

CONTRIBUCIÓN DE LA INDUSTRIA ALIMENTARIA A LA CALIDAD AMBIENTAL Y LA REGENERACIÓN DEL AGUA EN LA REGIÓN DE MURCIA

VIII SYMPOSIUM INTERNACIONAL SOBRE TECNOLOGÍAS ALIMENTARIAS

8th FOOD TECHNOLOGY
INTERNATIONAL SYMPOSIUM

Economía circular y Eco innovación / *Circular economy and Eco innovation*
Moderadores / Chairs: Antonio Sáez de Gea y Miguel Ayuso García

Contribution of the food industry to
environmental quality and water
regeneration in the Region of Murcia

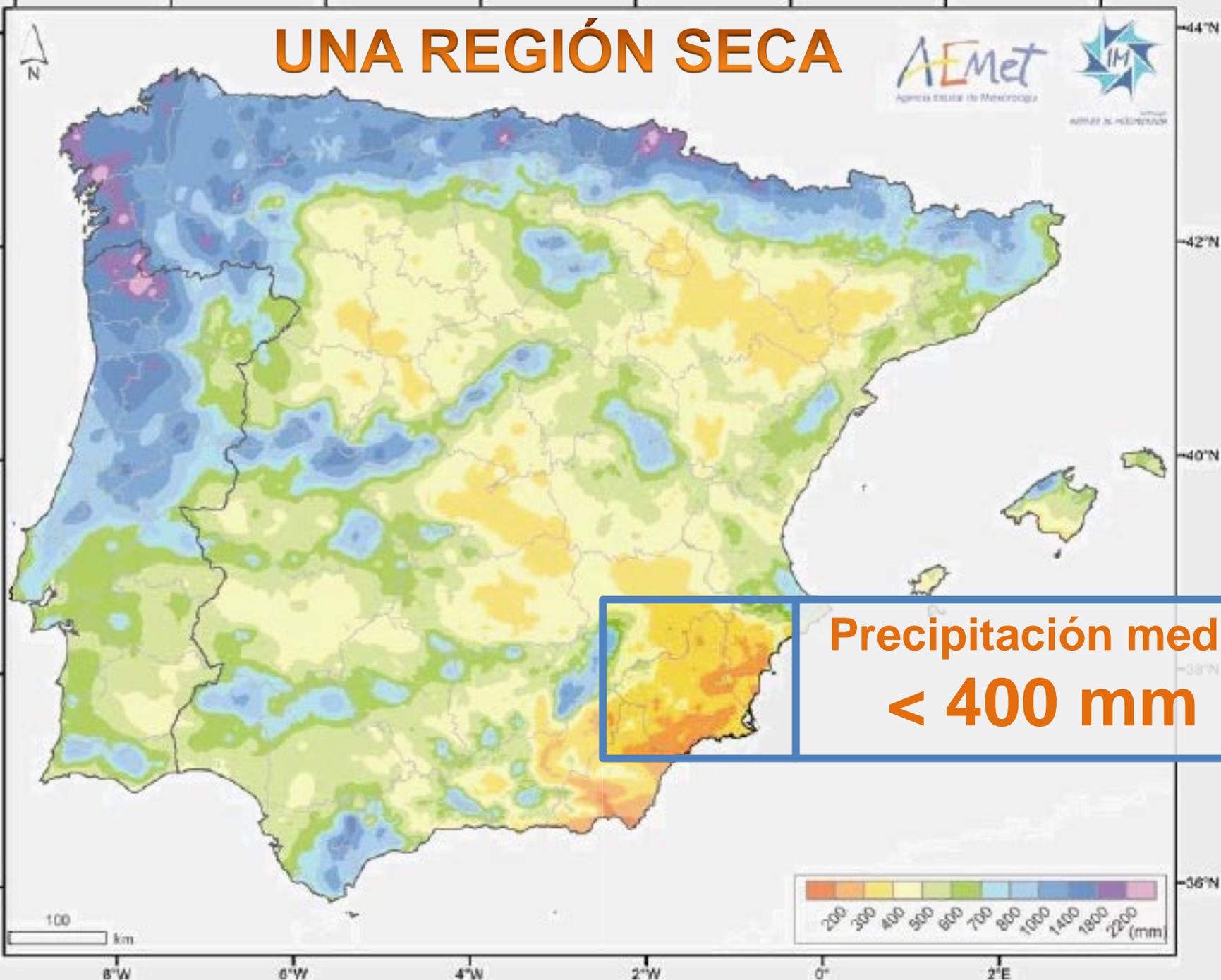






UNA REGIÓN SECA

AEMet
Agencia Estatal de Meteorología



Precipitación media
< 400 mm



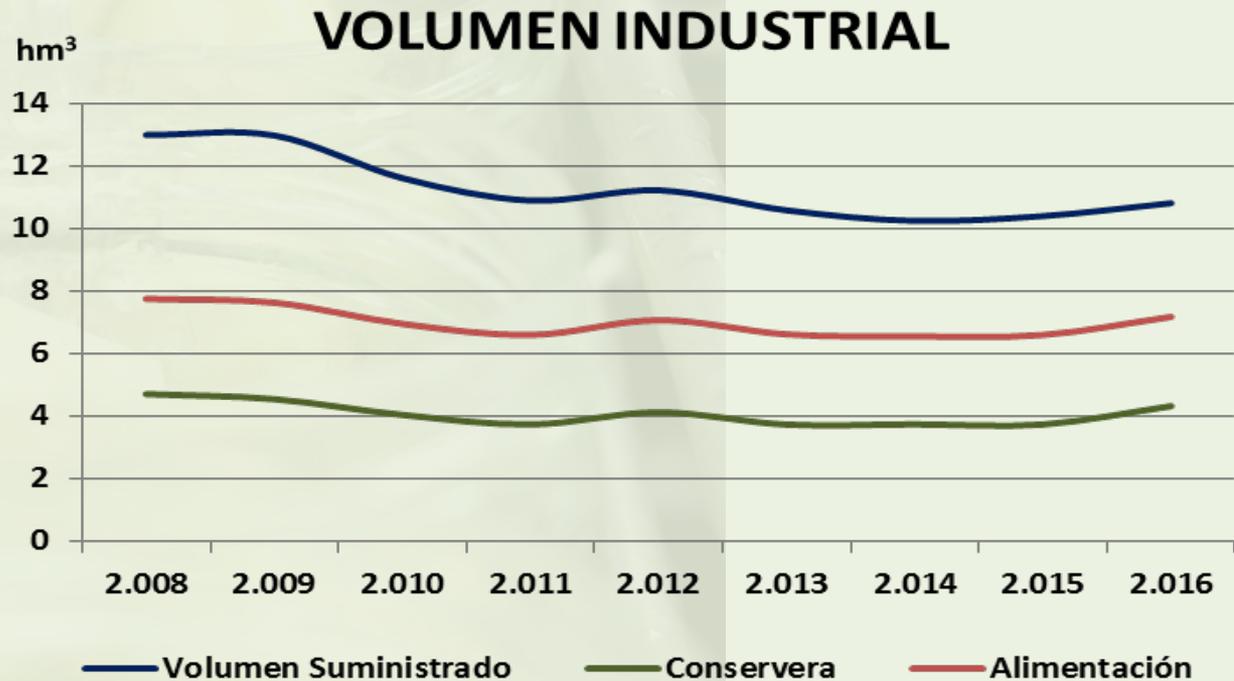
UN MEDIO AMBIENTE FRÁGIL



UNA REGIÓN FÉRTIL



UNA IMPORTANTE INDUSTRIA ALIMENTARIA

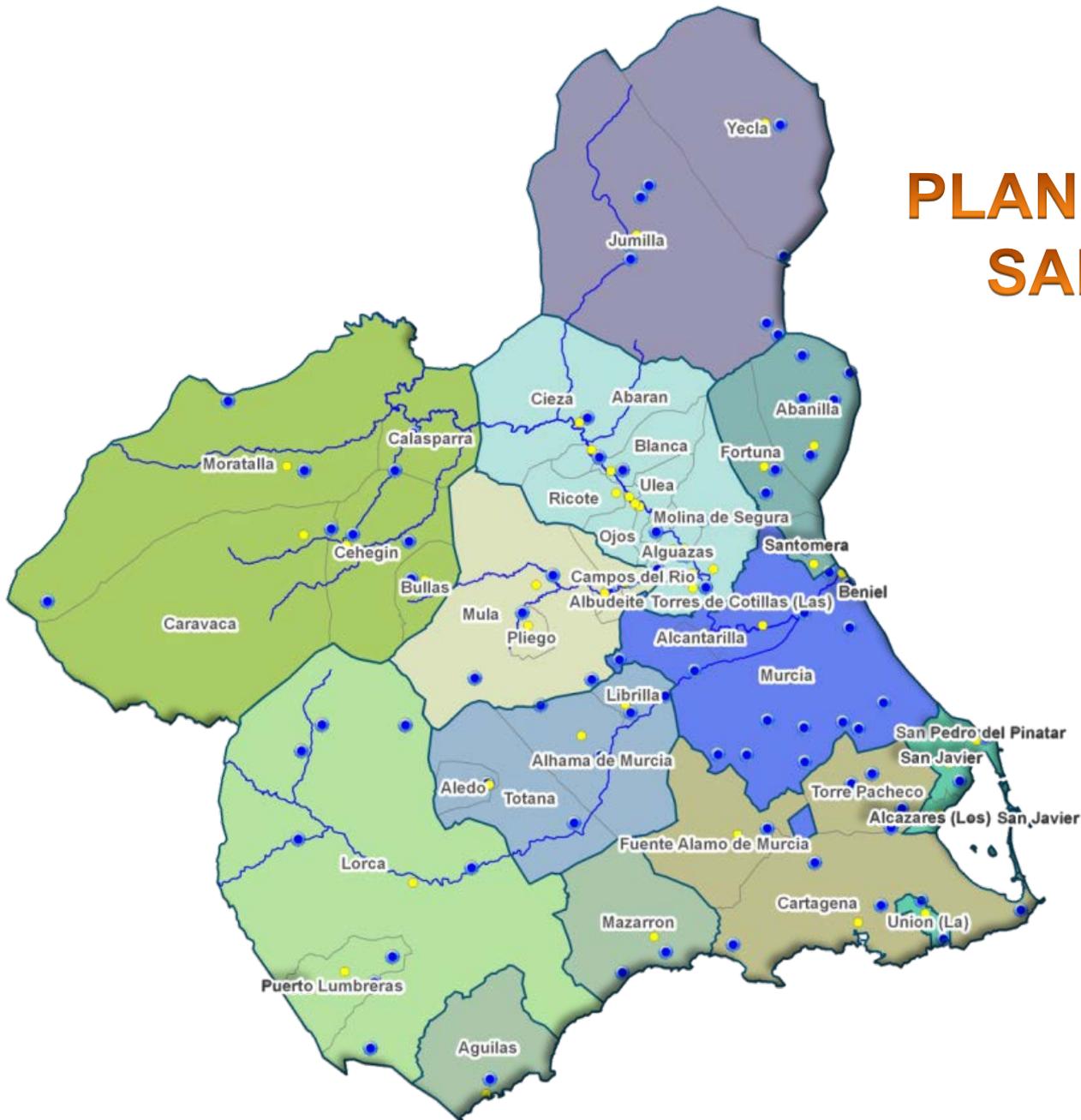




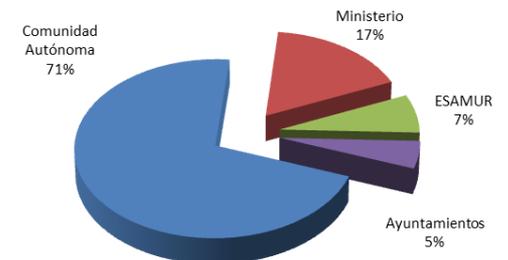
PLAN GENERAL DE SANEAMIENTO Y DEPURACIÓN 2001-2010

- ◆ **Escasez de agua**
- ◆ **Escasa dilución en cauces**
- ◆ **Aguas industriales**
- ◆ **Gran variación estacional**
- ◆ **Espacios naturales sensibles**
- ◆ **Reutilización intensa**

PLAN GENERAL DE SANEAMIENTO Y DEPURACIÓN 2001-2010



Inversión Global Plan General de Saneamiento



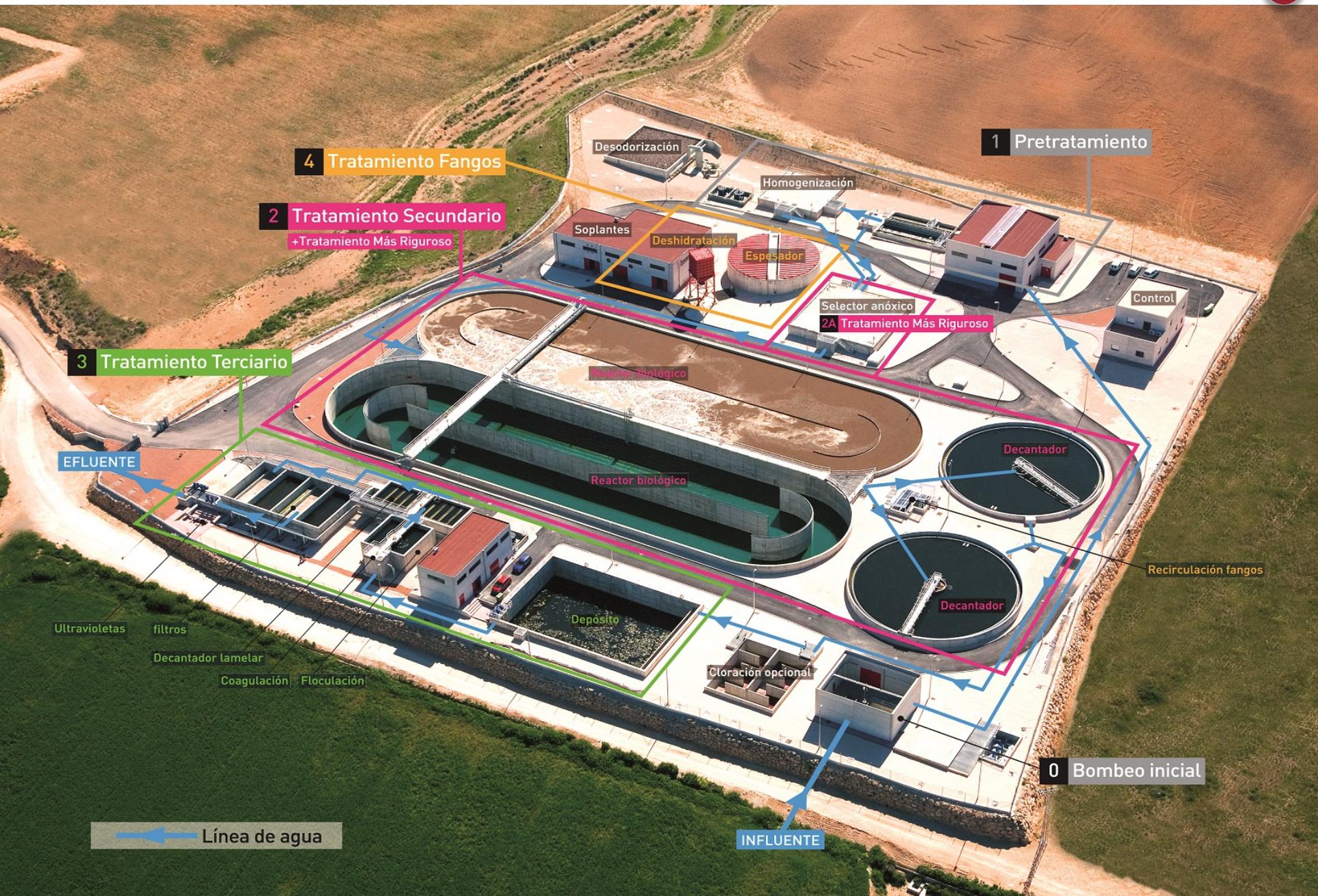


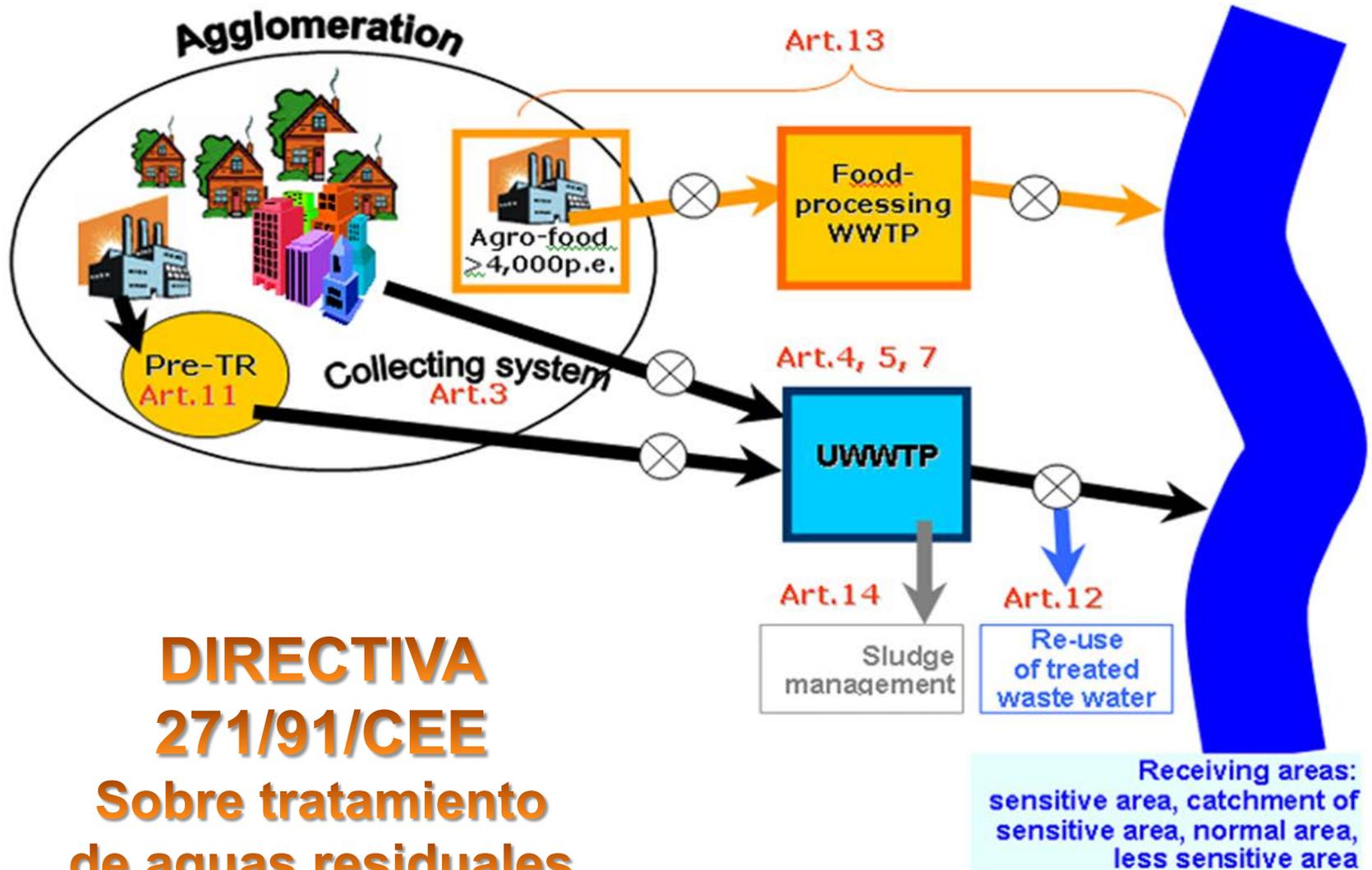
SANEAMIENTO Y DEPURACIÓN REGIÓN DE MURCIA



ESTACIONES DEPURADORAS DE AGUAS RESIDUALES (2016)

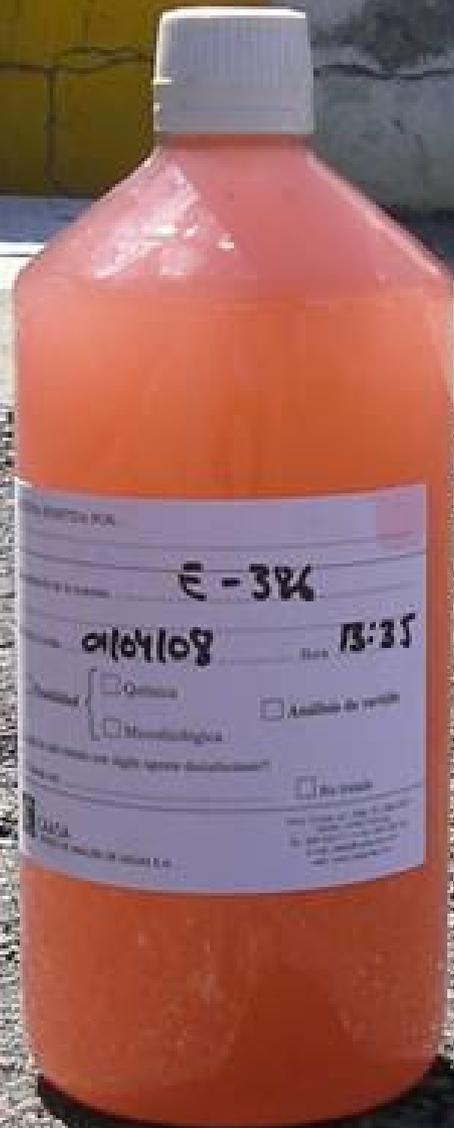
Tipología	Nº Instalaciones	Volumen depurado hm ³ /año	%
Depuración biológica con tratamiento terciario	58	52,40	50,2%
Depuración biológica	35	51,95	49,8%
Total	91	104,35	100%





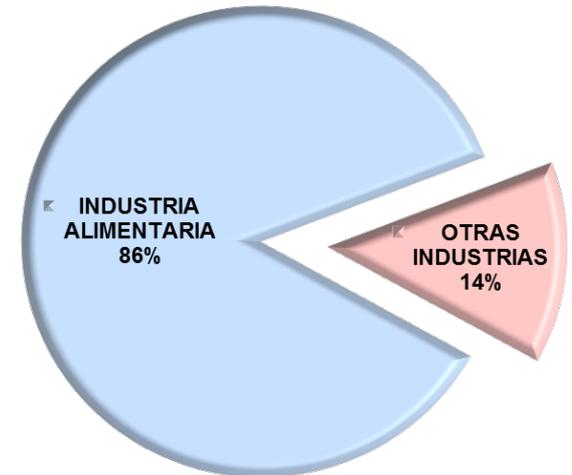
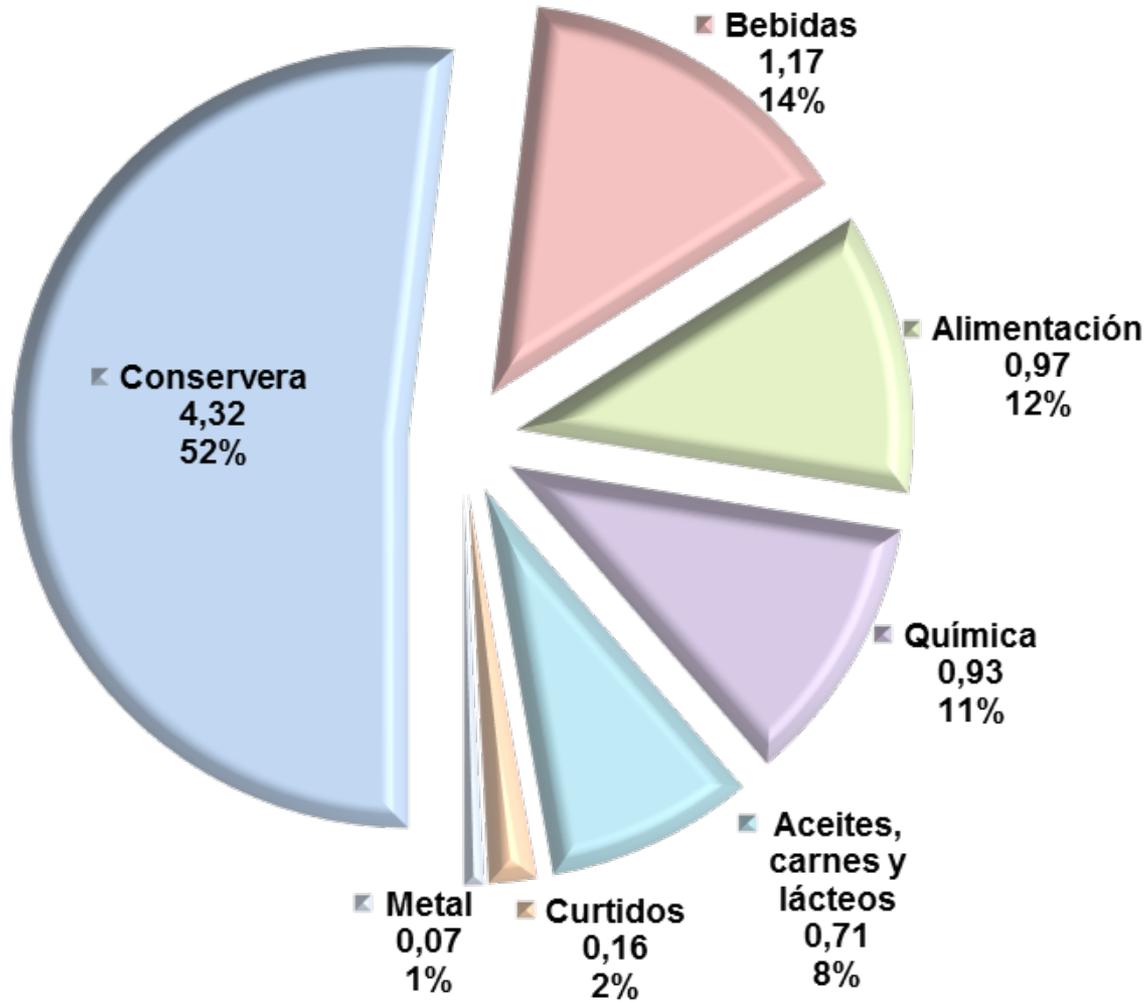
**DIRECTIVA
271/91/CEE**
**Sobre tratamiento
de aguas residuales
urbanas**

AGUAS RESIDUALES INDUSTRIALES



- ♦ pH EXTREMOS
- ♦ ACEITES Y GRASAS
- ♦ SÓLIDOS EN SUSPENSIÓN
- ♦ ALTA CARGA ORGÁNICA BIODEGRADABLE
- ♦ AUSENCIA DE TÓXICOS METALES PESADOS

VOLUMEN INDUSTRIA ALIMENTARIA



DEPURACIÓN DE AGUAS INDUSTRIALES

- ◆ **Convenio industria**
- ◆ **Decreto Regional 16/99**
- ◆ **Quien contamina paga**
- ◆ **Canon de saneamiento**
- ◆ **Ayudas y bonificaciones
por depuración en origen**



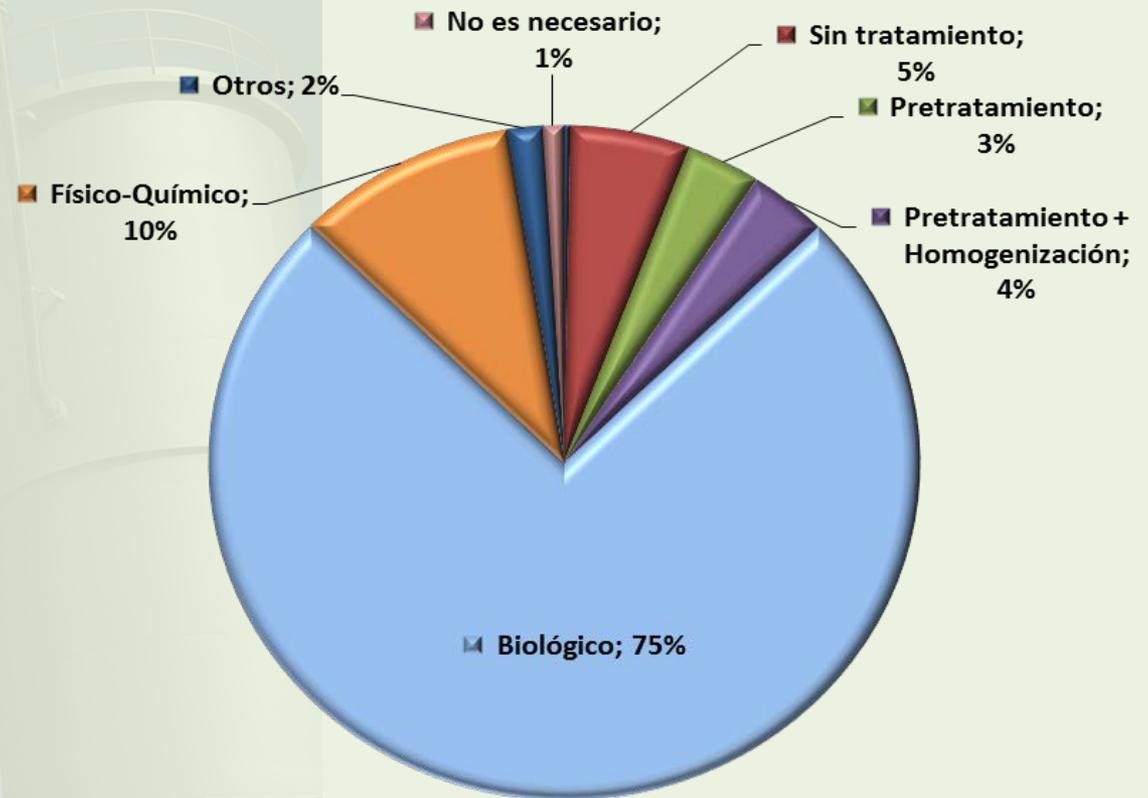


DEPURACIÓN INDUSTRIAL REGIÓN DE MURCIA

ESTACIONES DEPURADORAS DE AGUAS RESIDUALES INDUSTRIALES

Tipología	Nº Instalaciones
BIOLÓGICO	65
FÍSICO-QUÍMICO	40
PRETRATAMIENTO	110
Total	215

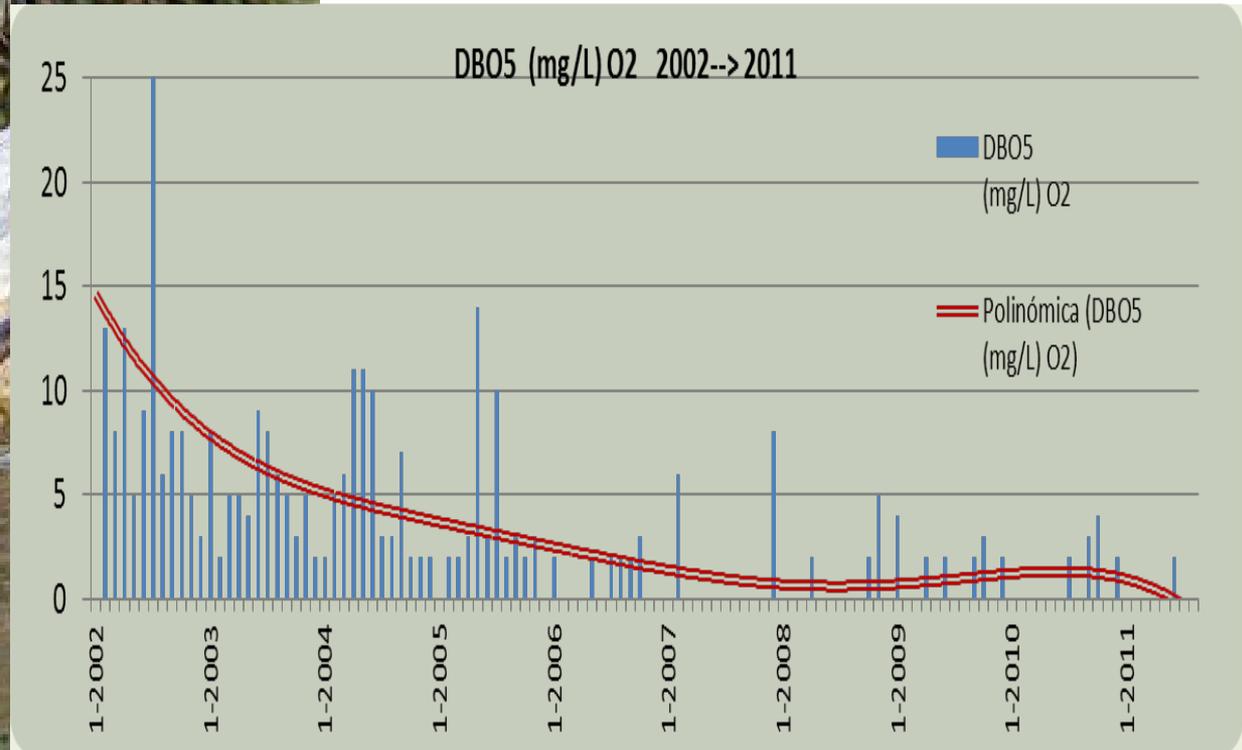
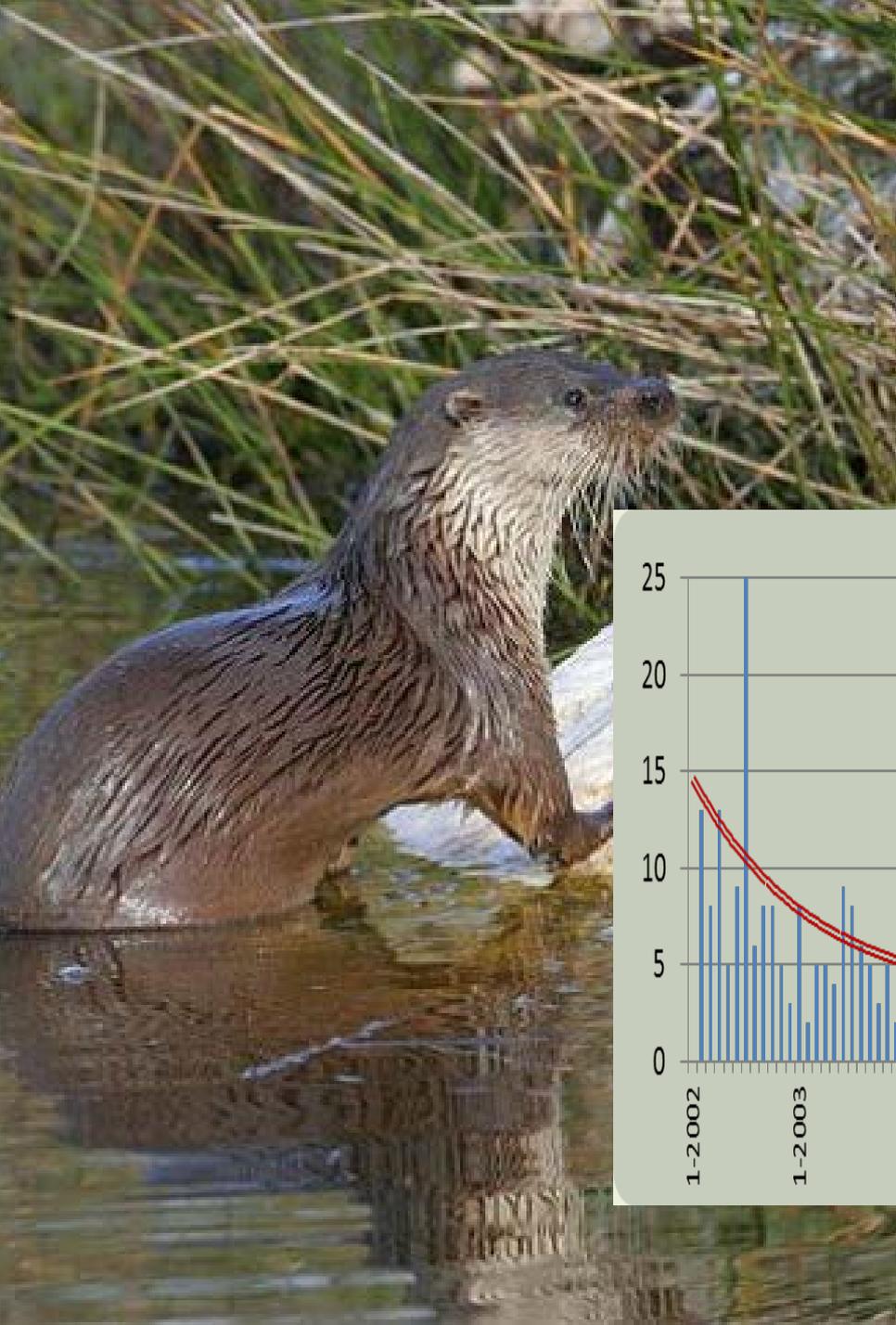
TRATAMIENTOS ANTES DEL VERTIDO







RECUPERACIÓN AMBIENTAL DEL RÍO SEGURA



A positive outcome for nature and the environment

Natural springs and wetlands in Spain, including some in the Segura basin, have been adversely affected over many years by over-abstraction from underlying aquifers for irrigation water.

The project has encouraged a reversal of those trends by locating some new treatment plants on the site of old pond treatment systems. In several cases rehabilitated ponds are now used to store high quality treated water from the adjacent plants, prior to direct reuse in irrigation.

As large surface area, shallow lagoons, the ponds imitate natural wetlands and have become favoured resting places for large populations of migrating birds, including threatened species such as White-headed Duck and Marbled Duck.

In 2011, in recognition of this phenomenon, two of the largest lagoons, Molina-Campotéjar (300,000m²) and Mazarrón-Les Moreras (200,000m²) were added to the Ramsar Convention list of Wetlands of International Importance.

Wastewater reuse brings life back to Spain's Segura river

water21

August 2012

Magazine of the International Water Association

Riverprize

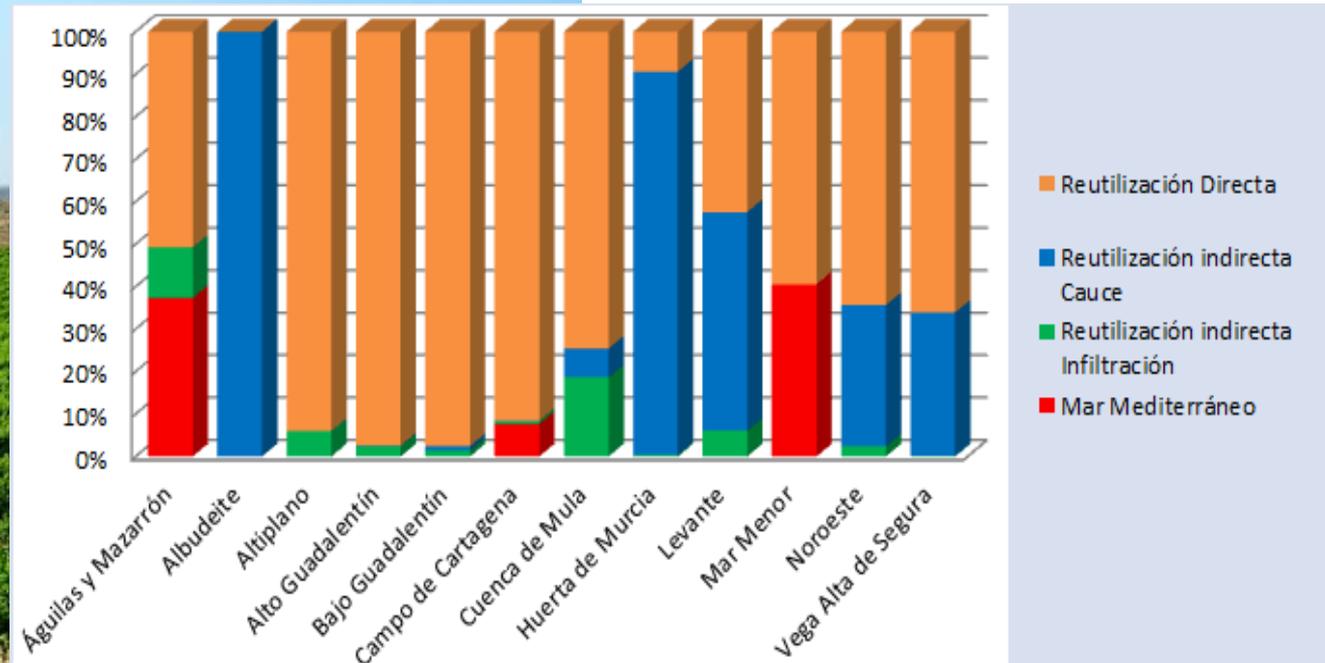
IRF EUROPEAN



White-headed ducks



REUTILIZACIÓN DE AGUAS





European
Commission

Water is too precious to waste

WATER IS A FINITE PRECIOUS RESOURCE

CIRCULAR ECONOMY

Closing the loop

FROM WASTE TO RESOURCES

CIRCULAR ECONOMY

USING WATER AGAIN

