

# WATER AS AN ECONOMIC FACTOR





**In how far are your regional rivers and lakes used as transport routes. In what way was that different in the past?**

- We haven't got so many rivers in our area, almost every river is dry and the few ones that carry water haven't got enough so as to use them as a transport route.
- But we have got very important ports which are always working. Our mainly water transport route is the Mediterranean Sea. In the past, the condition was similar to the current situation.





# ALMERÍA



Garrucha's Port



Andarax River



Almanzora River



# 2

**How are your regional rivers (and lakes?) used to extract energy? To what extent was that different in the past?**

**In Almería we don't use water motion to extract energy, there aren't any hydroelectric stations. The past was similar to the present, people didn't use to extract energy from the water motion. In Almería there were only a few watermills for personal use.**



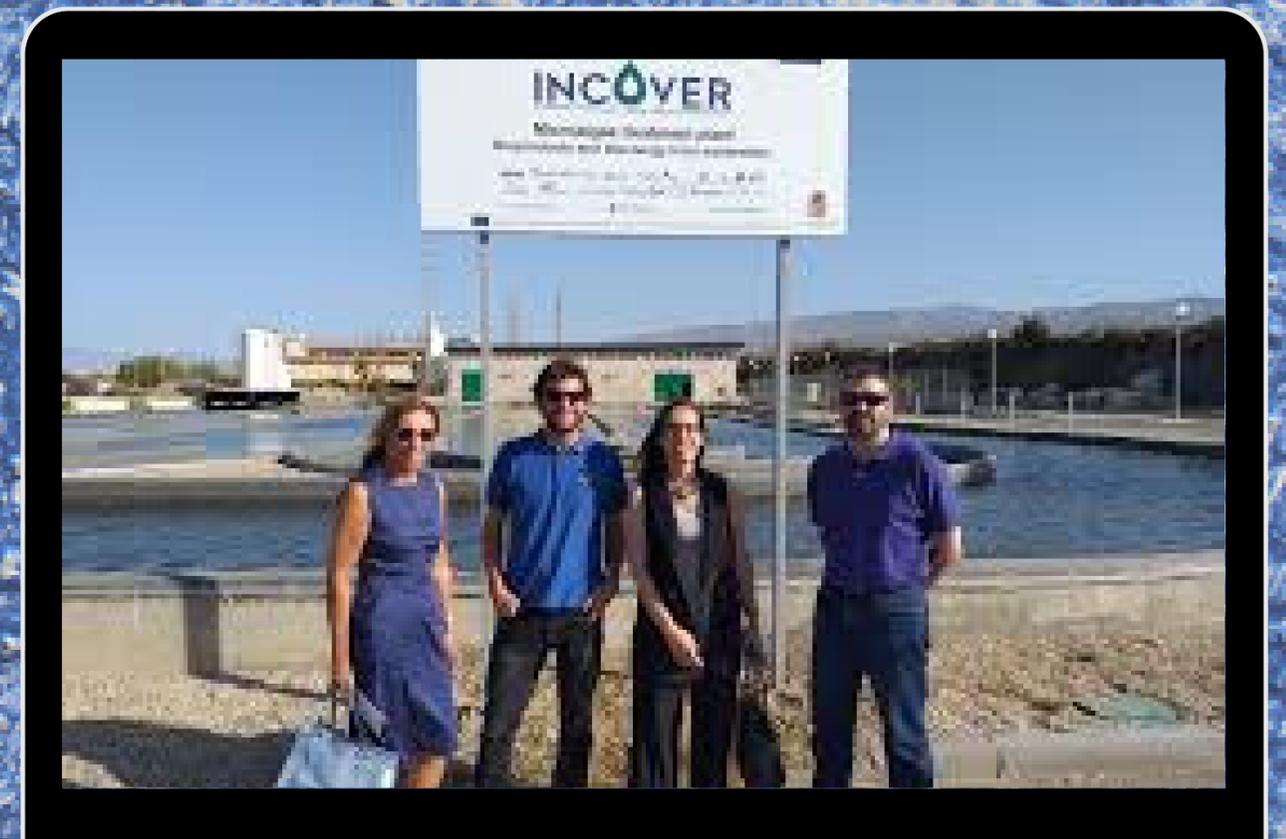
# ISABEL II RESERVOIR

The Nijar dam, together with the Isabel II reservoir, is located in Níjar, Almería. The construction of the Nijar dam represented an important hydraulic work in the 19th century. The lack of a rainfall area, the lack of hydrological studies and the location in a basin with a small extension justify the failure of this great building.



# INCOVER PROJECT

However, there is a European project called the **Incover Project**, which has been installed in El Toyo, Almería. This project consists of transforming residual water from a lagoon, called the raceway lagoon, into energy. It has been awarded the **“Water Industry Award 2018”** and we have the honour of having it here in our region.



# 3

## How have people changed your regional rivers and lakes according to their needs?

Almería is the Spanish province with the least water reservoirs.

- The main reservoir is the one situated in Cuevas del Almanzora. The water collected in this reservoir is sent to the water treatment plant located next to it and finally distributed to most of the towns and villages in the north-eastern part of Almería.
- The Beninar reservoir, located in Berja, provides part of the water necessary for production in greenhouses in the south-western part of the province.

As a result of not having wide rivers to use that water, we haven't changed any river or lake course.





**Beninar reservoir in  
Berja**



**Reservoir in Cuevas del  
Almanzora**



# LOS MOLINOS DEL RÍO AGUAS

**"Los Molinos del Río Aguas" is an inhabited and recovering farmhouse thanks to the members of a self-sustainable community. This village lives free from water and electricity connections. They get water from the river Aguas, they make use of solar energy and grow their own food. Its name comes from the hydraulic mills which were locally used in the past to produce flour and oil from the cereal and olive trees in the surroundings.**



# 4

## **To what extent do farmers in your region use groundwater or water from rivers to irrigate their fields? In how far has that changed over time?**

The past was similar to the present, people didn't use to extract energy from water motion, as there were hardly any water mills, the same happens today. Farmers in our region don't use water from rivers or groundwater to irrigate their fields because the rivers are too dry and the little groundwater available in the past was used up long time ago.

Instead of using that water, they use desalinated water which comes from the desalination plant in Carboneras. This plant distributes the desalinated water to most of the coastal towns and villages in the eastern part of the province.





# DESALINATION PLANT IN CARBONERAS

# 5

## What production processes do companies need water for? How do they get this water?

Tourism and agriculture are the two main sources of income in the province of Almeria, so water is essential for both of them.

Farmers mainly grow their vegetables in greenhouses. The two main areas are *Campo de Dalías-El Ejido* and *Campohermoso-Níjar*. Together, they have developed the largest concentration of greenhouse farming in the world, an estimated of more than



**Due to the lack of water in our region, most greenhouses use fully hydroponic systems that drip-feed chemical fertilizers into grow-bags.**

**They use underground aquifers that collect water from Sierra Nevada, although, they have a much more profitable project, in which the rain water falls into the greenhouse's roof and it's used to plant. The problem is that it does not rain much in our region, so even though it is more expensive, lot of companies stick to collecting water from Sierra Nevada.**



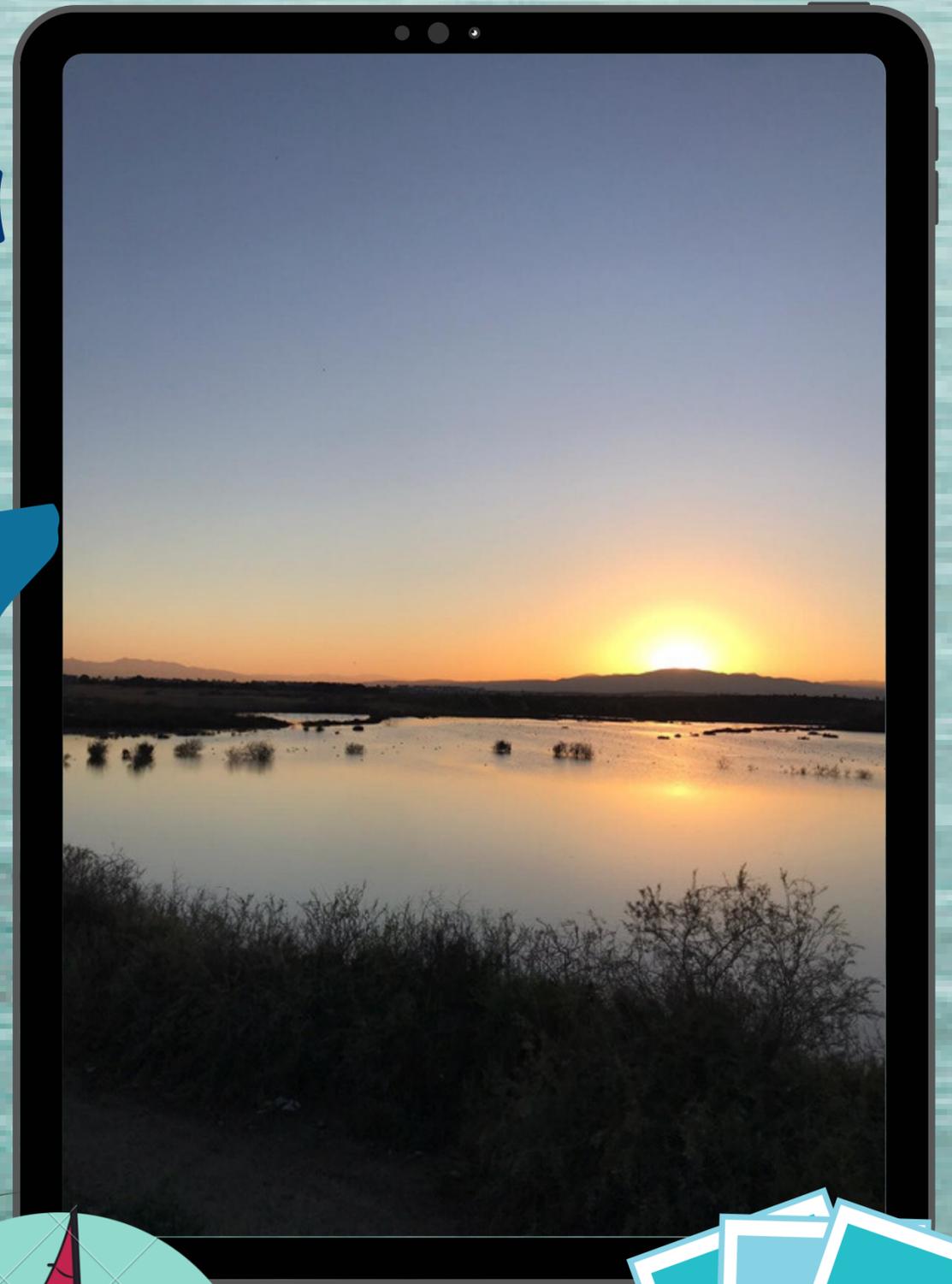
## How does water serve as a recreational area in your region?

In our region we can find a lot of water activities, but these two are the most outstanding: Over Limit, where you can rent a small sailing boat, a kayak or a surfboard. It is located in Vera Beach. You can also visit the reservoir of Cuevas, which is similar to Over Limit, but there are more things such as an aquaglide circuit or kitesurf sessions.

Vera Beach's lagoon is also used as recreational area for people to enjoy the views from a wooden lookout. Families climb to this lookout to see all the birds and ducks in the lagoon.



# VERA'S BEACH LAGOON



**OVER  
LIMIT**



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**IES EL PALMERAL, VERA  
SPAIN**



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