

CONNECTING REGIONAL INNOVATION VALLEYS THROUGH CIRCULAR INDUSTRIES. ASTURIAS

Region / Representative

Territory Name: PRINCIPADO DE ASTURIAS

Country: SPAIN

Population: 1,022 million (2019)

Representative Organisation: IDEPA, the RDA of the Principality of Asturias

Asturias is a region located on the northern coast of Spain, specialised in **PROCESS INDUSTRY**, with steel, zinc, pulp, fiber, cement and glass sites, which represents 43% of regional industrial employment. 1/3 of the territory being protected. This coexistence of models, industrial and natural, is an important challenge of circularity.

Agency and Priorities

IDEPA is the secretary of the S3 Asturias 2021-2027 and is devoted to its implementation.

The specific circular challenges of the process industry in the S3 Asturias are:

- Use of waste streams (material or heat)
- CCUs

The goals are:

- Reduction of waste to landfill
- Reduction of primary raw materials
- Reduction of greenhouse gas emissions

Interests

Uptake of **VALORISATION TECHNOLOGIES** by industry.

- Identification of Deep Tech to address the circular industry challenge
- Role of R&D infrastructures, depending on their degree of maturity (ET) and implementation (BAT).

Impact of **CIRCULAR VALUE CHAINS** and **CIRCULAR BUSINESS MODELS**.

- Tools to assess environmental and economic impact of Circular Value Chains and Business Models.
- Evaluation of futures to face social reactions like the No to MSW incineration or the No to plastic pyrolysis facilities in some municipalities.

Stakeholders

- Regional Government
- Regional Process Industry (IQPA)
- University of Oviedo
- INCAR-CSIC. Scientific centre
- A-SPIRE
- Vanguard Initiative

R&D Capacities

- [Pilot plants inventory-AsPH4C](#)
- [CO₂ capture pilot -HUNOSA La Pereda](#)
- [Open LAB-COGERSA.](#)
- [Gas LAB-ARCELORMITTAL](#)

Experience

Deeptech projects:

- [Calcium Looping INCAR.](#)
- [Hydrothermal carbonisation. INCAR \(min1:30\)](#)
- [Syngas. ARCELORMITTAL.](#)

Industrial Symbiosis initiatives:

- [CEMENTOS TV / INDUSTRIAS DOY](#)
- [DUPONT/ Gonvarri-HIASA](#)

Policy instruments: Asturias Paradise Hub 4 Circularity

- R&D grants for Circular Industry. Since 2021 includes a specific Circularity subprogram, with a budget reserve, to specifically subsidise R&D projects in regional cooperation to promote value chains focused on valorisation technologies.
- Investment aid programme to support the implementation of circular economy in industry. Launched in 2022 for the implementation of innovative measures to use waste streams in industry, focus on industrial or urban-industrial symbiosis. Co-funded by JTF.
- Study visits to pilot plants. A complement teaching tool in master degree studies.
- Industrial Symbiosis case studies. Good practices catalogue.