

Mapping the Blue Bioeconomy in Smart Specialization Strategies: the Andalusian case

*Blue Bioeconomy Innovation Forum
Ferrara (Italy), 19th November 2021*



Junta de Andalucía

Consejería de Transformación Económica,
Industria, Conocimiento y Universidades

Agencia de Innovación y Desarrollo
de Andalucía IDEA

M^a Angeles Ruiz
S4Andalucia Technical Office

*Agency of Innovation and Development of Andalusia IDEA
Andalusian Regional Government*

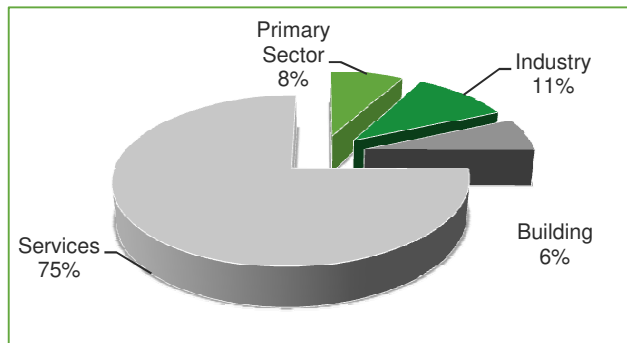
ANDALUSIA IN THE EU

- ✓ **The 2nd largest region in Europe**
- ✓ **The most populated region in Spain**

- ✓ Region of Borders
- ✓ Large coastal and marine ecosystems: 945 km of coastline
- ✓ Mediterranean and Atlantic sea sides
- ✓ Valuable Natural Capital
- ✓ Great wealth in its seabed



ANDALUSIA R&D&I ECOSYSTEM



Sources: IECA (Instituto de Estadística y Cartografía de Andalucía). Eurostat. Regional Innovation Monitor Plus [Andalusia Regional profile](#)

Area: 87.600 km²
945 km of coastine

Population: 8.465.236

LESS DEVELOPED REGION

Number of enterprises (2019)
518.465

Primary and secondary education level: 63.3%
Higher education level: 27.7%

14.347
Researchers

Total Expenses R&D/GDP

0,9%

358 Patents applied

Private Sector : 37,3 %

GDP 19.633 € pc
68% pps EU 27 (2020)

ANDALUSIA in BLUE: some BLUE ECONOMY relevant evidences identified in the region

- ❖ It generates **more than 300,000 jobs**
- ❖ It contributes with 17,000 M€ to Andalusian economy
→ **10.5% of regional GDP**
- ❖ **13 Ports: more than 86.000 jobs.** 162 million tons (2018). 28.75% of the national total
- ❖ Important leading facilities regarding building and maritime equipment
- ❖ **Fishing and Aquaculture: 20.790 jobs**
- ❖ **Blue Tourism: 17.8 million tourists (57.5% of total)**
- ❖ Blue Biotechnology: Great job creation possibilities
- ❖ Numerous research groups



RIS3: *Research and Innovation Smart Specialization Strategies*

Strategies for Research and Innovation-driven growth

The European Commission introduced the S3 concept in the EU Cohesion Policy 2014-2020 as an 'ex-ante conditionality' for European regions to obtain funding for research and innovation from the European Regional Development Fund

R&I Strategies for Smart Specialisation (RIS3)
= place-based economic transformation agendas

- 1) Focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development (= tough choices)
- 2) Build on each country's/region's strengths, competitive advantages and potential for excellence (= critical mass, differentiation)
- 3) Support all forms of innovation
- 4) Get stakeholders fully involved and encourage experimentation and private sector investment
- 5) Evidence-based and include sound monitoring and evaluation systems

<http://urces.speci>

3 SMART SPECIALISATION STRATEGY

RIS3ANDALUCIA 2014-2020

PRIORITIZATION REFERENCES RELATED TO BLUE BIOECONOMY

Blue Bio-economy is tackled by some innovation priorities and trajectories, particularly within P3 and P6, as follows:

RIS3Andalucia 2014-2020

BLUE BIOECONOMY MAPPING: RELATED PRIORITIES



EFICIENT AND COMPETITIVE INDUSTRY



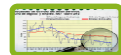
SOCIAL INNOVATION



KEY ENABLING TECHNOLOGIES



NETWORKING



SMES GENERATING EMPLOYMENT



INFRASTRUCTURES FOR COMPETITIVENESS AND EXCELLENCE



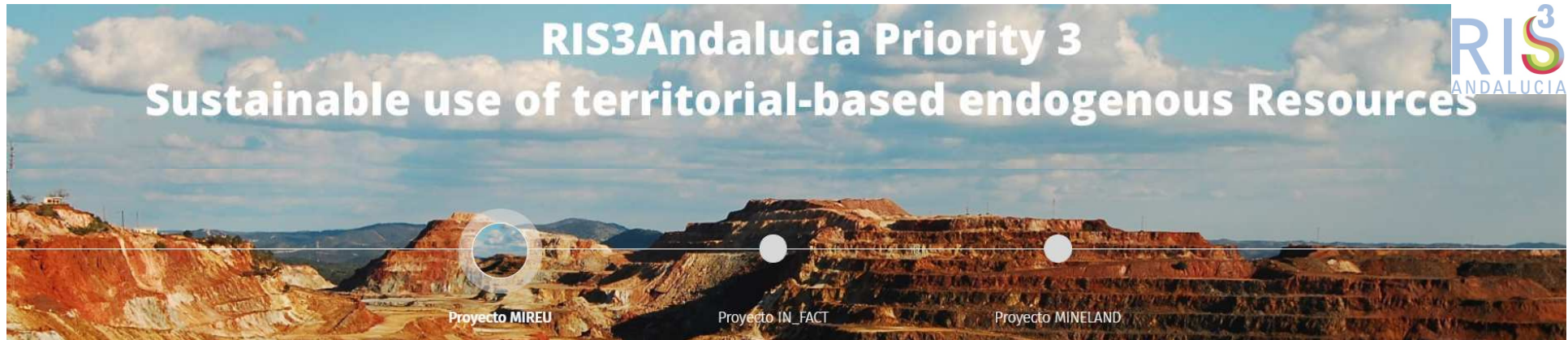
EXTERNAL ACTION



EDUCATION, TALENT AND CREATIVE ENVIRONMENTS

RIS3Andalucia Priority 3

Sustainable use of territorial-based endogenous Resources



Comparative and competitive advantages

Andalusia is the EU region with:

- ✓ High number of protected spaces and areas
- ✓ Coastal and marine ecosystems with new substances resources and reserves for new developments in health, tourism, food and energy
- ✓ World reference projects, such as LifeWatch
- ✓ High mining potential and geodiversity, wide variety of mineral raw material deposits and a resurgent metal mining sector
- ✓ Heritage uniqueness

P3. Lines of action

L31. R&I on the management of natural resources and cultural heritage

L32. New processes and products for the use of agricultural resources

L33. Mining integrated in the territory

L34. Innovation for the adaptation of territories to climate change

L35. Maintenance of the sustained flow of ecosystem services.



Comparative and competitive advantages.

Andalusia has :

- ✓ A very demanding food safety and traceability system
- ✓ **Andalusian sea as a source of new substances and varied foods**
- ✓ An **agri-food transformation industry** with a relevant weight in regional production and exports **able to increase the added value of productions through R & D & I** and ICT in its processes
- ✓ An important agri-food production system coupled with a local business model

P3. Lines of action

- L61. Advances in quality, traceability and food safety.
- L62. Functional and personalized food.
- L63. **Take advantage of new opportunities in the blue economy** and the green economy
- L64. **Innovation in processes and products of the food industries.**

RIS3 → DRIVER FOR ANDALUSIAN BLUE GROWTH



RIS3 acting as a leverage for drive change for enterprises, researchers and stakeholders involved with Andalusian Blue Growth

**S
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Andalusia is a community with strategic sectors included at RIS3 closely linked to Blue Economy : shipbuilding and 'off shore', ports, logistics and transport, tourism linked to the sea, marine bioproducts, marine renewable energies and fisheries, aquaculture and transforming industry

TECHNOLOGICAL INFRASTRUCTURES

- IFAPA
- CTAQUA
- Spanish Oceanographic Institute
- Marine Hydrographical Institute

KNOWLEDGE AGENTS

- UNIVERSITIES
CACYTMAR
ICMAN
- CEI-MAR
- MARITIME
NAVAL
CLUSTER
- TECNOBA
HIA
- MARITIME-
MARINE
CLUSTER
- LIFEWATCH

RIS3Andalucia implementation

188	8	2.686 Million €	11
Actions developed	Priorities	98% of the total budget	Regional Strategies involved

Budget and actions developed, by priorities

51%	40%	16%	13%	15%
of the total budget for actions focused on more than one priority	of the budget for ICT (P8), Energy (P7) and Agroindustry (P6)	of actions related to Health	of the budget for Energy actions	of the budget for ICT actions

- ✓ **Andalusian Circular Bioeconomy Strategy 2030**
- ✓ **Andalusian Strategy for Sustainable Development 2030**
- ✓ **Andalusian Industrial Strategy 2020**
- ✓ **Andalusian Energy Strategy**

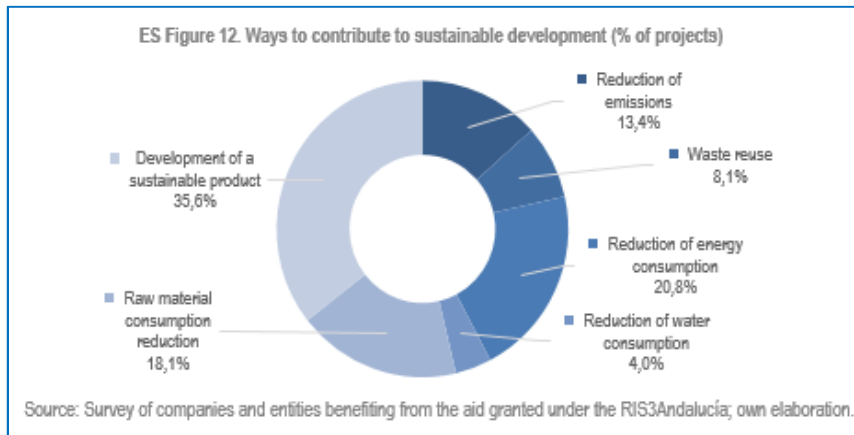
Compliance. RIS3Andalucia and SDGs

Sustainable Development

RIS3Andalucia action lines and the specialisation priorities are focusing the objective to **move towards a Sustainable Andalusia**, this is particularly an evidence with the priorities addressing Renewable energies, energy efficiency, sustainable building and Sustainable use of Territorial-based Endogenous Resources



RIS3 INTERMEDIATE PROGRESS EVALUATION 2014-2019



The Intermediate Evaluation was carried out based on the definition of 15 **evaluation criteria**, among them: **equal opportunities and sustainable development, in close relationship with some specific SDGs.**

According to the results, the contribution of RIS3Andalucía to sustainable development is being high, since the majority of Andalusian Regional Government departments have implemented actions fostering it and many of the projects supported have been oriented towards these objectives, particularly through the development of more sustainable products, saving energy and raw materials.

**RIS3
ANDALUCIA
implementation**



**REMARKABLE
PROJECTS
related to
BLUE
BioECONOMY**



- Priority 6 (L63)**

 - **AQUA & AMBI (INTERREG VA)** → Support for the management of wetlands on the Southwest Iberian Coast
- Priority 3 (L31)**

 - **ALGARED+ (INTERREG VA)** → Cross-border Network for the Development of Innovative products with microalgae
- Priority 6 (L34)**

 - **SABANA (H2020)** → Sustainable Algae Bio-refinery for Agriculture and Aquaculture
- Priority 3 (L31)**

 - **VENUS (INTERREG VA)** → natural banks of bivalve mollusc in Cadiz Gulf for sustainable management and conservation of associated habits
- Priority 6 (L64)**

 - **CASEAWA (H2020)** → Advanced materials using Biogenic Calcium Carbonate form Seashell Wastes

COHESION POLICY 2021-2027 A NEW GENERATION OF SMART SPECIALISATION STRATEGIES



ANDALUSIA: A LESS DEVELOPED REGION



EU Cohesion Policy
2021-2027



A more **competitive**
and **smarter** Europe
by promoting
innovative and smart
economic
transformation and
regional ICT
connectivity

*The **new generation of Smart Specialization Strategies** offers the **opportunity to embed the New European industrial policy** orienting growth policy to the **European Green Deal** in line with the **UN Sustainable Development Goals***

“An intervention-logic approach for the design and implementation of S3 strategies , JRC Science for Policy Report, 2021”

**Enabling Condition
Andalusia ERDF and ESF
OP 2021-2027**

RIS³
ANDALUCÍA

S4 ANDALUCÍA



2014-2020

2021-2027

MOVING FORWARD

S4 ANDALUCIA DESIGN PROCESS

starting with the

Agreement of the Andalusian Governing Council approving
the formulation of the Smart Specialization Strategy for
Sustainability of Andalusia 2021-2027, S4Andalucía
(BOJA n.19, 29th January 2021)



GOVERNANCE Formulation Agreement

S4Andalucía 2021-2027

The **MINISTRY OF ECONOMIC TRANSFORMATION, INDUSTRY, KNOWLEDGE AND UNIVERSITIES CHAIRS** and **PROMOTES** the elaboration process of the Strategy, with the assistance of the S4 Andalusia 2021-2027 **HIGH LEVEL WORKING GROUP** and the support of the **TECHNICAL OFFICE (IDEA Agency)**

Agents of the Governance: S4Andalucía Design

The governance model will guarantee the real and effective participation of the quadruple helix, facilitating the partaking and contributions of all interested regional actors involved with Andalusian R&D&I ecosystem:

- ❑ Agents of the Andalusian Knowledge System: Universities, public research organizations, science-technology parks, research and technology centers, technology transfer entities and organizations.
- ❑ Economic and social agents, as well as citizens.
- ❑ Public administrations involved.

Junta de Andalucía

Constitution of the High Level Working Group (Junta de Andalucía and JRC) 18th March 2021



Constitution of the Technical Team

(technical representatives of the Andalusian Government Departments) 28th May 2021



Sharing the advances of S4 design process works:
Opening the process to the public participation

S4 ANDALUCÍA **Community**

#somosS4Andalucia

#weareS4Andalucia

WEBINAR: S4ANDALUCÍA OPEN PRESENTATION

15th July 2021

✓ 460 people registered
✓ 369 attendees



Presentación Del Proceso S4 ANDALUCÍA

Sevilla, 15 de julio de 2021
Webinario de Presentación de la

Presentación del Diagnóstico en curso

Sevilla, 15 de julio de 2021
Webinario de Presentación de la S4Andalucía
#SomosS4Andalucia

Pablo Cortés Achedad
Secretario General de Empresa, Innovación y En-
Consejería de Transformación Económica, Indus-
Universidades, Junta de Andalucía

Webinario de Presentación S4 ANDALUCÍA 2021-27 15 de julio 11:00

 Rogelio Velasco Consejero de Transformación Económica, Industria, Comercio y Universidades, Junta de Andalucía	 Mikel Landabero Director General para Research Center, Comisión Europea	 Pablo Cortés Secretario General de Empresa, Innovación y Empleo, Junta de Andalucía
 Marcos Pérez Secretario Grupo Trabajo S4Andalucía, SG Empresa, Innovación y Emprendimiento	 Carmen Sillero Coordinadora Oficina Técnica S4Andalucía, Área de Estrategia y Programas, Agencia IDEA	

#SomosS4Andalucia



<https://www.youtube.com/watch?v=2lktSvXghJo>

JULY 2021

DECEMBER 2021

Open public consultation on the “*Diagnosis of the Andalusian Innovation System, SWOT and Challenges for innovation and digitization*”

Invitation to general public and stakeholders interested to contribute with their opinion through a form on the web: www.s4andalucia.es

EDP: Entrepreneurial Discovery Process

S4-EDP specific Groups:
quadruple helix participation



The Governance of S4Andalucía Process will open to the participation of all the interested regional actors, included **Blue Bioeconomy Andalusian Stakeholders**

CONSIDERATIONS TOWARDS **S4** ANDALUCÍA PRIORITIZATION

Towards S4Andalucía 2021-2027 prioritization

Taking into account the relevance of Blue Economy in our region, S4Andalucia:

- ❑ Starts to take into consideration the Blue Economy for its relation with various environments of specialization, particularly the ones related to fishing and aquaculture, leisure and tourism and marine energy.
- ❑ Will pay also attention to Blue Bioeconomy regarding some specific intervention focus such as: Research and Innovation in bioproducts and biotechnology for the blue economy
- ❑ Will contemplate the Blue Economy within the framework of Sustainability, as a transversal line chairing S4Andalucía, clearly connected with some emerging references in the Strategy, such as the promotion of research and innovation for the generation of new developments, the protection of biodiversity, environmental quality and the sustainable use of resources.

Towards S4Andalucía 2021-2027 prioritization

S4Andalucía:

- ❑ is betting on the sustainable access to critical resources for a blue, green, and digital Andalusia, considering circular economy and sustainable management of marine resources as significant elements.
- ❑ is willing to endorse the participation of Blue Bioeconomy Andalusian stakeholders in its Governance through its EDP structured participation process
- ❑ will contribute to encourage the connectivity between Andalusian entities and enterprises of the Blue Bioeconomy sector, fostering the synergies and alliances within the objective of networking and mutual support relationships
- ❑ S4Andalucía will be eager to actively participate and collaborate with the Blue Bioeconomy Mediterranean alliances and projects.

Thank you for your attention!

www.s4andalucia.es
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[#somosS4Andalucia](https://twitter.com/somosS4Andalucia)



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