



# RESEARCH REPORT 2025





# 1 RESEARCH PROJECTS

ENT has carried out projects at various levels (from local to international) and for a large variety of clients (public administrations, NGOs, trade unions, universities, etc.) in different work areas. Our projects are mainly related to the development and implementation of public policies, focussed on their design, analysis and management.

Here are the 2025 highlights:



## FOSTERING INNOVATIVE AND SUSTAINABLE BIO-WASTE MANAGEMENT AND CIRCULAR BIO-ECONOMY IN THE MEDITERRANEAN AREA - CIRBIOWASTE

### Funded by the European Commission

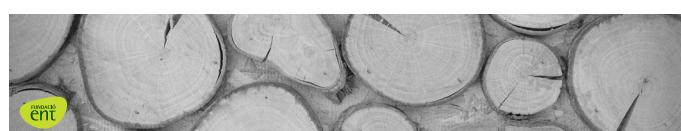
The project aims to enhance environmental resilience and support the transition to an efficient and circular bioeconomy in the Mediterranean area. It does so by promoting significant changes in behavior, governance, and management practices related to bio-waste, while closing its value chain loop-yielding notable environmental and economic benefits.



## LIFE4EPR -TOWARDS HARMONIZED EXTENDED PRODUCER RESPONSIBILITY SCHEMES ACROSS THE EU-

### Funded by the European Commission

The project aims to enhance the effectiveness, governance, and cost efficiency of EPR schemes by studying current practices, developing a technical tool, and delivering policy recommendations. Through stakeholder engagement, the project will map EPR schemes, benchmark case studies, and test a harmonized EU-wide register.



## WOODCIRCLES

### Funded by the European Commission

This project is an Innovation Action of the four-year Horizon Europe programme (2023-2027) led by the Danish Technological Institute. The ENT Foundation coordinates the work package on "Sustainability and impact assessment". WOODCIRCLES will develop innovative circular solutions for sustainable wood construction to help reduce Europe's dependence on non-renewable resources, cut GHG emissions, reduce waste generation, and offer long-term carbon sinks and substitution of fossil-based and carbon-intensive products. Based on identified needs and market potentials, the consortium will develop new value chains for upcycling of wood waste materials and optimized design-for-disassembly building system solutions to significantly increase recycling rates of wood in construction.



## LIFE BIOBEST

### Funded by the European Commission

The project aims to identify and validate the current best practices and management instruments along the bio-waste management chain that allow the production of quality compost and digestate and establish series of reference Key Performing Indicators, based on the analysis of existing databases and experiences. Through interconnected co-creation meetings with relevant expert stakeholders of the sector, solutions will be provided to overcome the identified technical, regulatory, economic and environmental barriers to widely adopt the proposed BPs. The project consortium is led by ENT Foundation and composed by Consorzio Italiano Compostatori, ACR+, European Compost Network and Zero Waste Europe. It is a 2.5-years LIFE Preparatory Project started in 2023.



## **H2020 SCORE: SMART CONTROL OF THE CLIMATE RESILIENCE IN EUROPEAN COASTAL CITIES**

### **Funded by the European Commission**

The SCORE project aimed to design, develop, monitor and validate robust adaptation measures in coastal and low-lying areas to protect them from increasing climate and sea level risks, including coastal flooding and erosion, to enhance their overall long-term resilience. ENT coordinated the work Package 7 "Socio-economic assessment of adaptation strategies and policy recommendations" and the Coastal City Living Lab of the Province of Barcelona – Vilanova i la Geltrú.



## **RESPONSIBLE PUBLIC PROCUREMENT AND CRITICAL CONFLICT MINERALS**

### **Commissioned by Medicus Mundi Mediterrània**

It is a project commissioned by Medicus Mundi for research, analysis and dissemination of good practices in responsible public procurement and contracting at the Catalan level, accompanied by the creation of a project laboratory with three municipalities that will receive personalized advice for the reproduction of some of the identified good practices in responsible public procurement.



## **OPTFOR-EU - OPTIMISING FOREST MANAGEMENT DECISIONS FOR A LOW-CARBON, CLIMATE RESILIENT FUTURE IN EUROPE**

### **Funded by the European Commission**

This 4-year Horizon Europe project started in 2023 will build a Decision Support System (DSS) to provide forest managers and other relevant stakeholders with tailored options for optimising decarbonisation and other Forest Ecosystem Services (FES) across Europe. ENT is a partner of this consortium lead by Administratia Nationala de Meteorologie (Romania).



## **PAY-AS-YOU-THROW WASTE RATES: EXPERIENCES, BARRIERS AND CHALLENGES IN SPAIN**

### **Commissioned by the Instituto de Estudios Fiscales**

This project aims to gather the knowledge and state of the art of pay-as-you-throw and save-as-you-throw systems. Additionally, an updated inventory of Spanish local authorities will be presented with implementation and practical examples of their application. The costs and revenues that must be taken into account when designing waste rates for payment per generation and participation bonuses will also be analysed. Finally, the barriers and challenges for their deployment in the near future will be presented.



## **TECHNICAL SUPPORT FOR LIFE CYCLE COST ANALYSIS OF STEEL PRODUCTS AND ECODESIGN IMPACT ASSESSMENT**

### **Commissioned by the Joint Research Center**

Aims to conduct a comprehensive Life Cycle Cost (LCC) analysis for five representative steel products sold on the European market, adopting a cradle-to-gate approach that traces the LCC from raw material sourcing (cradle) to the point of final product readiness at the manufacturing plant's exit (gate).



## **STUDY ON PROPOSALS FOR MUNICIPAL ADAPTATION TO SCENARIOS OF REDUCED AVAILABILITY OF RESOURCES IN GIRONA**

### **Commissioned by the Research & Degrowth International**

Based on the specific situation of the city of Girona, the aim of the study is to define, explore and propose concrete actions and measures to face and adapt to plausible scenarios of less availability of resources where scarcity intersects energy and basic resources for life, such as water or food, and the most obvious manifestations of climate change. The objective is to identify measures that can be adopted by the city council or citizen initiatives that the city council can support.



### **EVALUATION OF THE EFFICIENCY OF BIOGAS CAPTURE IN THE MAIN CONTROLLED STORAGE FACILITIES IN CATALUNYA AND ESTIMATION OF THEIR CLOSURE AND POST-CLOSURE COSTS**

**Commissioned by the Catalan Waste Agency**

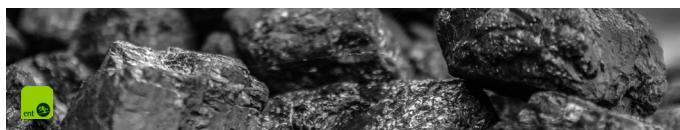
The purpose of this contract is to provide technical support services to the Catalan Waste Agency in the coordination, facilitation, review, and monitoring of tasks related to controlled landfills in Catalonia, mainly those arising from the evaluation of biogas capture efficiency and the estimation of closure and post-closure costs.



### **BRIDGING PREVENTION AND PREPAREDNESS IN CIVIL PROTECTION WITH ADAPTATION THROUGH INCLUSIVE PROXIMITY RESILIENCE ACTIONS (BEAVER)**

**Funded by the European Commission**

BEAVER's overall aim is to strengthen local communities' preparedness and resilience to disasters and emergencies, with a focus on vulnerable groups and the integration of climate adaptation as a cornerstone of robust civil protection (CP) systems.



### **BIO4UP - SUSTAINABLE BIOCHAR-ENHANCED UPCYCLING SOLUTIONS FOR ZERO-WASTE VALORIZATION OF ORGANIC WASTE INTO CIRCULAR ECONOMY PRODUCTS**

**Commissioned by the European Commission**

This MSCA Horizon Europe project aims to find synergies between universities, research centres and companies in order to promote, at a European level, the use of biochar (biochar) as a key material in innovation and sustainable and circular management of organic waste in order to obtain bioproducts and bioenergy.



### **REVOLUTIONIZING THE WASTE OF WASTE: A NEW BIOECONOMY-BASED BUSINESS FOR DIGESTATE (REWOW)**

**Funded by the European Commission**

Anaerobic digestion (or biomethanisation) enables the conversion of the organic fraction of waste into biogas through the action of microorganisms in the absence of oxygen. However, the solid fraction of the digestate remains a complex organic by-product, with limited productive uses and potential environmental impacts. ENT coordinates the work package on "Value chains, social & policy aspects development".



### **REPORT ON THE POTENTIAL FOR CREATING GREEN JOBS BASED ON THE DEMAND FOR NATIVE TIMBER SPECIES IN THE CONSTRUCTION MARKET**

**Commissioned by the Consorci Forestal de Catalunya**

This report falls within the framework of the ForestED project and its objectives were: i) To estimate the total employment (direct and indirect) associated with the forestry value chain of three species (chestnut, beech, and Aleppo pine), from their general use to their application in the manufacture of construction materials; and ii) To estimate the total employment (direct and indirect) associated with the production of cross-laminated timber.

In addition to these projects, we promote our own research projects such as:

**ecología Política**  
Cuadernos de debate internacional

**ECOLOGÍA POLÍTICA JOURNAL**

Ecología Política – Cuadernos de Debate Internacional is a bi-annual journal that reflects debates around the influence of political power on socioecological conflicts. Within the discipline of political ecology, it focuses on aspects such as environmental conflicts, inequalities in access to resources and exposure to pollution, environmental policies, resistance networks and social movements and referents of environmental thought.

ENT assumed the secretariat of the journal in 2006. Since 2013, Ecología Política has been jointly published by ENT Foundation and Icaria editorial, and it counts with an Editorial Board and an Advisory Board. In 2022, the CLACSO Political Ecology Group joined the co-edition of the journal.



**OBSERVATORY ON WASTE TAXATION**

The Observatory on Waste Taxation was created in 2018 to monitor the use of taxation instruments for waste policy in Spain. Our objective is to act as a reference in this aspect and to promote a greater use of waste taxes and charges as tools to improve waste management.

# 2 RESEARCH ARTICLES

## ARTICLES PUBLISHED AND ACCEPTED IN JOURNALS WITH IMPACT FACTOR

Tiwari, A., Rodrigues, L. C., Caruso, R., Ensenado, E. M., Makousiari, E., & Gharbia, S. (2025). Multi-criteria analysis of ecosystem-based adaptation strategies for flood risk reduction in Irish, Italian, and Turkish Coastal City Living Labs. *Sustainable Futures*, 10, 101506.

Riera, M., Ferrandis, A., Campos, L. (2025) Assessment framework to assist ecosystem-based adaptation implementation at local level: evidence from Spain and Portugal. *Global Sustainability*, Volume 8. Cambridge University Press. <https://doi.org/10.1017/sus.2025.10023>

Nohales, G., Puig-Ventosa, I. Models of Separate Collection for High Quality Composting, pp. 372-408, <https://doi.org/10.1039/9781837673650-00372> Chapter 14 in Sánchez, A., Gea, T., Font, X., Artola, A., Barrena, R., Moral-Vico, J. (Eds.) *Composting: Fundamentals and Recent Advances*. Royal Society of Chemistry, 2025. ISBN: 978-1-83767-162-5 <https://books.rsc.org/books/edited-volume/2290/chapter-abstract/8454360/Models-of-Separate-Collection-for-High-Quality>

Tiwari, A., Campos Rodrigues, L., Nalakurthi, S., Gharbia, S. (2025) Public perceptions of climate risks, vulnerability, and adaptation strategies: Fuzzy cognitive mapping in Irish and Spanish living labs. *Environmental and Sustainability Indicators*: Volume 26, June 2025, 100678.

Riera-Spiegelhalder, M., Campos Rodrigues, L., & Ferrandis Martínez, A. (2025) A Multicriteria Analysis to Integrate Stakeholder Perceptions of Ecosystem-Based Flood Adaptations in Coastal Urban Areas. *Documents d'Anàlisi Geogràfica*, 71(1): 153-179.

## OTHER RESEARCH PUBLICATIONS IN 2025

Sastre, S. (2025) Contabilidad de flujos materiales y cierre de ciclos materiales: de la hoja de cálculo al reciclador. *Recupera*, 141: 44-45.

Puig Ventosa, I., Sastre Sanz, S., Martínez Guallar, A., Ràfols Florenciano, R. (2025) Evaluación de la aplicación del impuesto sobre el depósito de residuos en vertederos, la incineración y la coincineración de residuos. *RETEMA*, 264: 208-211.

Puig, I, Marina, G. (2025) Análisis de la reforma del impuesto sobre el vertido e incineración de residuos en Cataluña. *RETEMA*, 262: 168-171.

# 3 OWN PUBLICATIONS

## OBSERVATORY ON WASTE TAXATION

 Observatorio  
de la fiscalidad de los residuos



### Las tasas de residuos en España 2025

Waste charges paid by households and commercial activities in 131 municipalities have been analysed, including all the provincial capitals. This study continues previous analyses performed with data from 2015, 2018, 2019, 2020, 2021, 2022, 2023 and 2024.

The report carries out a comparative analysis of the results obtained between 2015 and 2025. To this end, the main indicators used are analyzed, both qualitatively and quantitatively, providing a record of the evolution of waste charges in Spain.

[Observatorio de la Fiscalidad de los Residuos \(2025\) Las tasas de residuos en España 2025. Fundació ENT.](#)

## ECOLOGÍA POLÍTICA JOURNAL

 Ecología Política  
Cuadernos de debate internacional



### 70 Militarization December 2025

This issue of Ecología Política examines how armies, militarized landscapes, and the arms industry generate ecological destruction, reinforce extractivist dynamics, and deepen inequalities, while their climatic and environmental impacts largely remain invisible. Drawing on the concept of necropolitics, the articles explore who—and which territories—are deemed expendable in the name of security, development, or even sustainability.



### 69 Abya Yala June 2025

Celebrates the vitality of Latin American and Caribbean political ecology as a living practice, rooted in contested territories, resisting bodies, and knowledge systems that defend life. Beyond academia, this current manifests in concrete struggles, collective memory, and organized communities that reshape concepts such as ecological debt, body-territory, extractivism, and green colonialism.

# 4 FELLOWSHIPS

## FELLOWSHIPS

In 2025, ENT Foundation had 4 fellows:

### **Dr. Santiago Gorostiza**

 Postdoctoral researcher at the Lund University Centre for Sustainability Studies (Lund). He is an environmental history specialist in the Spanish Civil War and the Franco regime. He made a research internship at ENT during his doctoral research in the framework of a European Marie Curie project on political ecology. He is a member of the editorial board of Ecología Política journal and has edited several issues of the journal. After completing his doctorate at the University of Coimbra (Portugal), he was a postdoctoral researcher at the Institute of Environmental Science and Technology (ICTA) at the UAB, where he did research on environmental history and historical climatology

### **Dra. Irmak Ertör**

 Assistant professor at the Ataturk Institute - Bogazici University. Economist and specialist researcher in political ecology and specifically in relation to fishing and aquaculture.

### **Dr. Gabriel Weber**

 Associate Professor of International Affairs and Sustainability at ESSCA, Bordeaux. He was a Marie Curie Post Doc Fellow at ENT in the field of Political Ecology. He holds a PhD in Environmental Management and Accounting from TU Dresden in Germany. His research focuses on mitigation and adaptation to climate change, environmental policy instruments, and waste management, within the fields of ecological economics and political ecology.

### **Dra. Marien González Hidalgo**

 Environmental Scientist and researcher specialized in political ecology studies with a feminist perspective and psycho-social perspective in environmental conflicts.

## OTHERS

During 2025 Gerard Marina joined the team at the Fundació ENT, thanks to the grant from the Servei Públic d'Ocupació de Catalunya and with the co-financing of 40% from the European Social Fund Plus.

 SOC / Servei d'Ocupació de Catalunya

 Generalitat de Catalunya

 Cofinançat per la Unió Europea

# 5 OTHER RESEARCH ACTIVITIES

## CONTRIBUTIONS IN INTERNATIONAL CONFERENCES

- March 20 | Ignasi Puig | "The case of Spain" | Workshop Bin2Bean | Online.
- November 18 | Ignasi Puig | "El camino legal: de Bruselas a Madrid: Marco Jurídico para garantizar el cumplimiento de los objetivos de la RAP y de recogida separada de envases de bebidas" | Conferencia Global de Expertos en Sistemas de Depósito (SDDR) para envases de bebida | Madrid.

## CONTRIBUTIONS IN OTHER EVENTS

- January 16 | Ignasi Puig | "Las tasas de residuos en España 2024" | Webinar Composta en Red | Online.
- March 28 | Itziar Müller | Taller "Compra pública responsable, minerals crítics i vehicle elèctric: possibilitats d'actuació a nivell municipal" | Xarxa de Municipis per l'Economia Social i Solidària (XMESS) | Online.
- April 4 | Sergio Sastre | "Ecoinnovación en eficiencia de materiales" | Basque Circular Summit | Bilbao.
- April 25 | Ignasi Puig | "Fiscalidad Climática" | Asamblea Ciudadana Navarra sobre el Cambio Climático | Online.
- April 29 | Maria Calaf | "Sessions informatives amb el teixit comercial de la ciutat sobre el Pagament per Generació de residus" | Igualada.
- May 26 | Maria Calaf | "Ordenanza Fiscal de Residuos" | Foro Abierto de Transparencia y Escucha activa | Zaragoza.
- June 4 | Itziar Müller | "Diagnosi de compra pública i bioeconomia elaborada per ENT" | Jornada de formació en eines de contractació pública dins la bioeconomia | Barcelona.
- September 17 | Sergio Sastre | "Economia Circular. Conceptes i estratègies per a la implementació pràctica de l'economia circular al model productiu" | Curs COAMB | Barcelona.
- September 30 | Verónica Martínez | "Presentació del projecte WOODCIRCLES" | Taller: Solucions concretes als reptes de descarbonització d'edificis en el sector de la construcció | Barcelona.
- October 16 | Ignasi Puig | "Residus municipals: compliment d'objectius legals, on som i què ens queda per fer?" | Akademia Forum Talks 2025. Online.
- October 28 | Gemma Nohales | "Contribució del model PAP a les polítiques europees d'economia circular: aprenentatges del projecte EU LIFE BIOBEST" | 25 anys de la recollida selectiva porta a porta a Catalunya, balanç, èxits i reptes | Barcelona.
- October 28 | Ignasi Puig | "Tres estudis estadístics sobre els resultats del sistema PaP: recollida selectiva, impropis i taxes" | 25 anys de la recollida selectiva porta a porta a Catalunya, balanç, èxits i reptes | Barcelona.
- November 27 | Ignasi Puig | "Las tasas de residuos en España 2025" | Fomento de la Economía Circular en la Gestión Municipal de Residuos. FACSA-FOVASA - Universitat Politècnica de València | València.
- December 3 | Ignasi Puig | "Las tasas de residuos en España 2025" | CONAMA Local | Sesión EC.03 - Los costes de la gestión de los residuos municipales y su recuperación con criterios de equidad social y transparencia | Viladecans.

## PENSAMENTS

PensamENTS are online sessions organized by ENT to debate around issues related to the environment. ENT invites an expert to each session, who offers a presentation and then the session opens up to questions and debate. In 2025, **9** sessions were held:

### January | Alberto Confalonieri

*Italian Compost and Biogas Consortium (CIC)*

Implications of biowaste quality in the recycling processes, and the role of compostable plastics

### February | Clarissa Morawski

*ReLoop*

Closing the Loop: Deposit-Refund Schemes (DRS) Trends Shaping Europe

### March | Víctor Moralo

*ECIJA Abogados*

Condiciones legales, obligaciones y acciones de tutela para la implantación del SDDR en España

### April | Aintana de la Varga

*Universitat Rovira i Virgili*

¿Cómo afronta la legislación la contaminación por plásticos? Situación actual y retos presentes y futuros

### May | Mar Riera

*Fundació ENT*

Adaptació al canvi climàtic de les ciutats costaneres europees: Solucions innovadores dins del projecte SCORE

### June | Gemma Nohales

*Fundació ENT*

Claves para la gestión eficiente de Biorresiduos: recomendaciones del proyecto LIFE BIOBEST enfocadas al contexto en España

### September | Sergio Sastre

*Fundació ENT*

Indicadores de economía circular y contabilidad de flujos materiales: hacia un marco armonizado de indicadores de economía circular para las regiones de la UE. El caso de España

### October | Ignasi Puig i Gerard Marina

*Fundació ENT - Observatorio de la Fiscalidad de los residuos*

Presentación del estudio "Las tasas de residuos en España 2025"

### December | Ivan Murray

*Universitat de les Illes Balears*

El final del turisme barat

## PRESENTATIONS

In 2025, two online presentations of issues 68 and 69 of the journal Ecología Política were held:

### October | #69 Abya Yala

Aida Luz López, Mariluz Nova, Edna Castro and Vanessa Empinotti.

### March | #68 Residuos

Ignasi Puig, Mariel Vilella and Josep Espluga.

**2** Participations in international conferences

**14** Participations in other events

**9** PensamENTS sessions

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