

VERONICA MARTINEZ SANCHEZ

Member of ENT since September 2016.

Consultant, researcher and coordinator of projects in the area of waste management, economy and environment.



EDUCATION

- 2016. PhD in Integrated Economic and Environmental assessment of waste systems and technologies at the Technical University of Denmark (DTU).
- 2010. MSc in Environmental and Chemical Engineering. European Double MSc Degree obtained at the Technical University of Denmark (Department of Environmental Engineering) and the Polytechnic University of Catalonia (ETSEIB).



PROFESSIONAL EXPERIENCE

- September 2016 - Present. Fundació ENT. Environmental consultant and researcher, mainly involved in the areas of Waste Management and Decision Support Tools as Life Cycle Assessment and Life Cycle Costing.
- September 2019 - May 2022. Associated professor at Universitat Politècnica de Catalunya (UPC), Escola d'Enginyeria de Barcelona Est (EEBE). "Circular Economy and Sustainability" in master "Material Science", "Chemical Engineering" y "Interdisciplinary and Innovative Engineering".
- November 2015- August 2016. Post-doctorate at the Technical University of Denmark. Main responsibilities were: i) implementing Life-Cycle Costing (LCC) capabilities into the Life-Cycle Assessment (LCA) software EASETECH, ii) project proposals writing for national and international funding agencies, iii) development of a webtool platform to enhance collaboration between public and private institutions and DTU through student projects dealing with residual resource management, and iv) environmental assessment of several prevention alternatives for the food waste generated in Denmark.
- December 2011- November 2015: PhD Candidate at the Technical University of Denmark. Main task was the management and performance of four projects: i) LCC and LCA of organic waste source separation, ii) LCC and LCA of food waste hierarchy, iii) LCC of household waste incineration, and iv) LCC optimization of US household waste.
- September 2012-January 2014: Support in Teaching activities of the course Solid Waste Technology and Management at the Technical University of Denmark.
- October 2010- December 2011: Research Engineer at the Technical University of Denmark. Main task was the performance of the following projects: i) LCA of unsolicited mail prevention, ii) LCA of plastic recycling and waste-to-energy plants, and iii) LCA of a waste refinery plant.



MOST RELEVANT AREAS OF EXPERTISE

- Waste Management (special interest on packaging waste)
- Circular Economy
- Decision Support Tool (Life Cycle Assessment and Life Cycle Costing)



MAIN PROJECTS

- Preparation of a report on the contribution of the MedWaves center to the circular economy and climate change mitigation strategies. Catalan Waste Agency | 2023.
- Design and Evaluation of an Aggregates Tax in Italy. Organisation for Economic Co-operation and Development | 2023.
- Study on urban mining in Barcelona and associated climate change mitigation. ODG | 2023.
- Study on the circularity of renewable energies in Catalonia. ACCIÓ | 2023.
- WOODCIRCLES - Integrated, circular, and digitally supported sustainable solutions for waste minimization and carbon capture in buildings and the construction sector. European Commission | 2023 - 2027.
- Analysis of the methodological feasibility for obtaining a framework of annual indicators of the circular economy in Catalonia. Catalan Institute of Statistics (IDESCAT) | 2023.
- LIFE BIOBEST - LIFE-2021-PREP-NATURA. European Commission | 2022 - 2026.
- Reform of the environmental tax framework of the autonomous region of Andalusia: Circular economy and waste management. Organisation for Economic Co-operation and Development (OECD) | 2021-2022.
- Analysis of the Draft Law of Circular Economy of Andorra and support for the preparation of amendments. Andorra General Council | 2021.
- 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.
- Training of the MedCities network members in municipal waste management, environmental management, energy efficiency and mobility. MedCities | 2021.
- Review of economic and socio-economic studies on recycling topics (RESYCLE). Joint Research Center JRC-IPTS | 2021.
- Calculation of the carbon footprint in Alella City Council. Barcelona Provincial Council | 2021.
- Support for the drafting of a LIFE proposal on sustainable tourism. Neàpolis | 2020.
- Conventional & Biodegradable Plastics in Agriculture. For the European Commission DG Environment. Project conducted under Framework Contract No ENV.B1/FRA/2018/0002 Lot 1. Technopolis | 2020.
- Analysis of the needs of R + D + I of new materials for packaging and of increase of the percentage of plastic recycled in new containers in the frame of the Project Interreg Europe CircE (PGI02398). Department of Environment and Housing, Government of Catalonia | 2020.
- Technical and environmental feasibility study of the implementation of a deposit-refund scheme (DRS) in Spain. Tragsatec | 2020.
- Study of the environmental impact of the activity of Preparation for Reuse of wasted toys. Espai Ambiental | 2019.
- DECISIVE - A Decentralised management Scheme for Innovative Valorisation of urban biowaste. European Commission | 2016 - 2020.



PUBLICATIONS

Thesis

- Martínez-Sánchez, V. (2016). Integrated environmental and economic assessment of waste management systems. Doctoral Dissertation, Technical University of Denmark, Department of Environmental Engineering, Kgs. Lyngby.
- Martínez-Sánchez, V. (2010). Environmental Assessment of Sewage Sludge Incineration. LCA approach. MSc Thesis. Technical University of Denmark, Department of Environmental Engineering. Kgs. Lyngby.

Chapters

- Martínez-Sánchez, V., Puig Ventosa, I. "Circular economy" (p49-56), Chapter 9 in Padilla Rosa, E., Ramos-Martín, J. (2023) Elgar Encyclopedia of Ecological Economics. Edward Elgar.

Articles

- Nohales Duarte, D., Martínez Sánchez, V., Pellicer García, P., Puig Ventosa, I. (2023) Desafíos en el ámbito local en materia de economía circular y residuos. Equipamientos y Servicios Municipales, 203: 18-23.
- Freire-Gonzalez, J., Martínez-Sánchez, V., Puig-Ventosa, I. (2022) Tools for a circular economy: Assessing waste taxation in a CGE multi-pollutant framework. Waste Management, 139: 50-59.
- Martínez Sánchez, 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.
- Faraca, G., Martínez, V., Astrup, T. (2019) Environmental life cycle cost assessment: Recycling of hard plastic waste collected at Danish recycling centres. Resources, Conservation & Recycling, 143: 299-309.
- Blikra, E., Martínez-Sánchez, V., Thomsen, M. (2018) A Review of Waste Management Decision Support Tools and Their Ability to Assess Circular Biowaste Management Systems. Sustainability, 10(10), 3720.
- Mestre, M., Martínez, V. (2017) Desperdicio alimentario, análisis de una problemática poliédrica. PAPELES de relaciones ecosociales y cambio global, 139: 93-103.
- Martínez-Sánchez, V., Levis, J.W., Damgaard, A., DeCarolis, J. F., Barlaz, M. A., Astrup, T. F. (2017) Evaluation of Externality Costs in Life-Cycle Optimization of Municipal Solid Waste Management Systems. Journal of Environmental Science and Technology, Environ. Sci. Technol., 2017, 51 (6), 3119-3127.
- Martínez-Sánchez, V., Hulgaard, T., Hindsgaul, C., Riber, C., Kamuk, B., Astrup, T.F., (2016). Estimation of marginal costs at existing waste treatment facilities. Waste Manag. 50, 364-75.
- Martínez-Sánchez, V., Tonini, D., Møller, F., Astrup, T.F. (2016). Life-Cycle Costing of Food Waste Management in Denmark: Importance of Indirect Effects. Environ. Sci. Technol. 50, 4513-4523.
- Martínez-Sánchez, V., Kromann, M.A., Astrup, T.F. (2015). Life cycle costing of waste management systems: Overview, calculation principles and case studies. Waste Manag. 36, 343-355.

- Rigamonti, L., Grosso, M., Møller, J., Martinez Sanchez, V., Magnani, S., Christensen, T.H. (2014). Environmental evaluation of plastic waste management scenarios. *Resour. Conserv. Recycl.* 85, 42–53.
- Tonini, D., Martinez-Sanchez, V., Astrup, T.F. (2013). Material resources, energy, and nutrient recovery from waste: are waste refineries the solution for the future? *Environ. Sci. Technol.* 47, 8962–9.

Technical reports

- 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.
- Hann, S., Fletcher, E., Molteno, S., Sherrington, C., Elliott, L., Kong M.A, Koite, A., Sastre, S. Martinez, V. Relevance of Conventional and biodegradable plastics in agriculture. July 2021. For the European Commission DG Environment. Project conducted under Framework Contract No ENV.B1/FRA/2018/0002 Lot 1.
- Martinez Sanchez, V., Pellicer Garcia, P., Puig Ventosa, I. Anàlisi de les necessitats d'R+D+I en nous materials per a envasos de begudes i per augmentar el percentatge de plàstic reciclat en nous envasos. Publications of the Department of Environment and Housing, Government of Catalonia | 2020.
- Martinez-Sanchez, V., Chifari, R., Puig-Ventosa, I, Thiriet, P. (2019) User Manual of the DECISIVE decision support tool. Deliverable 5.3. DECISIVE H2020 Project.
- Martinez-Sanchez, V., Chifari, R., Puig-Ventosa, I, Jofra-Sora, M., Veà, E.B, Romeo, D., Klinglmair, M., Thiriet, P., Soctti, M., Walk, S. (2018) Methodology for the planning of decentralised biowaste management. Deliverable 5.1. DECISIVE H2020 Project.
- Martinez-Sanchez, V., Tonini, D., Astrup, T.F. (2013). LCA of selected MSW management scenarios for TAS in the perspective of the REnescience process. Technical Report for TAS, Technical University of Denmark, Department of Environmental Engineering, Kgs. Lyngby.
- Martinez-Sanchez, V., Tonini, D., Astrup, T.F. (2012) LCA of selected MSW management scenarios for Amagerforbrænding in the perspective of the REnescience process. Technical Report for Amager Ressource Center, Technical University of Denmark, Department of Environmental Engineering, Kgs. Lyngby.
- Møller, J., Grosso, M., Rigamonti, L., Martinez-Sanchez, V., Clavreul, J., Barahona-Ramirez, K.L., Magnani, S., Christensen, T.H. (2012). Sustainable European Waste Systems “SEWAS.” Project report for CEWEP. Technical University of Denmark and Politecnico di Milano.
- Møller J, Butera S, Martinez Sanchez V, Christensen TH, Kromann M, Willumsen E. (2012) Livscyklusvurdering og samfundsøkonomisk vurdering af forskellige alternativer for håndtering og behandling af gipsaffald. Danish Environmental Protection Agency Report, Miljøprojekt nr. 1410, 2012. In Danish.
- Martinez-Sanchez, V. and Møller, J. (2011). LCA on the prevention of unsolicited mail in the Vestforbrænding municipalities. Technical Report for Vestforbrænding, Technical University of Denmark, Department of Environmental Engineering, Kgs. Lyngby.



RECENT COURSES AND WORKSHOPS

- PhD Course: “A guided tour of Essential Statistical Methods for Environmental Scientists”, Roskilde University, January 2014.
- Workshop on Life-Cycle Sustainability Assessment, Gothenburg, August 2013.

- PhD Course: “Advanced LCA – Consequential modelling, EIO, LCA, iLUC, and rebound effects”. Aalborg University, October 2012.
- PhD Course: “Academic Writing”, Technical University of Denmark, October 2013.
- Course: “Environmental and Natural Resource Economics”, University of Copenhagen (Department Institute of Food and Resource Economics), April-June, 2012.
- Course: “Life cycle costing - theory and practice”, BSRIA Research and Consultancy Organization (Bracknell, UK) March 2012.
- PhD Course: “Teaching and Learning (Module 1)”, Technical University of Denmark, April 2012.
- PhD Course given by the University of Wien: “Material Flow Analysis (STAN)” Technical University of Denmark, May 2010.



| PRESENTATIONS IN INTERNATIONAL CONFERENCES

- ISWA World Congress 2019. “DECISIVE Decision Support Tool” Bilbao, October 2019.
- ECI Conference on “LCA and other assessment tools for waste management and resource optimization” with the presentation: “Optimization of municipal solid waste management using externality costs”. Cetrato (Calabria), June 2016.
- Martínez-Sánchez, V., Astrup T. Life Cycle Costing for Solid Waste Management Systems in EASETEHC. Poster Presentation in DTU Sustain Conference 2015. 17th December 2015.
- The 5th International Conference on Engineering for Waste and Biomass Valorisation with the presentation: “Cost Assessment Model for Solid Waste Systems and Technologies”. Rio de Janeiro, August 2014.