

A project labelled by the UfM



Union for the Mediterranean  
Union pour la Méditerranée  
الاتحاد من أجل المتوسط

# Circular Economy

## Opportunities in the Arab region

### Innovating for a Greener Future:

The role of R&D in empowering Arab SMEs for Circular Economy Success

**Maria Calderó Pascual**, project coordinator

19 November 2024, 8:30-9:15 am

*Doha, Qatar*



**Beta**

Biodiversitat, Ecologia,  
Tecnologia Ambiental i Alimentària

**UVIC**

UNIVERSITAT DE VIC  
UNIVERSITAT CENTRAL  
DE CATALUNYA



Innovative  
sustainable economy

**Interreg**  
Euro-MED

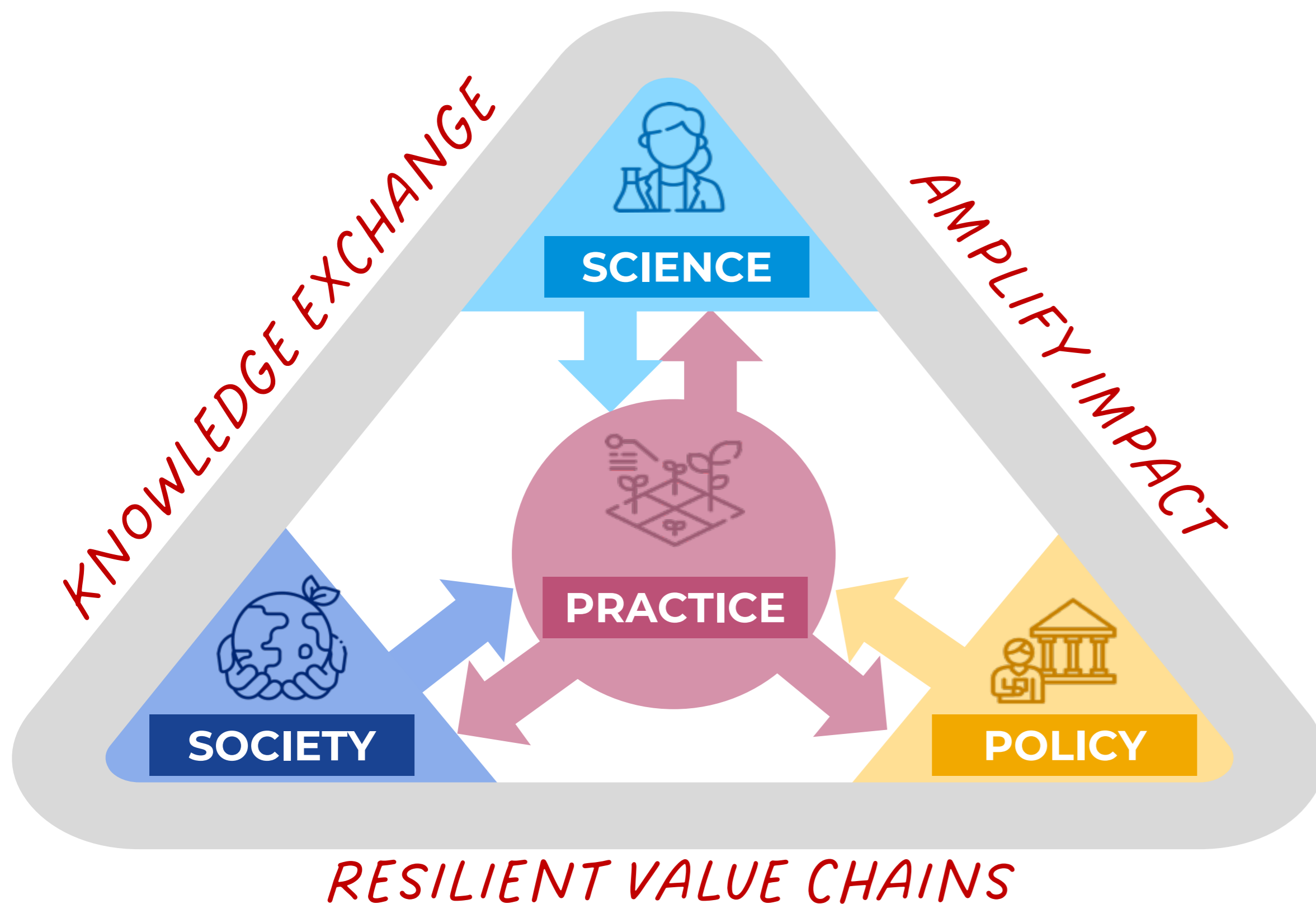


Co-funded by  
the European Union



# SMEs' ROLE

## Transition to a circular economy



### **PRACTICE4SCIENCE:**

- Share real sector challenges and barriers.
- Align research and innovation priorities with actual sector challenges.
- Identify new niches of opportunity.
- Co-develop innovative solutions.
- Increase the adoption and acceptance of new technologies, products and practices.
- Support the collection of practice-based information.

### **PRACTICE4POLICY:**

- Facilitate the adoption of informed policy decisions.
- Prevent dysfunctions in policy implementation.
- Develop realistic regulations and political agendas.
- Build trust between policymakers and practitioners.

### **PRACTICE4SOCIETY:**

- Connect with the consumer needs.
- Inform them about the latest sustainable developments.
- Preserve social inclusion.
- Change lifestyles and promote behavioural change towards circular actions.





# R&D's ROLE

## Innovation enhancing sustainable practices

### SCIENCE4PRACTICE:

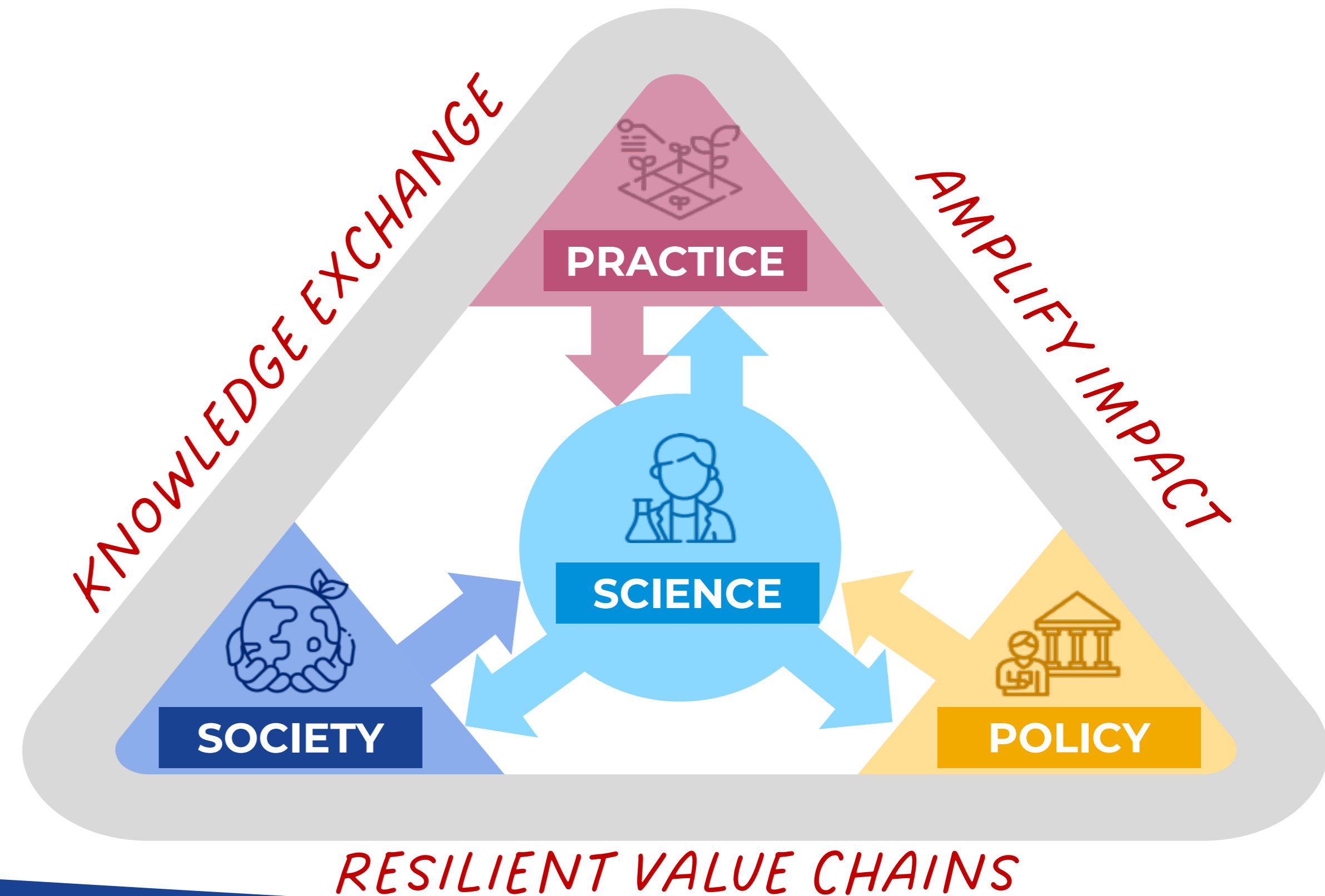
- Co-develop innovative practices, processes, and technologies to enhance the sustainability and competitiveness of economic sectors.
- Facilitate the transfer of validated knowledge and technologies.
- Enable the transfer of skilled personnel to the private sector.

### SCIENCE4POLICY:

- Provide evidence-based scientific information to policymakers.
- Support the development of new or improvement of regulations, policies, and action plans.
- Support the removal of policy barriers.

### SCIENCE4SOCIETY:

- Provide foundation for innovation, problem-solving, and the advancement of knowledge.
- Contributing to higher quality of life.
- Promoting critical thinking, curiosity, and problem-solving skills.
- Transnational cooperation.



# SUCCESS STORIES I

Contributing to sustainable use of natural resources, economic growth and stability in the Mediterranean



الزراعة الحراجية هي نظام زراعي يجمع ما بين الأشجار و/ أو الشجيرات الحشبية مختلطة والإنتاج الحيواني بهدف الوصول إلى أقصى استفادة من التفاعلات البيئية والاقتصادية

نظام الزراعة الحراجية: أشجار خشبية ومحاصيل اقتصادية وحيوانات مزرعية

نظام الزراعة الحراجية: أشجار خشبية ومحاصيل اقتصادية

نظام الزراعة الحراجية: أشجار خشبية وحيوانات مزرعية

الزراعة المختلطة هي نظام زراعي يجمع ما بين المحاصيل الاقتصادية والأعلاف مع الإنتاج الحيواني معاً بنفس المزرعة. وتعتبر الزراعة المختلطة نظام مغلق ومن أكثر أنظمة الإنتاج الزراعي اعتدالاً

نظام الزراعة المختلطة (محاصيل وحيوانات مزرعية)

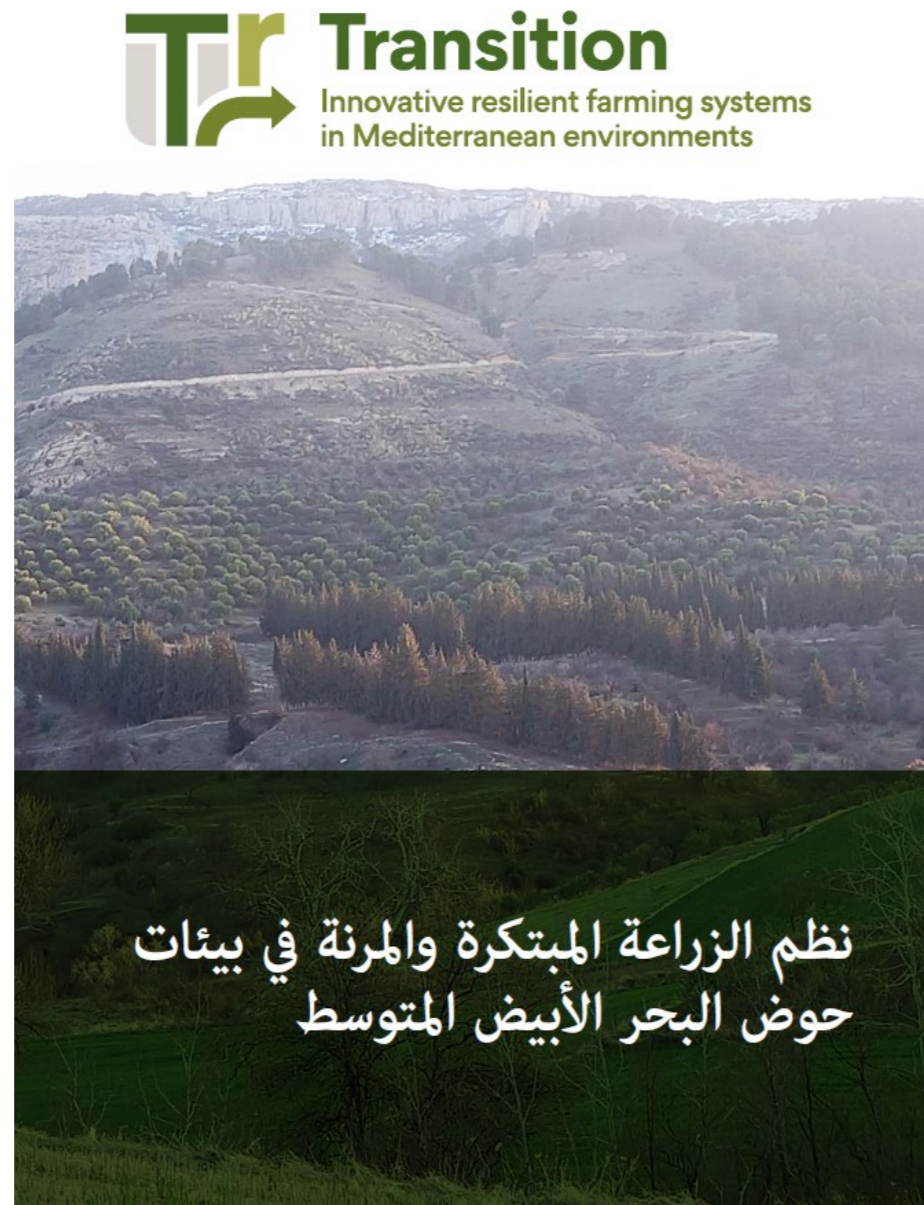
نظم الزراعة المبتكرة والمترنة في بيئات حوض البحر الأبيض المتوسط

الفريق: يتألف الفريق من ١٠ شركاء من ٦ دول مختلفة. ٥ مناطق دراسة (٣ مناطق بدول شمال المتوسط: فرنسا، إيطاليا، إسبانيا، ومنطقتين من دول جنوب المتوسط: مصر والجزائر، إضافة إلى متخصصين في النمذجة المناخية (اليونان)

مدة المشروع: من 1 يونيو 2021 وحتى 31 مايو 2024

لمواجهة آثار التغيرات المناخية، تتطلب النظم الإيكولوجية الزراعية في حوض البحر الأبيض المتوسط تحولاً كبيراً من الاستخدامات التقليدية للزراعة والحراجة الزراعية إلى أنظمة مستدامة طويلة الأجل، بما في ذلك الزراعة المختلطة والحراجة. يجب أن يعزز هذا الانتقال مرونة المزارعين والمجتمعات الريفية، مع دمج الأنشطة التقليدية بالإستخدامات المبتكرة

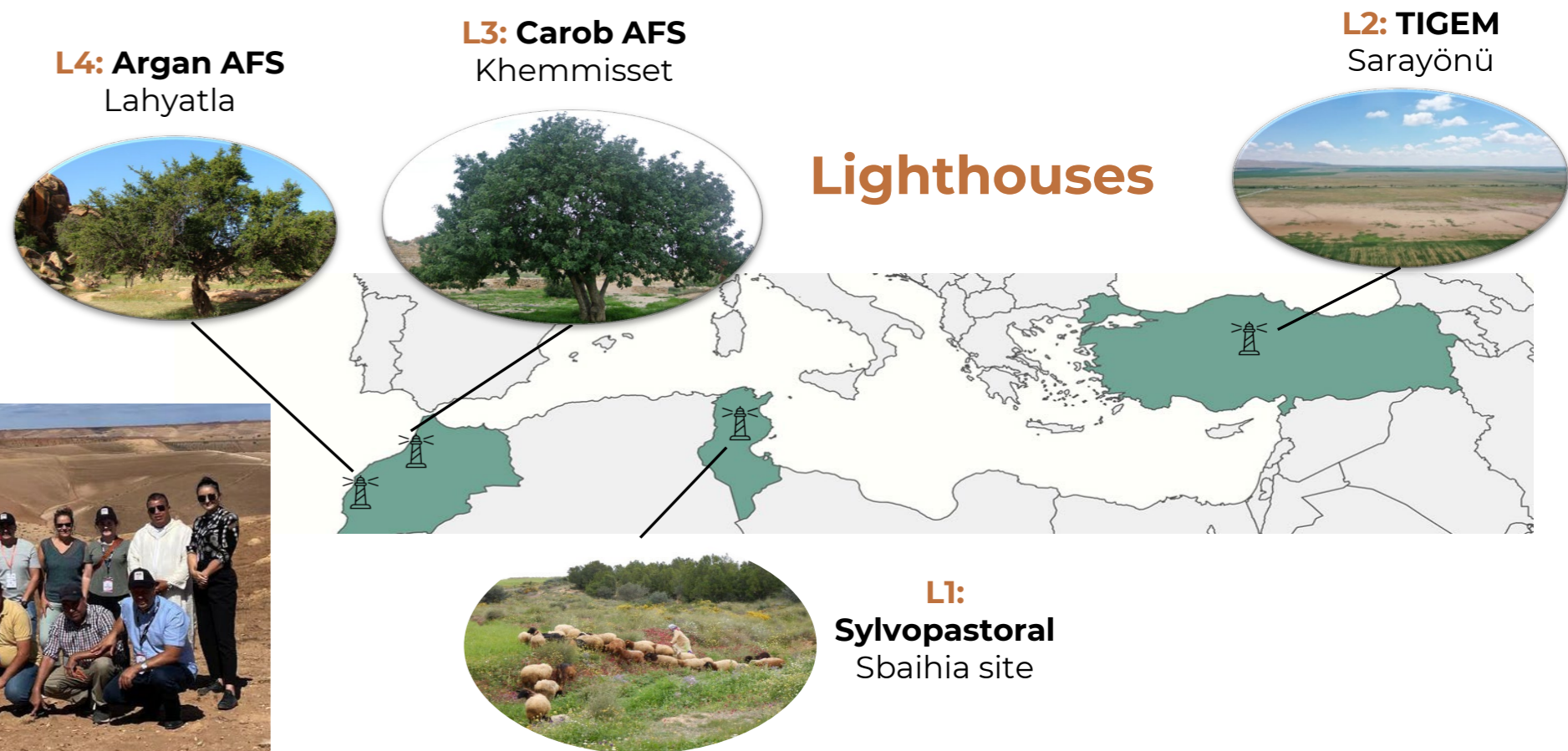
بإستخدام النهج التشاركي سيعمل المشروع على تقديم: فهم للحواجز التي تحول دون توسيع نطاق تنفيذ الممارسات الزراعية الجديدة في أنظمة الزراعة المختلطة والحراجة أدوات لصنع القرار المبني على الأدلة مع وضع عارطة طريق على مستوى حوض البحر الأبيض المتوسط لاعتقادها على نطاق أوسع، ومتماشية مع أولويات أصحاب المصالح والمتنفيين



**Transition**  
Innovative resilient farming systems in Mediterranean environments



To promote the large-scale adoption of agroforestry systems (AFS) in arid and degraded areas of the Mediterranean basin, leveraging their potential for land restoration, climate change mitigation, and biodiversity conservation



Agrometry for Sustainable Development  
https://doi.org/10.1007/s13593-023-00927-3 (2023) 43:73

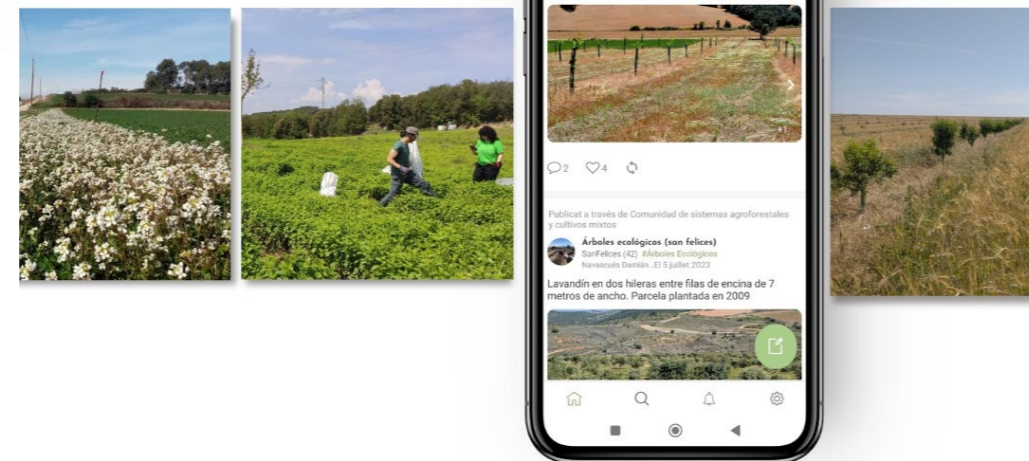
**META-ANALYSIS**

**Are agroforestry systems more productive than monocultures in Mediterranean countries? A meta-analysis**

Danilo Scordia<sup>1</sup> · Sebastiano Andrea Corinzia<sup>2</sup> · Jaime Coello<sup>3</sup> · Rosa Vilaplana Ventura<sup>4</sup> · Diana Elisa Jiménez-De-Santiago<sup>4</sup> · Berta Singla Just<sup>4</sup> · Omar Castaño-Sánchez<sup>4</sup> · Carme Casas Arca · Marc Tchamitchian<sup>5</sup> · Léa Garreau<sup>5</sup> · Mohamed Emran<sup>6</sup> · Sami Z. Mohamed<sup>6</sup> · Mai Khedr<sup>6</sup> · Moham Roxanne Suzette Lorilla<sup>7</sup> · Alexandre Parizel<sup>7</sup> · Giuseppe Mancini<sup>2</sup> · Antonella Iurato<sup>2</sup> · Sergio Porro · Corrado Dimauro<sup>8</sup> · Fabio Gresta<sup>1</sup> · Salvatore Luciano Cosentino<sup>2</sup> · Giorgio Testa<sup>2</sup>

Accepted: 3 October 2023

**COMMUNITY OF AGROFORESTRY SYSTEMS AND MIXED CROPS**



Innovative sustainable economy

**Interreg Euro-MED**



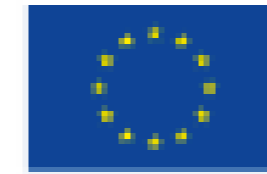
Co-funded by the European Union



# SUCCESS STORIES II

Fostering transnational cooperation across the Mediterranean

**Interreg  
NEXT MED**

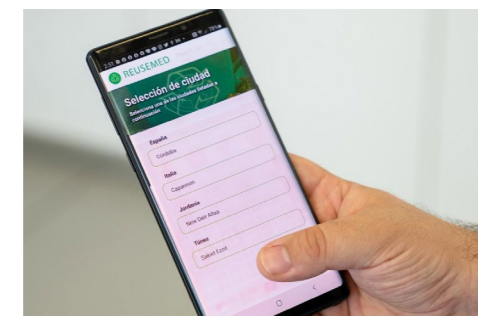


Co-funded by  
the European Union

**DECOST**  
Decentralised Composting in Small Towns



**REUSEMED**  
Reuse Circuits in the Mediterranean



**CLIMA**  
Integrated Municipal Waste Management Plans



**MED-InA**  
Zero Waste Alliance for cities and citizens



**CEOMED**  
Local open market waste management through anaerobic digestion



**Med4Waste**



Catalogue of waste solutions

*French / Arabic / English  
All publicly available!*

## Med4ZeroWaste MOOC

- 1 Introduction and aim of the course  
Course structure, educational team, code of honour.
- 2 Waste generation and management  
Linear economy, waste generation and management in the Mediterranean.
- 3 Circular economy  
Zero waste, change of paradigm, producer responsibility governance models.
- 4 Reduce Strategies  
Supply chain design, sale, and consumption.
- 5 Reuse Strategies  
Preparation for reuse and benefits, supply chain, good practices.
- 6 Recycling and Composting  
Material recovery, resource generation, biowaste.
- 7 From theory to practice  
Municipalities, businesses, and citizens.



Business Ecosystem Report

## Mentoring Schemes



Policy Toolkit



Innovative  
sustainable economy

**Interreg  
Euro-MED**



Co-funded by  
the European Union

# SUCCESS STORIES III

Making the Mediterranean region smarter and greener

**Interreg  
Euro-MED**



Co-funded by  
the European Union

## Innovative Sustainable Economy Community (ISEC) Hub



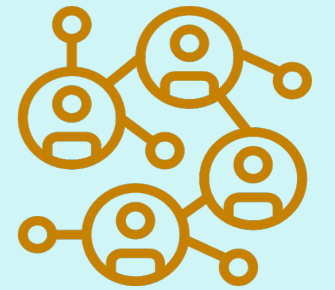
*Green Economy*  
*Blue Economy*  
*Cross-cutting Priorities*



 Francesco Camonita Policy & Project officer CPMR - JMC	 Maria Garcia Acting Ex-Secretary CPMR - JMC	 Haris Pallogiannis Policy & Project officer MIO-ECSD
 Andrea Di Girolamo Senior project officer AIE	 Francesco Cocco Secretary General AIE	 Luisa Aparicio Project manager MedWaves
 Maria Calderó Project manager BETA-TC (UVIC-UCC)	 Mercè Boy Project coordinator BETA-TC (UVIC-UCC)	 Alessandro Miraglia Team lead MedWaves
		 María Junquera Team lead MedWaves



CONNECT



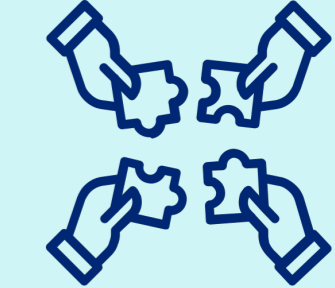
LEARN



SHARE



COLLABORATE



Innovative  
sustainable economy

**Interreg  
Euro-MED**

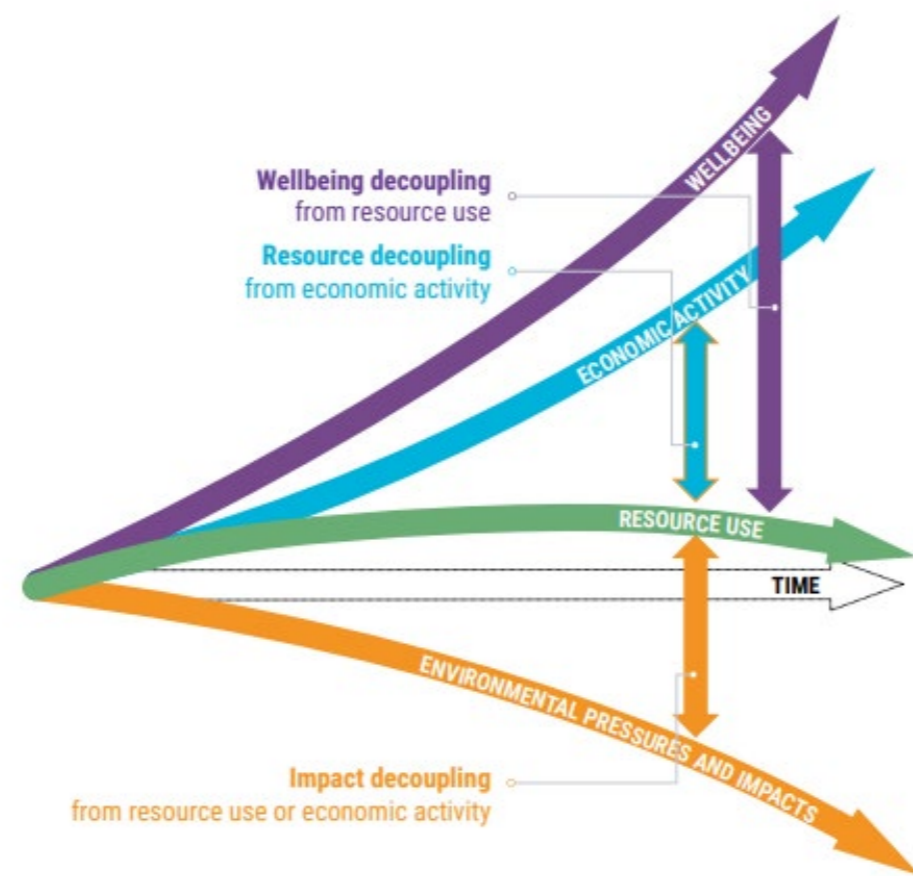
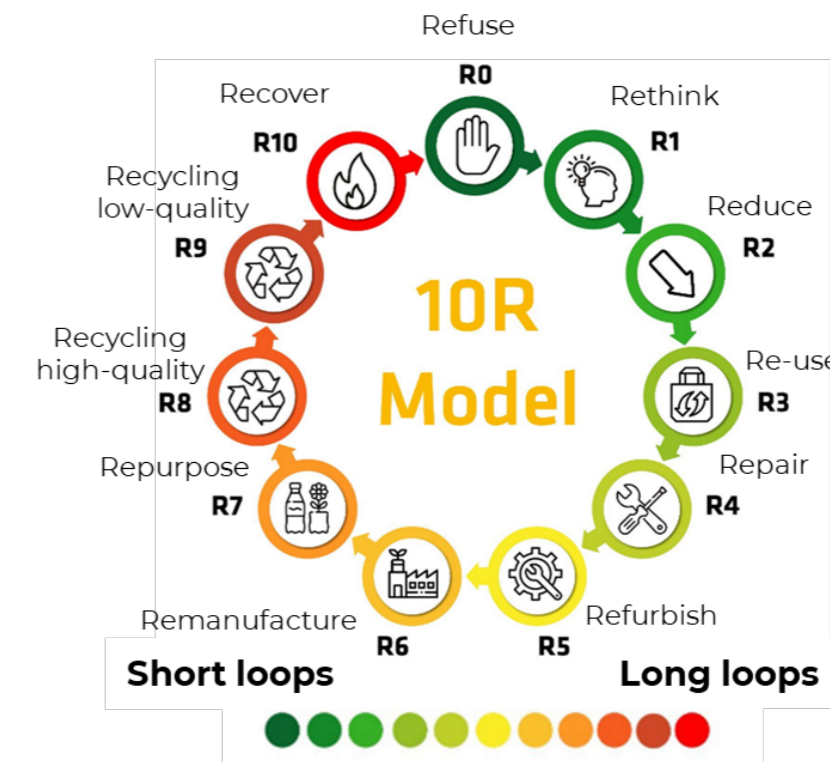
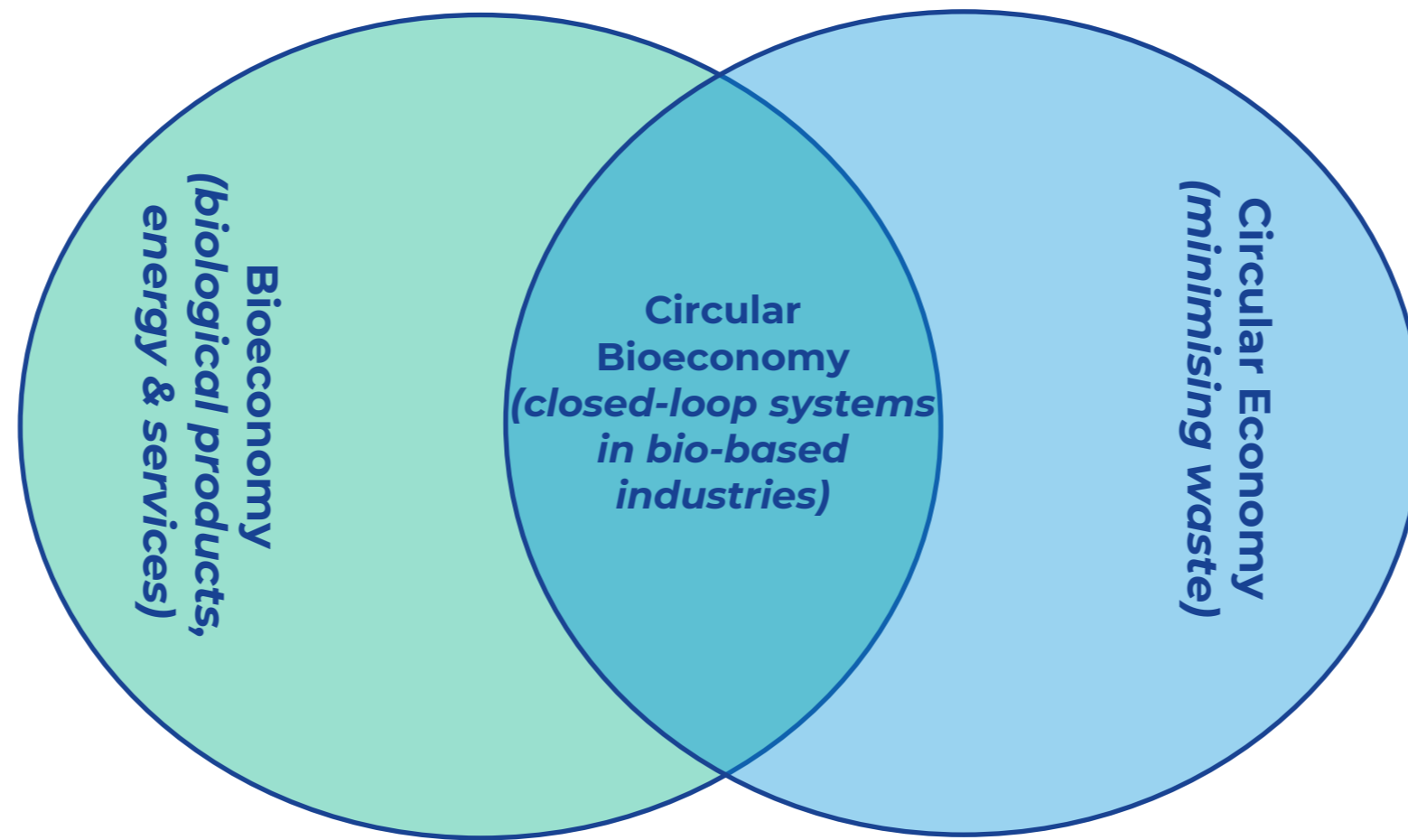
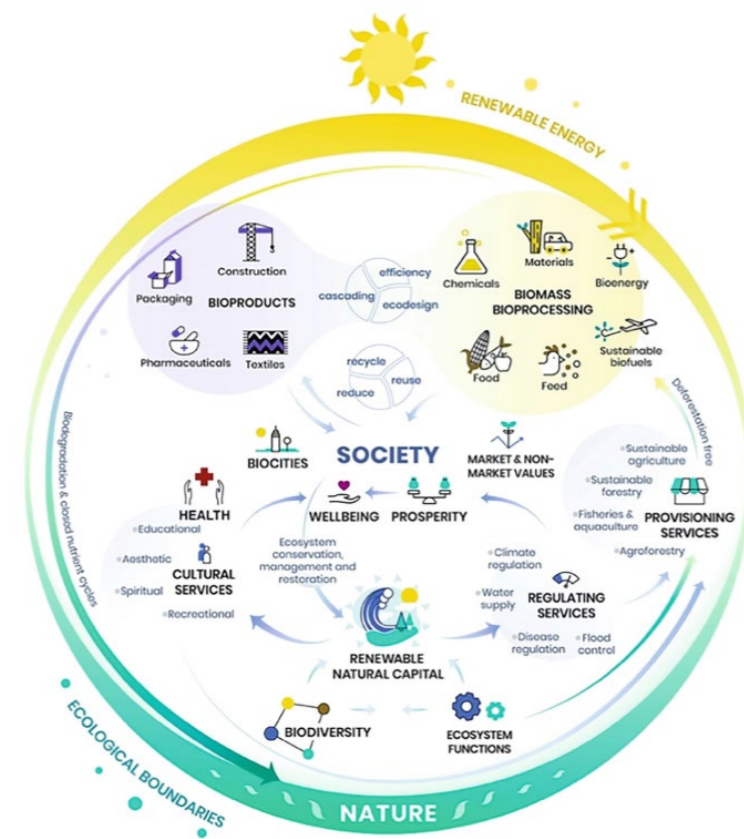


Co-funded by  
the European Union

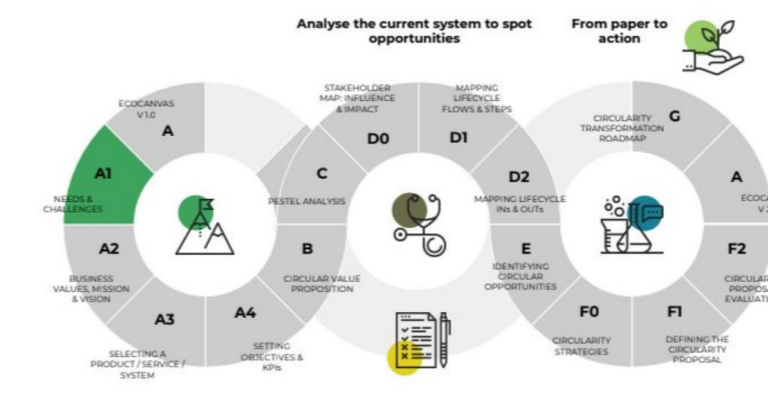
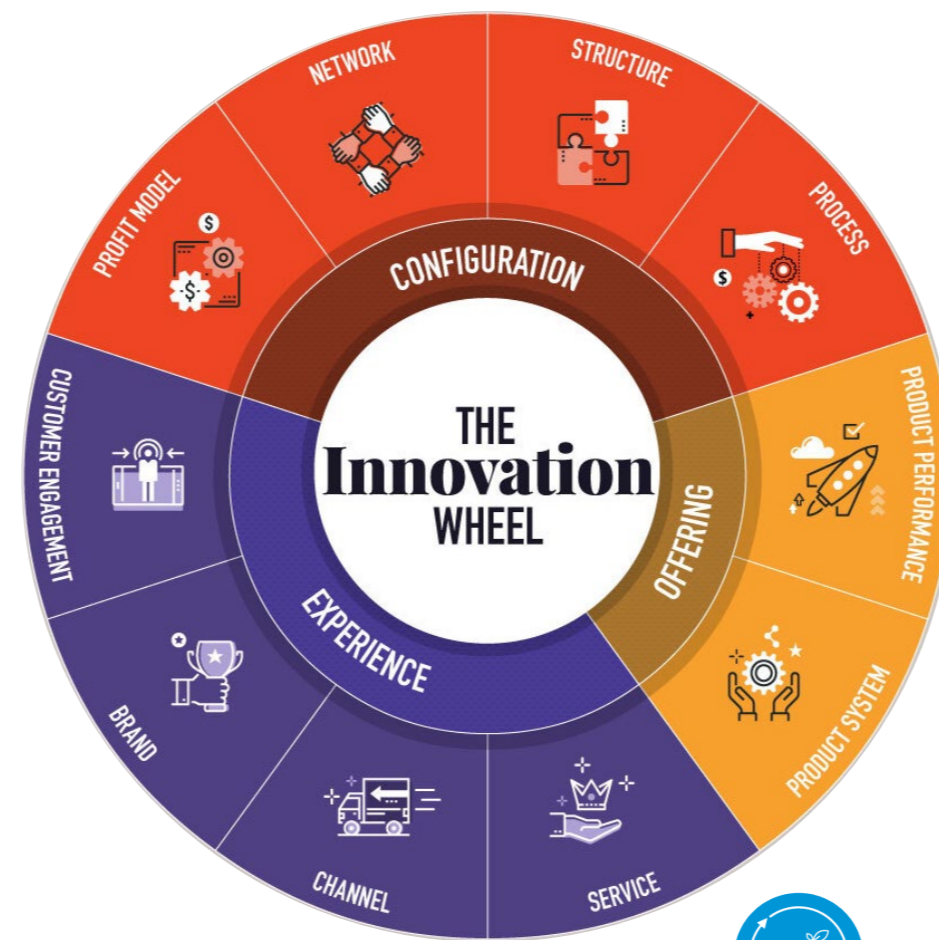


# ACTIONABLE STEPS

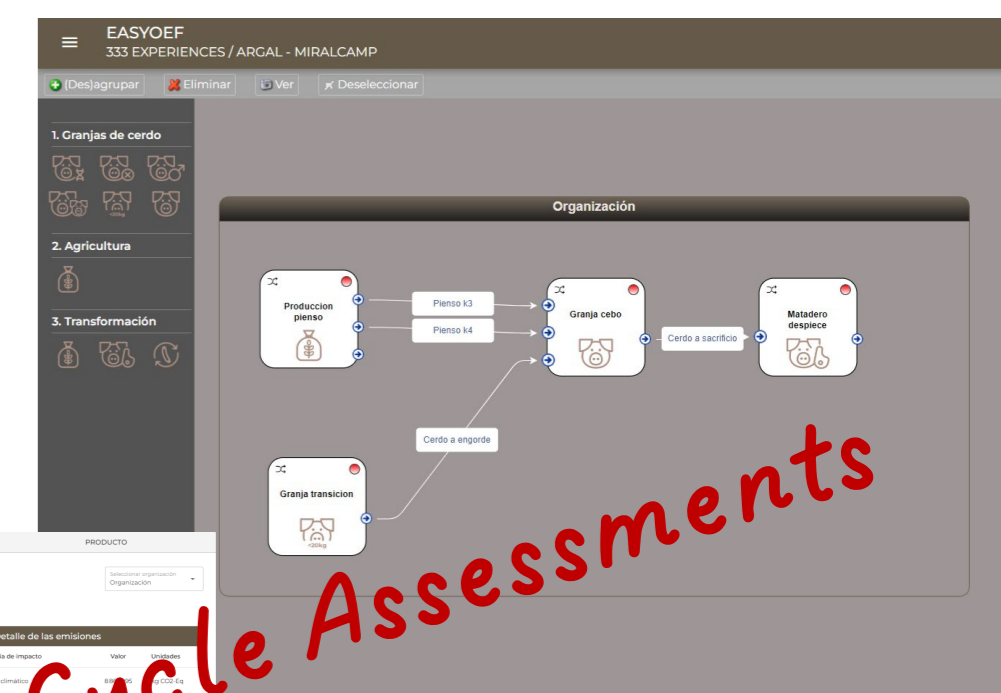
Adopt circular economy practices and measure impact



## New Value Chains



**EMBRACE**  
Circular Business  
Model Toolkit



**Life Cycle Assessments**

Assessment tool to evaluate the environmental and social performance of agrifood and livestock systems (compliant with ISO14067, ISO14064, GHG Protocol).

**SOME REFERENCES:**

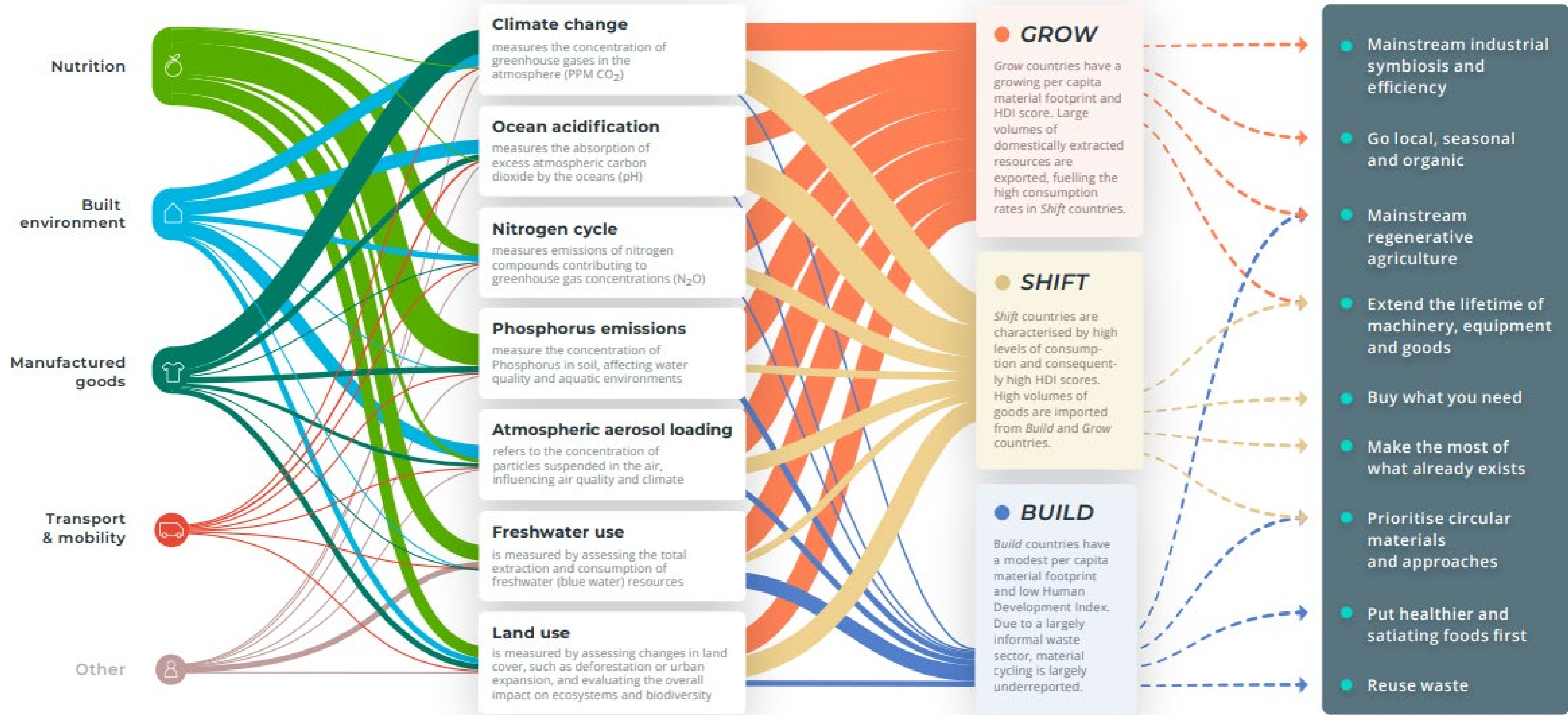
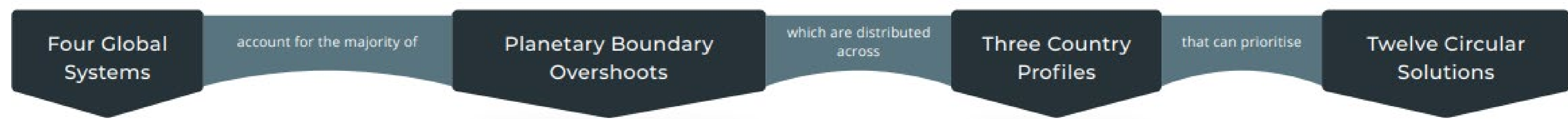
<https://circularbioeconomyalliance.org/>  
Reike, D., et al. (2018)  
Global Resources Outlook 2024 - Bend the trend: Pathways to a liveable planet as resource use spikes  
<https://www.visualcapitalist.com/10-types-of-innovation-the-art-of-discovering-a-breakthrough-product/>  
[https://green-business.ec.europa.eu/environmental-footprint-methods/oef-method\\_en](https://green-business.ec.europa.eu/environmental-footprint-methods/oef-method_en)



**Innovative sustainable economy**

**Interreg Euro-MED**

Co-funded by the European Union



**FROM THEORY...**

Four global systems—food, the built environment, manufactured goods and mobility—put the most pressure on key Earth systems, driving us past the safe limits of six planetary boundaries. However,

these systems are vital for fulfilling people’s needs. To determine how circular economy solutions can help, we must first understand the processes taking place in each of these systems—and their impact.

**...TO ACTION!**

By uncovering high-impact ‘hotspots’, next steps are made clear, although the safe limits of the planetary boundaries are crossed and cannot be returned to normal.

[The Circular Gap Report 2024](#)



# INNOVATIVE SUSTAINABLE ECONOMY



<https://innovative-sustainable-economy.interreg-euro-med.eu>



[innovative-sustainable-economy@interreg-euro-med.eu](mailto:innovative-sustainable-economy@interreg-euro-med.eu)



<https://twitter.com/Gov4Innovation>



<https://www.linkedin.com/company/gov4innovation/>

A project labelled by the UfM



Union for the Mediterranean  
Union pour la Méditerranée  
الاتحاد من أجل المتوسط

# Thanks!

**Maria Calderó Pascual**  
maria.caldero@uvic.cat



Innovative  
sustainable economy

**Interreg**  
Euro-MED



Co-funded by  
the European Union