

# Region of Murcia SPAIN

**D. Pedro Angosto Cano**  
**Brussels, 15<sup>th</sup> November 2022**

## Climatology of Murcia Region:

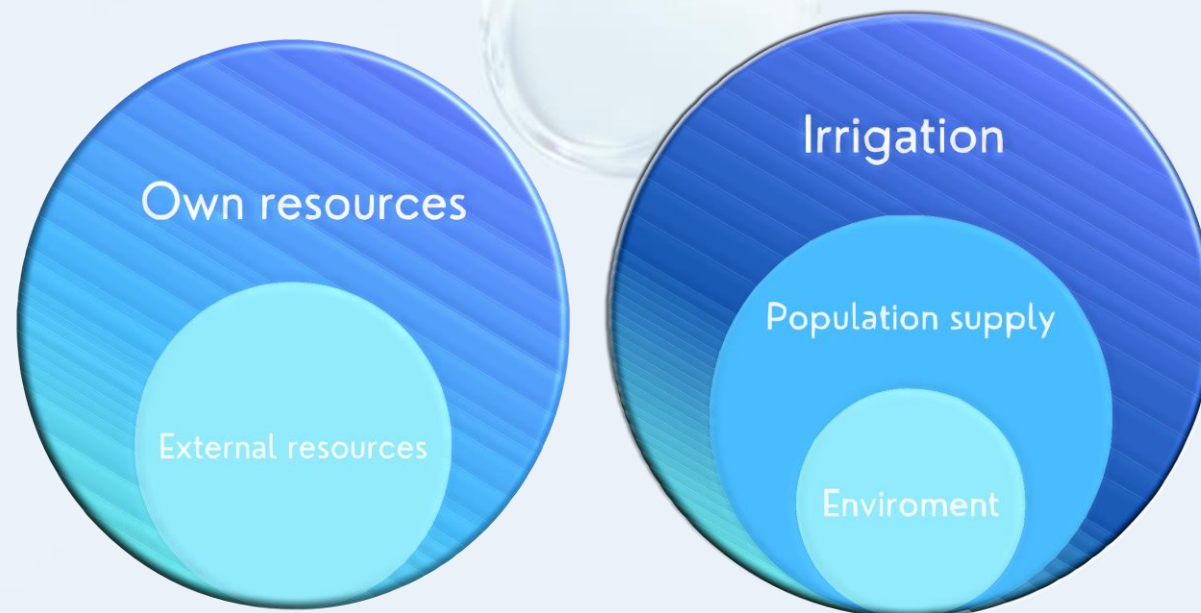
- Mild winters: an average of 11°C
- Warm summers: regularly exceeds 40°C.
- The average annual temperature is 18°C
- Rainfall: 244 mm/ anual (average last 10m years).
- Hours of sunshine per year: 3.000
- Average relative humidity: 60

The Region of Murcia enjoys a **Mediterranean climate** of **semi-arid** type.

## ANNUAL WATER BALANCE: STRUCTURAL WATER DEFICIT

**Groundwater overexploitation**

**Estructural deficit  
460 Hm<sup>3</sup>/Year**



CONSUMPTION 1.500 Hm<sup>3</sup>/Year

DEMAND 1960 Hm<sup>3</sup>/Year

### Hight Irrigation efficeincy based on:

- Strong presence of localized irrigation techniques.
- The efficiency of our irrigation water is the largest in Spain.
- Strong investment in the restructuring and modernization of irrigation
- Water is paid by the farmers, the most expensive in Spain.

*“ What it teaches most is the need ”*

## New technology in water management A Model of Efficiency

### Seawater desalination:

- Spain is the world's fourth largest producer of desalinated water
- Murcia: 139 Hm3/year - 9%
- Working on improve energy efficiency.

**The region of Murcia is considered the region with the most and best wastewater treatment.**

- Reuse over 100 Hm3/year water, accounting for 25% of all Spain
- 99% of the urban population of the Murcia region is connected to the sewerage system and 95% at a treatment plant.
- We apply the highest purification technology (tertiary systems)

- Knowing the company's water footprint
- Reduce consumption
- Hygienic ecodesign in cleaning equipment
- Reducing pollutant loads
- Reuse of wastewater

### Hydroefficiency in the Food Industry:



## What is the way to boost critical mass in innovation water ecosystems ?

- Identify the problema or need: Research
- Technology transfer
- Training people
- Personalize the training to the target group



*“Development, competitiveness and sustainability is based on improved knowledge”*

# Collaboration

The only way:  
Close collaboration with knowledge-generating institutions





**Organiza**

**CRN** Conservas Vegetales  
Centro de Referencia Nacional de Conservas Vegetales

**Junio 2022**

**Curso on line**

**OPTIMIZACIÓN Y EFICIENCIA DE AGUA Y ENERGÍA EN LA INDUSTRIA ALIMENTARIA**



**CURSO ONLINE**

**"NUEVAS ALTERNATIVAS DE TRATAMIENTO PARA EL APROVECHAMIENTO DE RESIDUOS VEGETALES"**

**CRN** Conservas Vegetales

Región de Murcia

**CENTRO DE REFERENCIA NACIONAL DE CONSERVAS VEGETALES**

**JORNADA TÉCNICA DE TRANSFERENCIA TECNOLÓGICA EN INDUSTRIA ALIMENTARIA.**

**26 NOVIEMBRE 2020.**

**COORGANIZADA POR:**

**CRN** Conservas Vegetales **CTC** Centro Tecnológico Nacional de la Conserva y Alimentación **RIS3 MUR**

**CIFEA** Molina de Segura  
Centro Integrado de Formación y Experiencias Agrarias

**imi**  
Instituto Murciano de Investigación y Desarrollo Agrario y Medioambiental

**CTNC** Centro Tecnológico Nacional de la Conserva y Alimentación

**Universidad Politécnica de Cartagena**

**CSIC**  
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS  
CENTRO DE EDAFOLOGÍA Y BIOLÓGIA APLICADA DEL SEGURO

**UNIVERSIDAD DE MURCIA**

**CRN** Conservas Vegetales  
Centro de Referencia Nacional



**"EXPERIENCIAS DE COOPERACION DE LA REGIÓN DE MURCIA EN MATERIA DE AGUA: LIBIA Y PARAGUAY"**

Pedro Angosto Cano  
Jornada Derecho Humano al Agua, ODS nº 6  
Fundación FADE. 13 de Noviembre de 2018.



**CURSO DE ESPECIALIZACIÓN EN GESTIÓN, DEPURACIÓN Y REUTILIZACIÓN DE AGUAS RESIDUALES PARA TECNICOS DE LIBIA**



**ESTANCIAS FORMATIVA DE PROFESORES ALUMNOS INDIGENAS DE PARAGUAY**







**CURSO**  
**ECONOMÍA CIRCULAR EN LA INDUSTRIA ALIMENTARIA**

**CRN** Conservas Vegetales  Región de Murcia

PLAN PARA EL PERFECCIONAMIENTO DEL PROFESORADO 2021






**En nuestra VISIÓN**



**los ODS**

**OBJETIVOS DE DESARROLLO SOSTENIBLE**



 Región de Murcia



**PROJECT**  
**Anchoring Social Circular Economy Attitudes in VET (SCE - VET)**




**CRN** Conservas Vegetales **CIFEA** Molina de Segura

**A:FP** Asociación Agraria de Fomento Profesional

**OBJETIVES**

- To map and publish a review of existing SCE strategies in all participating countries.
- To offer a Social Circularity Day where can create new networks and potential cooperation.
- To investigate the integration of SCE in society.
- To follow up the student's attitude development of SCE.
- To create a massive open online VET course (MOOC) on Social Circular Economy.
- To publish a SCE network online.
- To develop a Social Circular VET Method Canvas.
- To maintain a continuous dissemination through multiplier events, social media and the partners own channels.

**PARTNERS**

- The Federation of Swedish Deafblind for Education and Culture/VA
- Vocational College of Groningen/NOVA - National Coordinator
- Stichting Platform Bede en Techniek, Netherlands
- Stichting De Drie ADC's Netherlands (Twerfval)
- HumusCultuR, Italy
- Centrol de Recerca Creativ Innovatió de Alacant, Romania
- Inovacion Viva - Greece
- OC Limburg, Belgium
- Centre de Recerca Creativ Innovatió de Alacant, Romania
- (Re)activaciones Educativas (Re)activa (EUROPEA FOLIA - Poland
- Centro Integrado de Formación y Experiencias Agrarias de Molina de Segura - Spain



**Collaborative project with iWatermap partners and stakeholders to improve our critical mass  
Example: Green Deal Agro2Circular Project (Agrofood, Wetsus, CTNC, INFO...)**



## Territorial Circular systemic solution for the upcycling of residues from the agrifood sector

H2020 Agreement n.º 101036838

### Objective 1

Demonstrating the first value chain for the upcycling of most representative agrifood sector wastes:  
Fruits&Vegetables and Multilayer Plastics

### Objective 2

Providing to the A2C technological solution the circular systemic approach by building a multidimensional model enabling the solution territorial deployment

### Objective 3

Maximizing project impacts and facilitating A2C systemic solution replication& scalability

*A2C will implement a demonstrator in the Region of Murcia that can be replicated in different regions of Europe for a territorial implementation of the circular economy*

***More European funds to the Region of Murcia for issues related to water***



## REGION OF MURCIA - iWATERMAP Action Plan (2021-2023)

ongoing

### 1. IMPROVEMENT OF THE CRITICAL MASS

#### MAIN ACTIONS:

1. Business sustainability innovation voucher. Water footprint calculations. INFO Q3 2021 - 2023
- 2 Technology transfer area “water in the agrifood industry”. Technological surveillance. CTNC Q1 2022-2023



→ RIS4Mur (2021-2027).

**Water Working Group is included**

### 2. IMPROVEMENT OF HUMAN CAPITAL, TRAINING AND EDUCATION

#### MAIN ACTIONS:

3. Sustainability and circular economy sessions, ToT. CNR CIFEA Q2 2021 -2023
4. Water in the agrifood sector Infoday. CIFEA CTNC AGROFOOD Q3 2022 - 2023

### 3. IMPROVEMENT OF INTERNAZIONALIZATION

#### MAIN ACTIONS:

5. INetWater Meeting Point. INFO UMU UPCT CSIC CTNC AGROFOOD Q3 2021 - 2023



- I. Murcia Food Brokerage Event 2023
- II. International Symposium on Food Technologies
- III. CTCAlimentacion Magazine

***Technological innovations in the water sector***

# Thanks for your attention

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