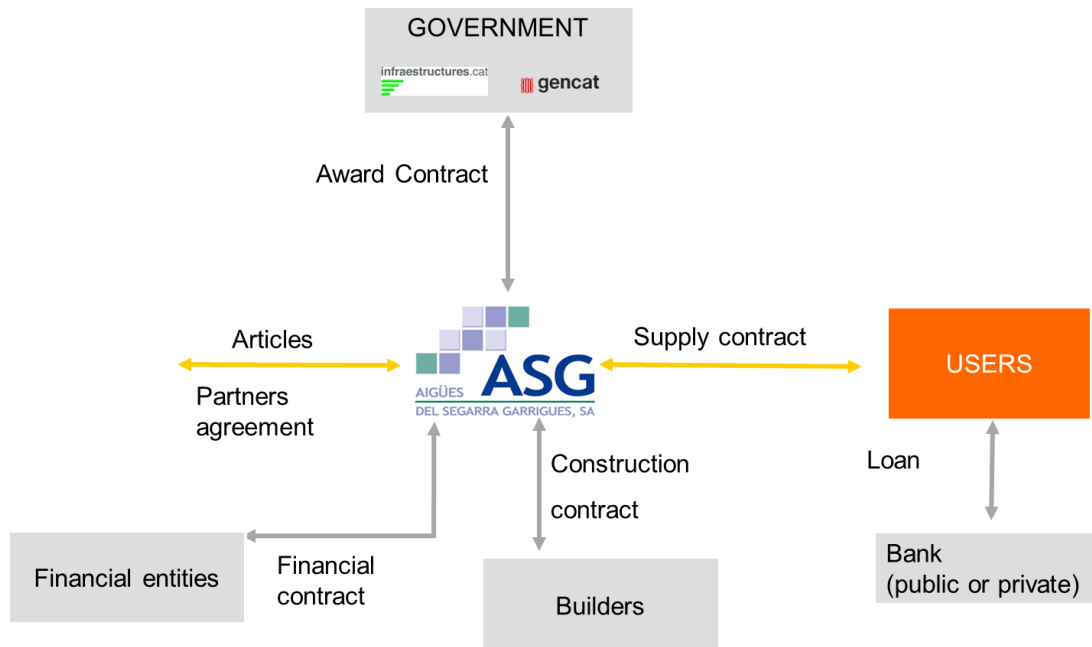


The company **Aigües de Segarra Garrigues, S.A. (ASG)** is the private company in charge of executing the works: land consolidation, design, build, operate and maintain the irrigation distribution network to Segarra-Garrigues scheme.



ASG started his activity in 2003, it is formed by a group of companies, amongst which are different construction companies, and AGBAR. AGBAR has participated in the design and build of the irrigation system, and is in charge of the operation. Agbar has a total share of 23% of ASG.

The financial contract for the construction of the irrigation network entailed the financial operation of a public project with the highest budget ever established in Spain, and the 3rd in Europe

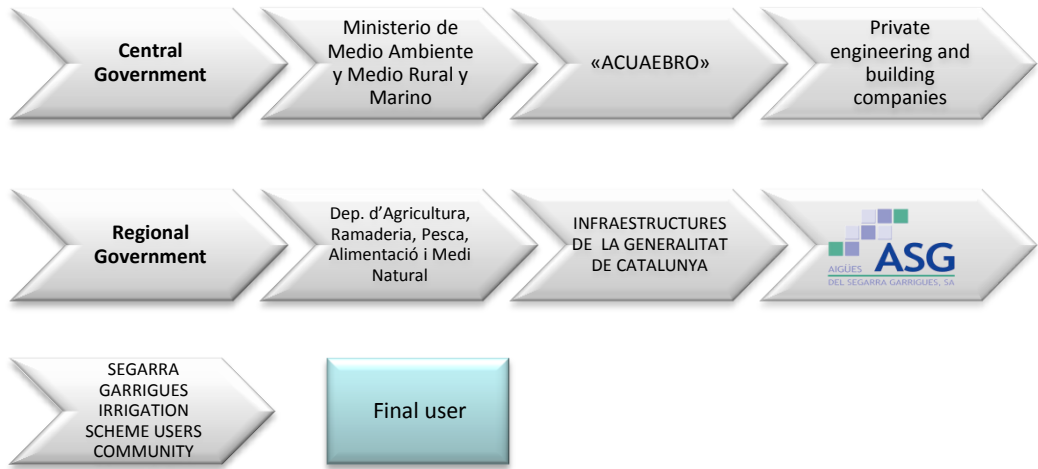


ASG Incomes:

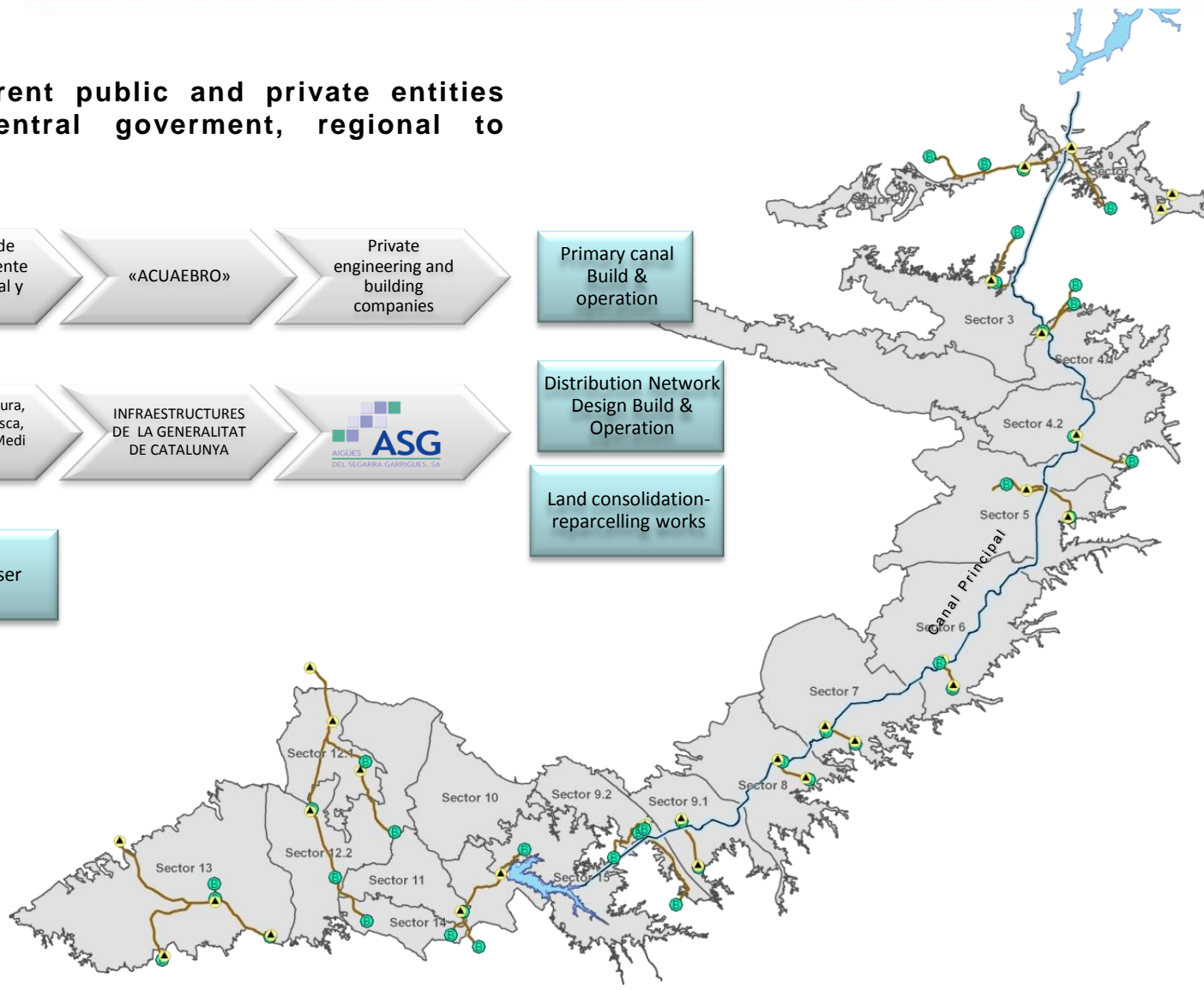
Construction → as investment executed

O&M → tariff €/m3 supplied

In this project different public and private entities collaborate from central government, regional to private entities



- Primary canal Build & operation
- Distribution Network Design Build & Operation
- Land consolidation-reparcelling works



Canal de Navarra

1st phase: 2006-2014 (22.363Ha) → AGBAR is a shareholder

1st phase extension: 2014 (15.275Ha) → AGBAR is shareholder and in charge of O&M.

This extension involves energy efficiency, and irrigation transformation to pressured.



Algerri-Balaguer

Operation & Maintenance by AGBAR

Area: 8.000Ha

Water Supply: 6.000m³/Ha year

Irrigation Technique: Sprinkler + Localized





AQUALOGY
Where Water Lives