SERGIO SASTRE SANZ

Member of ENT since July 2015
Consultant, researcher and coordinator of waste and economy and environment projects

EDUCATION

- 2021. PhD Environmental Science and Technology, Universitat Autònoma de Barcelona.
- 2007. Master degree, Environmental Sciences, Ecological Economics at ICTA, Universitat Autònoma de Barcelona.
- 2001-2006. Bachelor in Environmental Sciences at Universidad Autónoma de Madrid.

PROFESSIONAL EXPERIENCE

- 2011-2014 – Research Technician at the Marine Sciences Institute (CSIC) within the EU Project VECTORS.
- 2008-2011 - Research Technician at the Marine Sciences Institute (CSIC) within the EU Project SPICOSA.
- 2008-2011 - Research Technician at the Social ecological systems laboratory, Universidad Autónoma de Madrid.
- 2008-2011 - Internship in the Aigüestortes National Park.
- 2007-2008 - Research Technician at Ambiental Science and Tecnology Institute (ICTA) within the project 'El metabolismo socioeconómico de la economía española. Un análisis interregional, 1995-2005'. Directed by Óscar Carpintero, Jordi Roca and Joan Martínez Alier.

MOST RELEVANT AREAS OF EXPERTISE

- Material Flow Accounting.
- Waste management and circular economy.
- Environmental taxation.
- Waste management and environmental taxation.
- Multicriteria Integrated Assessment.
- Environmental economics and ecosystem services.

MAIN PROJECTS

- Technical assistance for the preparation of a study that provides the analytical, quantitative, and qualitative tools to enable appropriate decision-making during the design and implementation of the SDDR in the Canary Islands. Canarian Government | 2026 - 2027.
- Quantification and analysis of the timber value chain in Navarre. OREKAN | 2026.
- Methodological update and harmonization of the Material Flow Accounts for the Basque Country. IHOBE | 2026.
- Analysis of the accounting of material flows on an island scale, determination of relevant indicators and strategic analysis of the circular economy within the framework of inter-island flows in the Canary Islands (action 3.1.1 PAEC-26). Canarian Government | 2026.
- Study of Review and proposal for improvement of the tax on landfilling, incineration and co-incineration of waste. Ministry for Ecologic Transition and Demographic Challenge | 2026.
- Update of the material flow accounts of Navara 2023-2024. GANASA | 2026.
- Analysis of material flows, specifically material flow accounting, and identification of key flows and opportunities for circular economy policies in the Canary Islands. Canarian Government | 2025.
- Report and technical assistance for the preparation of the material flow account (MFA) and the development of circular economy indicators of the European framework at the regional level of the Community of Madrid. Comunidad de Madrid | 2025.
- Training and support in material flows and life cycle inventories. IHOBE | 2025.
- Accompaniment in the calculation of the accounting of material flows of Navarra and evaluation of circular economy indicators of the ECNA 2030 framework. GANASA | 2025.
- Basque data system for sectoral flows of materials and products. IHOBE | 2024 - 2025.
- Update of the 2021 Material Flow Account and calculation of equivalent raw materials (MPE) in Catalonia for the years 2011, 2014 and 2016. Catalan Institute of Statistics (IDESCAT) | 2023 - 2024.
- Analysis of material flows in the value chains of Euskadi. IHOBE | 2023 - 2024.
- Study of material inputs to the Vitoria-Gasteiz production system. Vitoria City Council | 2023.
- Update of the evaluation of compliance with the municipal waste recycling objectives of the Waste Framework Directive in Spain. Recircula | 2023.
- Analysis of the methodological feasibility for obtaining a framework of annual indicators of the circular economy in Catalonia. Catalan Institute of Statistics (IDESCAT) | 2023.
- Technical assistance to AIREF for the development of the study on public spending related to urban waste management. AIREF | 2023-2022.
- Analysis of the methodological feasibility for obtaining a framework of annual indicators of the circular economy for Catalonia. IDESCAT | 2022-2023.
- Calculation of statistics and indicators of circular economy and waste. IHOBE | 2022. [Coordination]
- Technical assistance to establish the calculation of a recycling index for different flows of municipal waste in Catalonia. Catalan Waste Agency | 2022. [Coordination]

- Study on fraud in terms of extended producer responsibility (EPR) of domestic packaging placed on the Spanish market. Ministry for the Ecological Transition and the Demographic Challenge | 2022. [Coordination]
- Technical assistance in order to prepare the 2030 Strategy and the Local Action Plan to promote the circular economy in Vitoria-Gasteiz. Vitoria City Council | 2022.
- Update of the Material Flow Accounts for Catalonia, database and indicators for the year 2018. Catalan Institute of Statistics (IDESCAT) | 2021. [Coordination]
- VAT as an instrument of environmental taxation in Spain. Institute of Fiscal Studies | 2021. [Coordination]
- Accounting of material flows of the Balearic Islands. Balearic Islands Government | 2021. [Coordination]
- Technical assistance service for the revitalization and updating of the "Catalunya Circular" Observatory. Eurecat | 2021.
- Best practices in achieving waste reduction in the Mediterranean . Union for the Mediterranean | 2021. [Coordination]
- Implementation of measures to prevent marine litter generated by beverage containers in the Cabo de Gata-Níjar Natural Park. Catalan Waste Agency | 2021. [Coordination]
- Study of new models and scenarios on the technical and environmental feasibility of the implementation of a deposit, refund and return system (SDDR) in Spain. Ministry for Ecologic Transition and Demographic Challenge | 2021.
- Understanding illegal plastic waste shipments in the EU - Focus on Spain. Zero Waste Europe | 2021. [Coordination]
- Scoping study to assess the feasibility of further EU measures on waste prevention and implementation of the Plastic Bags Directive. Eunomia for the European Commission | 2020.
- Landfill tax and waste markets. IHOBE | 2020.
- Proposal review on a waste tax in the municipality of Las Palmas de Gran Canaria. Las Palmas de Gran Canaria City Council | 2020.
- Canon and waste markets. IHOBE | 2020.
- Support for the drafting of a LIFE proposal on nature tourism. Neàpolis | 2020.
- Mapping of material/energy/waste flows in the industrial areas of Vitoria-Gasteiz. CIMAS INNOVACIÓN Y MEDIO AMBIENTE, S.L.L. | 2020.
- Technical and environmental feasibility study of the implementation of a deposit-refund scheme (DRS) in Spain. Tragsatec | 2020.
- The effectiveness of the application of the waste tax and their evolution. Catalan Waste Agency | 2019.
- Analysis of the environmental and economic costs of light packaging waste management and their distribution in Spain. Amigos de la Tierra | 2019.
- Preparation of the Commission's guidance on the implementation of the general minimum requirements for EPR. Eunomia | 2019 - 2020.
- Elements for the development of environmental taxation on extractive activities in Catalonia. Centre de recerca ecològica i aplicacions forestals (CREAF-UAB) | 2019.
- Supporting the Evaluation of the EU Biodiversity Strategy to 2020 and Follow-up. European Commission | 2019 - 2021.
- Update of the material flows in Catalonia. IDESCAT | 2019. [Coordination]

- Appui technique portant sur le développement de la responsabilité élargie des producteurs au Maroc – Produits plàstiques. Regional Activity Centre for Sustainable Consumption and Production | 2019.
- Study of associated costs of the tasks carried out by the local entities of Catalonia in the management of waste electrical and electronic equipment. Catalonia Waste Agency | 2019.
- Study on investment needs in the waste sector and on the financing of municipal waste in Member States. Eunomia | 2019.
- Fiscal instruments for the Circular Economy in Spain. Institute of Fiscal Studies | 2018.
- Analysis of data on light packaging in the Balearic Islands. Government of the Balearic Islands | 2018.
- Position paper on a European tax on plastics. Zero Waste Europe | 2018.
- Study for consistency analysis of packaging and packaging waste data in Catalonia. Catalonia Waste Agency | 2017 - 2018.
- Calculation and analysis of material flow indicators for Catalonia. IDESCAT | 2017.
- Analysis of reform scenarios of the Metropolitan Waste Treatment Charge (TMTR). Àrea Metropolitana de Barcelona | 2017.
- Analysis of the waste charge in Las Palmas de Gran Canaria, Spain. Las Palmas de Gran Canaria City Council | 2017 - 2018.
- Report on the structure of waste treatment tariffs for 2017 of the GHK Waste Consortium. Consorci de Residus GHK | 2017.
- Advice on environmental taxation for the drafting of the Regional Waste Law. Gestión Ambiental de Navarra (GANASA) | 2017.
- Early Warning Mechanism - Study to Identify Member States at Risk of Non-compliance with the 2020 target of WFD and to Follow-up the Compliance Promotion Exercise Phase 1 and 2. Spain. Eunomia for the European Commission | 2017.
- Feasibility study for the implementation of a selective waste collection of organic fraction in Zaragoza.
- Early Warning Mechanism - Study to Identify Member States at Risk of Non-compliance with the 2020 target of WFD and to Follow-up the Compliance Promotion Exercise Phase 1 and 2. Spain.
- A Comprehensive Review of Gaps and Weaknesses and Key Priority Areas for Improvement in the EU Waste Statistics. Comissió Europea | 2016.
- Design and survey analysis to assess the experience of home composting in Asturias.
- Study on reform scenarios of the Metropolitan Waste Treatment Rate (TMTR)
- Study of waste charges in Las Palmas de Gran Canaria, Spain.
- Study on the feasibility of the implementation of a deposit-refund scheme (DRS) for single-use beverage containers in Catalonia.
- Technical, environmental and economic availability study for implementing a deposit and return system SDDR.
- Capacity building, programmatic development and communication in the field of environmental taxation and budgetary reform. Comissió Europea | 2016-2017.
- Linking Biodiversity to National Economic and Social Priorities in the EU State Members. Comissió Europea | 2015-2017.

- Study on the economic benefits of Marine Protected Areas. Research project managed by EASME and the European Commission's DG MARE | 2016-2017.
- Analysis of Spain and Portugal within the project "Municipal waste compliance-promotion exercise 2014-2015". Eunomia for the European Commission | 2015.

MAIN PUBLICATIONS

Thesis

Sastre Sanz, S. (2021). Resource extraction, trade and waste management: a regional approach to the Spanish socioeconomic metabolism. https://tesisenred.net/handle/10803/673648

Articles

- Sastre Sanz, S., Puig-Ventosa, I. and Calaf Forn, M. (in press) 'Growing fees, modest signals: Evolution of municipal waste charges in Spain (2015–2024)', Waste Management & Research. doi: 10.1177/0734242X261461026.
- Sastre Sanz, S. (2026) 'Indicadores de economía circular a escala autonómica en España: avances y situación de la implantación de la contabilidad de flujos materiales a nivel regional', RETEMA, marzo/abril, pp. 3–6.
- 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.
- Meisterl, K., Sastre, S., Puig-Ventosa, I., Chifari, R., Martínez Sánchez, L., Chochois, L., Fiorentino, G., Zucaro, A. (2024) Circular Bioeconomy in the Metropolitan Area of Barcelona: Policy Recommendations to Optimize Biowaste Management. *Sustainability, 16*, 1208.
- Puig Ventosa, I., Sastre Sanz, S. (2023) Gastos e ingresos de las entidades locales en materia de gestión de residuos urbanos. Revista Índice, 91: 42-44.
- Martinez Sanchez, V., Sastre Sanz, S. and Puig Ventosa, I., Review of economic and socio-economic studies on recycling topics, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-41936-5, doi:10.2760/041884, JRC126384.
- Sastre, Sergio. 2021. "Resources Extraction, Trade and Waste Management: A Regional Approach to the Spanish Socioeconomic Metabolism." Phd Thesis. Institut de Ciència i Tecnologia Ambeintals. Universitat Autònoma de Barcelona.
- Pellicer, P., Puig I., Sastre, S., Iriani, M. (2020) Una mirada a las tasas de residuos en España 2020. Equipamiento y Servicios Municipales, nº 193: 28-31.
- Sastre Sanz, S., Puig Ventosa, I., Llopart, J. (2019). 'Mind the gap': un modelo para el seguimiento de los objetivos europeos de reciclaje aplicado a las Comunidades Autónomas españolas. RETEMA, 216: 102-105.
- Sastre Sanz, S., Puig Ventosa, I. (2019). La dimensión fiscal del vehículo eléctrico en España. Economía Industrial. Ministerio de Industria, Comercio y Turismo, 411: 69-84.

- Puig I., Sastre, S. Iriani, M. (2018) Una mirada a las tasas de residuos en España 2018. Equipamiento y Servicios Municipales, nº 185: 10-14.
- Puig-Ventosa, I., & Sastre Sanz, S. (2017) An exploration into municipal waste charges for environmental management at local level: The case of Spain. Waste Management & Research, 35(11), 1159-1167.
- Puig, I., Sastre, S. (2017) Las tasas de residuos en España. Equipamiento y Servicios Municipales. Revista de Urbanismo y Medio Ambiente, 180: 10-15.
- Puig, I., Sastre, S. (2016) Las tasas de residuos en España. Crónica Tributaria, 159, 131-164.
- Carpintero, O., Lomas, Pedro L., Sastre, S. (2016) El metabolismo económico de las regiones españolas. Las regiones despobladas abastecen de materiales y energía a las más desarrolladas económicamente. El Ecologista, 87.
- Tomlinson, B., Maynou, F., Sabatés, A., Fuentes, V., Canepa, A., Sastre, S. (2015) Systems approach modelling of the interactive effects of fisheries, jellyfish and tourism in the Catalan coast. Estuarine, Coastal and Shelf Science.
- Puig, I., Jofra, M., Calaf, M., Sastre, S. (2015) "Estado actual de la fiscalidad ambiental en España y perspectivas de futuro" (cap. 6) a Adame Martínez, F. (director) Fiscalidad ambiental en España: situación actual y perspectivas de futuro. Aranzadi.
- Nunes PALD, Loureiro ML, Piñol L, Sastre S, Voltaire L, Canepa A. (2015) Analyzing Beach Recreationists' Preferences for the Reduction of Jellyfish Blooms: Economic Results from a Stated-Choice Experiment in Catalonia, Spain. PLoS ONE 10(6): e0126681. doi:10.1371/journal.pone.0126681.
- Sastre, S., Carpintero, Ó., Lomas, P. 2015. Regional Material Flow Accounting and Environmental Pressures in Spain: the Role of Physical Trade at the Regional Scale. Oral Presentation at the 11th Bienial conference of the European Society for Ecological Economics. Leeds, UK.
- Sastre, S., Carpintero, Ó., Lomas, P. 2015. Agrofuels in Spain: land requirements, trade-offs and alternatives. Forthcoming.
- Sastre, S., Carpintero, Ó., Lomas, P. 2015. Exploring the role of Regional Material Flow Indicators within Multicriteria Assessment Frameworks. Ecological Indicators. Forthcoming.
- Carpintero (Dir), Sastre,S., Lomas, P., Arto, I., Bellver, J., Delgado, M., Doldán, X., Fernández, J., Frías, J., Ginard, X., González, A. C., Gual, M., Murray, I., Naredo, J. M., Ramos, J., Velázquez, E., Villasante, S. 2015. El Metabolismo Económico Regional Español. FUHEM.
- Sastre, S., Carpintero, Ó., Lomas, P. 2015. Regional Material Flow Accounting and Environmental Pressures: the Spanish Case. Journal of Environmental Science and Technology. Environmental Science & Technology, 49 (4): 2262-2269.
- Delgado, M. Carpintero, Ó., Lomas, P., Sastre, S. 2015. Andalucía en la división territorial del trabajo dentro de la economía española. Una aproximación a la luz de su metabolismo socioeconómico 1996-2010. Revista de Estudios Regionales. 100.
- Voltaire, L. Loureiro, M., Nunes, P., Piñol, L., Sastre. S. 2015. Economic analysis of offshore wind farms project on coastal recreational demand: results from a mix revealed-stated behavior analysis for the Catalan coast. Forthcoming.

- Hattam, c., Atkins, J., Beaumont, N., Börger, T., Böhnke-Henrichs, A., Burdon, D., de Groot, R., Hoefnagel, E., Nunes, P., Piwowarczyk, P., Sastre, S., Austen, M. 2014. Marine Ecosystem Services: linking indicators to their classification. Ecological Indicators, 49.
- Tomlinson, B., Sastre, S., Blasco, D., Guillén, J., 2012. The Systems Approach Framework in the context of Resilience Adaptive Management and governance: A case study in the urban beaches of Barcelona. Ecology And Society, 16 (4).
- Sastre, S. Peguero, G., Lomas, P., Di Donato, M. 2008. Crítica y perspectivas de los AGRO(bio)combustibles: el caso de Cataluña en el contexto español. FUHEM-Ecosocial.

ORAL PRESENTATIONS

- Sastre, S. 2025. Ecoinnovacción en eficiencia de materiales. Basque Circular Summit. Bilbao.
- Sastre, S. 2025. Economia Circular. Conceptes i estratègies per a la implementació pràctica de l'economia circular al model productiu. Circular Economy Course. COAMB. Online.
- Sastre, S. 2023. Fluxos materials i indicadors d'economia circular. Circular Economy Course. COAMB. Online.
- Sastre, S. 2023. La responsabilitat ampliada del productor a examen: propostes de millora. Recuwaste 2023. Mataró.
- Sastre, S. 2022. Anàlisi de fluxos materials a Catalunya i Espanya i consideracions per avançar cap a una economia circular. Circular Economy Course. COAMB. Online.
- Sastre, S. 2021. Eines i metodologies per a la implementació pràctica de l'economia circular al model productiu. Circular Economy Course. COAMB. Online.
- Voltaire, L. Loureiro, M., Nunes, P., Piñol, L., Sastre. S. Offshore windfarms and recreation demand for the Catalan Coast: a pooled revealed and stated trip behavior analysis. Oral presentation at the 2nd International Ocean Research Conference. November 2014. Barcelona, Spain.
- Sastre, S. Exploring the links between Industrial Ecology and Fisheries Science. Oral presentation at Ecosystem Approach to Fisheries in the Mediterranean and Black Seas meeting. April 2014. Barcelona, Spain.
- Sastre, S. 2013. Managing coastal ecosystem services in Catalonia: jellyfish blooms, wind-farms, and tourism. Oral presentation at the Symposium on Integrating New Advances in Mediterranean Oceanography and Marine Biology. November 2013. Barcelona, Spain.
- Canepa, A., Sastre, S., Piñol, L., Gonzalez, V. 2013. Thirty years of jellyfish blooms in Catalonia: Narratives and empirical evidences. Oral presentation at the Fourth International Jellyfish Bloom Symposium. July 2013. Hiroshima, Japan.
- Loureiro, M., Nunes, P., Piñol, L., Voltaire., Sastre, S. 2013. Analyzing beach recreationist's preferences for the reduction of jellyfish outbreaks: economic results from a stated-choice experiment in Catalonia, Spain. Oral presentation at the Fourth International Jellyfish Bloom Symposium. July 2013. Hiroshima, Japan.
- Gomez-Bagghetum E., Martín López, B., Lomas, P., Zorrilla, P., Sastre, S., Montes, C. 2006. Ecosystem services loss derived from land use homogeneization in Mediterranean multifunctional landscapes. Oral presentation at the Ninth Biennial Conference of Internacional Society of Ecological Economics, 'Ecological Sustainability & Human Well-Being. Delhi, India.