Cristina Madrid-Lopez, PhD

CV February 2024

PI, Living Lab on Environmental Modelling for Energy Policy (LIVENlab)
Junior Group Leader, SosteniPra
Institute for Environmental Science and Technology (ICTA)
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Appointments

ICTA. SosteniPra group. JIN Junior Group Leader	2021-Present
ICTA. IASTE Group. Senior researcher	2017-2021
Yale University. Center for Industrial Ecology. Marie Curie Fellow.	2015-2017
Liphe4 Scientific Society. Researcher.	2012-2014
UAB. Department of Applied Economics. FPU Predoctoral Researcher.	2007-2011
ICTA-UAB. Junior Researcher	2005- 2007

Certifications

Independent Researcher (I3/R3). 2023
Ministry of Universities, Government of Spain

Associate Professor (Acreditació de Recerca) 2022
Catalan Agency for University System Quality (AQU)

Assistant Professor (Inform de Lector) 2019
Catalan Agency for University System Quality (AQU)

Education

PhD in Environmental Science (Ecological Economics and Environmental Management) 2014
Universitat Autònoma de Barcelona (UAB). Institute for Environmental Science and Technology (ICTA).

PhD Thesis: The Water Metabolism of Socio-ecosystems: Epistemology, Methods, and Applications. 2014
MPh (DEA) Thesis: Virtual Water Flows and Water Metabolism of Agricultural Trade in Andalusia. 2007

Postgraduate Degree in Science Pedagogics. (1-year program) 2007
UAB. Institute for Education Science.

Postgraduate Degree in International Comparative Rural Policy Studies. (2-year program) 2007
Universitat Autònoma de Barcelona, University of Guelph (Canada) and Brandon University (Canada).
Joint program of ten international universities.

"Licenciatura" in Environmental Sciences. (5-year BSc+MSc equivalent) 2004
School of Experimental Sciences. Pablo de Olavide University. Seville, Spain.

Thesis: New Ideas for Old Problems: An Application of the Virtual Water Concept to Andalusian Tomato Exports (In Spanish).

Languages

Spanish. Native **English** C2. **Catalan**. C1. **German** B2. **Dutch** A2.

CV summary

I am junior group leader at the Institute for Environmental Science and Technology, Universitat Autònoma de Barcelona (ICTA-UAB). At ICTA, ***I lead a research lab on sustainability assessment for energy transition*** called the LIVEN lab. The lab is currently formed by eleven people with diverse backgrounds in biology, economics, engineering, computer science and political science. I hold a PhD with European recognition (***Doctorat Europeu***) which I completed with the support of a ***grant from the FPU program***.

I hold the accreditations as ***assistant professor (Informe de Lector)*** and ***associate professor (Acreditació de Recerca)*** of the Catalan University Quality Agency (AQU) as well as the ***certification as independent researcher (I3/R3)*** of the Spanish Ministry of Universities.

With my research I seek to understand if and how innovative technologies contribute to reach sustainable development objectives, with a special focus on renewable energy technologies. More concretely, I ***assess the environmental and socio-economic trade-offs of different energy system configurations***. My work has a transdisciplinary and challenge-oriented approach that integrates concepts and methods has a strong component of data science and modelling. This research is ***funded by the European Commission*** and the ***Spanish Research Agency*** with five competitive grants.

My current research deals with four aspects of the energy transition. First, the socio-economic and environmental tradeoffs of wind energy development in the European Union (project JUSTWIND4ALL). Second, the participatory design of energy pathways that are economically viable and environmentally feasible in Portugal (SEEDS). Third, the dependency on international markets of the energy transition in Spain (ETOS). And fourth, the regional impact distribution according to different narratives of energy transition in Spain (LIVEN).

I also have ***two side research interests***. First, I am interested in understanding how agriculture can help in the ecological transition. I have done some work assessing the trade-offs of water and food security for rural and urban development (in collaboration with the ERC project URBAG). Second, I work to understand the role of citizen science to collect data about resource use in public services and to increase environmental awareness in primary school children (with the CARE and CCB30 projects).

The results of this research are covered in scientific articles, mostly in ***Q1 journals, PhD thesis, MSc theses***, invited talks, ***presentations in national and international conferences*** and ***invited contributions*** of related encyclopedias, among others. Besides, I also seek to produce other academic outputs including working protocols, maps, datasets, and open-source software. I would highlight our python-based open-source tool ENBIOS (environmental and bioeconomic system assessment), the adaptation of the energy system optimization model Calliope for Spain or a regionalized inventory of renewable energy technologies in Spain.

I put efforts in ***participating actively in international research networks***. I currently am representative for Spain in the COST action NEXUSNET, where I am member of the management committee and part of WG1 on modelling. With this group, we are drafting a white paper on water-food-energy nexus modelling. I am also an elected board member of the International Society for Industrial Ecology (ISIE), where I am working to create an open modelling community. I became a member of ISIE during my ***2.5-year postdoctoral training at Yale University***, which was funded by a ***Marie Curie International Outgoing Fellowship***. I have also enjoyed predoctoral research stays at ***King's College London*** (UK, 4 months), ***Twente University*** (NL, 7 Months) and the Center for Prospective Studies (Ecuador, 1.5 months)

I have been involved in ***official program*** teaching in both, economics and engineering at UAB and ESADE business school. Currently, I am ***responsible*** for ***two graduate*** and ***one undergraduate*** courses and collaborate as lecturer in another graduate course. All courses are taught in English and average about 12 ECTS. Since 2020, I supervised ***three graduated PhD students*** and ***11 MSc students***. I currently supervise three PhD students more. I participated in a ***teaching exchange project*** and led the design of a ***teaching innovation project***.

My teaching experience also includes participation in ***nonacademic training*** such as a MOOC in the Coursera Platform, a summer school series or the design and implementation of a ***course for public administration*** technical personnel. Seeking to improve my teaching skills, I have completed UAB's, 7-ECTS-credit ***training program on Higher Education (FDES)***, as well as followed a few courses on ***new technologies*** and ***gender perspective*** in teaching.

Part of my efforts are devoted to share my contributions with a non-academic public. Among others, I collaborate with policy makers at the Spanish and Catalan administrations, volunteer as mentor for women in science, and participate in science outreach programs "Crazy about science" and "Experimenta Challenge" for high-school children. I also frequently participate in talks and seminars for practitioners and industries.

Please look at the following pages for more details.

Publications

Articles with peer review

	Article	Year	IF
1.	Martin N, Zinck Thellufsen J, Talens Peiró L, Chang M, Cloarec M, **Madrid-López C**. The many faces of heating transitions. Deeper understandings of future systems in Sweden and beyond. Energy, 290: 130264.	2024	9
2.	Untereiner E, Toboso-Chavero S, Vázquez FariñasA, **Madrid-López C**, Villalba G and Gabarrell Durany X. "Predicting willingness to pay and implement different rooftop strategies to characterize social perception of climate change mitigation and adaptation. Environmental Research Communications, in press.	2024	2.9
3.	Toboso-Chavero, S., Montealegre, A. L., García-Pérez, S., Sierra-Pérez, J., Muñoz-Liesa, J., Gabarrell Durany, X., Villalba, G., **Madrid-López C**. The potential of local food, energy, and water production systems on urban rooftops considering consumption patterns and urban morphology. Sustainable Cities and Society, 95: 104599.	2023	10.696
4.	Martin N**,** Talens Peiró L, Villalba Méndez G, Nebot-Medina R, **Madrid-López C**. An Energy Future Beyond Climate Neutrality: Comprehensive Evaluations of Transition Pathways. Applied energy 331:120366.	2023	11.446
5.	Süsser D, Martin N, Stavrakas V, Gaschnig H, Talens-Peiro L, Flamos A, **Madrid-López C**, Lilliestam J. Why energy models should integrate social and environmental factors: Assessing user needs, omission impacts, and real-word accuracy in the European Union. Energy Research and social Science, 92:102775.	2022	8.514
6.	Martin N, **Madrid-López C,** Villalba Méndez G, Talens Peiró L. New Techniques for Assessing Critical Raw Material Aspects in Energy and Other Technologies. Environmental Science and Technology, 56 (23):17236:6.	2022	11.357
7.	Martin N, **Madrid-López C,** Villalba Méndez G, Talens Peiró L. Overlooked factors in predicting the transition to clean electricity. Environmental Research: Infrastructure and Sustainability,2: 021005.	2022	New journal
8.	Reyes-García V, Graff L, Junqueira AB, **Madrid-Lopez C.** Decarbonizing the academic sector: Lessons from an international research Project. Journal of Cleaner production, 368: 133174.	2022	11.072.
9.	Felipe-Falgàs P, **Madrid-Lopez C,** Marquet O. Assessing micromobility environmental performance using LCA and self-reported modal change. The case of shared e-bikes, e-scooters, and e-mopeds in Barcelona. Sustainability 14(7), 4139.	2022	3.889
10.	Mendoza Beltran A, Jepsen K, Rufí-Salís M, Ventura S, **Madrid Lopez C**, Villalba G. Mapping direct N2O emissions from peri-urban agriculture: The case of the Metropolitan Area of Barcelona. Science of the Total Environment, 822:153514.	2022	10.754
11.	Talens Peiró L, Martin N, Villalba Méndez G, **Madrid-López C.** Integration of raw materials indicators of energy technologies into energy system models. Applied Energy, 307:118150.	2022	11.446
12.	Vázquez, I., Madrid, C., Chávez, A., & Villalba, G. (2022). Lifecycle carbon footprint: the case study of the electricity use in Puebla, Mexico. Revista Internacional de Contaminación Ambiental, 38, 199-217.	2022	0,465
13.	Di Felice LJ, Cabello V, Ripa M, **Madrid-Lopez C.** Quantitative Storytelling: Science, Narratives, and Uncertainty in Nexus Innovations. Science, Technology, & Human Values, 1-28.	2021	3.634
14.	Toboso-Chavero S, **Madrid-López C,** Villalba G, Gabarrell Durany X, Hückstädt AB, Finkbeiner M, Lehmann A. Environmental and social life cycle assessment of growing media for urban rooftop farming. The International Journal of Life Cycle Assessment,26: 2085–2102.	2021	5.257

	Article	Year	IF
15.	Langemeyer J, **Madrid-Lopez C,** Mendoza Beltran, Villalba Mendez G. Urban agriculture — A necessary pathway towards urban resilience and global sustainability? Landscape and Urban Planning. 210, 104055.	2021	8.119
16.	Toboso-Chavero S, Gabarrell Durany X, Villalba G, **Madrid-López C.** More than the sum of the parts: System analysis of the usability of roofs in housing estates. Journal of Industrial Ecology 25(5): 1284-1299.	2021	7.202
17.	Toboso-Chavero S, **Madrid-López C,** Gabarrell Durany X, Villalba G. Incorporating user preferences in rooftop food-energy-water production through integrated sustainability assessment. Environmental Research Communications, 3-6: 5001.	2021	6.395
18.	Salmoral Portillo G, Khatun K, Llieve F, **Madrid-Lopez C.** Agricultural development in Ecuador: A compromise between water and food security? Journal of Cleaner Production 202: 779-791.	2018	6.395
19.	Northey, S.A., **Madrid-Lopez, C**., Haque, N., Mudd, G.M., Yellishetty, M., 2018. Production weighted water use impact characterisation factors for the global mining industry. Journal of Cleaner Production 184:788–797.	2018	6.395
20.	**Madrid-Lopez C** & Giampietro M. The water metabolism of socio-ecological systems: Reflections and a conceptual framework. Journal of Industrial Ecology 19(5): 853–865.	2015	3.265
21.	Cabello-Villarejo V & **Madrid-Lopez C.** Water use in arid rural systems and the integration of water and agricultural policies in Europe: the Case of Andarax River Basin. Environment, Development and Sustainability 16(4): 957–975.	2014	
22.	**Madrid C**, Cabello V, Giampietro M. Water-use Sustainability in Socio-Ecological Systems: a Multi-scale Integrated Approach. Bioscience. 63(1):14-24.	2013	5.439
23.	Velázquez E, **Madrid C** and Beltrán MJ. Rethinking the Concepts of Virtual Water and Water Footprint in Relation to the Production-Consumption Binomial and the Water-Energy Nexus. Water resources Management, 25: 2. 743-761.	2011	2.054
24.	Tabara JD, Roca E, **Madrid C**, Valkering P, Wallman P & Weaver P. Participatory Integrated Sustainability Assessment of Water Systems. Lessons from the Ebro River Basin. International Journal on Innovation and Sustainable Development 3:1. 48-69.	2008	
25.	**Madrid C** and Velázquez E. Water Metabolism and Virtual Water Flows: An Application to the Fruit and Vegetable Sector in Andalusia, Spain. (Spanish) Revibec Vol. 8: 29-47.	2008	

Articles in preparation or under review

1.	**Madrid-López C**, Toboso-Chavero S, Gilabert J, Ventura S, Domene E, Villalba G. Reconciling urban agriculture and water policy: a georeferenced assessment of water metabolism. Invited to Special Issue in Environmental Research Letters.	In prepar
2.	**Madrid-López C**, de Tomás Pascual A, Sierra Montoya M, Pfenninger S, Süsser D, Llliliestam J. The trade-offs of the energy transition in Europe: relating market, people and industry views to the global option space. For submissions to Joule.	In prepar
3.	**Madrid-López C.** Not ageing that well, why shale gas is still not an option for energy security in Europe. For submissions to Ecological Economics.	In prepar
4.	**Madrid-López C**, Navarrete T, Muttel C, Sacci R. When the context matters: dynamic definition of global warming potential. For submission to Environmental Science and Technology.	In prepar
5.	**Madrid-López C**, Rufí-Salís M, Arcas V, Muños J, Sierra M, de Tomás A. Industrial Ecology. Invited entry in the Oxford Encyclopedia of Sustainability.	In prepar
6.	**Madrid-López C**, Perez Sánchez L, Marot S, de Tomás Pascual A, Sierra Montoya M, Soleymani R. Life cycle Assessment and MuSIASEM: Two complementary sustainability assessment methods. To be submitted to the journal of Industrial Ecology.	In prepar

7. **Madrid-López C**, Sierra Montoya M, Ruiz C. Space matters: a regionalized assessment of environmental trade-offs of the energy transition in Spain and Catalunya**.** To be submitted to Global Environmental Change. In prepar

8. Sierra-Montoya M, Muñoz J, **Madrid-López C.** High-resolution regionalized distribution of wind energy impacts in Europe. To be submitted to Joule. In prepar

9. De Tomas Pascual A, Soleymani R, Pérez sánchez L, Villalba G, **Madrid-López C.** Analyzing the environmental option space of suboptimal energy transition scenarios. To be submitted to Joule In prepar

10. Caballeros-Finkelstein A, Ramos-Martin J, **Madrid-López C.** An energy transition without externalization? Implications of internationally traded resources for the success of the energy transition in Spain. To be submitted to Ecological Economics. In prepar

Book Chapters

1. Rufí-Salís M, Toboso-Chavero S, Rieradevall J, Talens-Peiró L, Petit-Boix A, Villalba G, **Madrid-López C**, Gabarrell X. Circular Economy Principles in Urban Agri-food Systems: Potentials and Implications for Environmental Sustainability. In book: "A Systemic Transition to Circular Economy - Business and Technology Perspective" from the Series: "Greening of Industry Networks Studies" In press

2. **Madrid-López C**. Water Footprint. Invited entry in the Elgar Encyclopedia of Ecological Economics. 2023

3. **Madrid-Lopez C** & Giampietro M. The water grammar. Chapter 9 in: Giampietro M, Aspinall R, Ramos Martín J and Bukkens S (ed). Resource Accounting in Sustainability Assessments: Exploring the nexus between land, water, food, energy, wealth and population. Routledge. 2014

4. **Madrid-Lopez C**, Cadillo Benalcazar J, Diaz Maurin F, Kovacic Z, Serrano Tovar T, Giampietro M, Aspinall R, Ramos-Martin J. Punjab State: India's Grain Basket. Chapter 13 in: Giampietro M, Aspinall R, Ramos Martín J and Bukkens S (ed). Resource Accounting in Sustainability Assessments: Exploring the nexus between land, water, food, energy, wealth and population. Routledge. 2014

5. Serrano Tovar T, Cadillo Benalcazar J, Diaz Maurin F, Kovacic Z, **Madrid-Lopez C**, Giampietro M, Aspinall R, Ramos-Martin J. Mauritius: The Idyllic Sugarcane Island. Chapter 12 in: Giampietro M, Aspinall R, Ramos Martín J and Bukkens S (ed). Resource Accounting in Sustainability Assessments: Exploring the nexus between land, water, food, energy, wealth and population. Routledge. 2014

6. Diaz Maurin F, Cadillo Benalcazar J, Kovacic Z, **Madrid-Lopez C**, Serrano Tovar T, Giampietro M, Aspinall R, Ramos-Martin J. South Africa's Emerging Economy. Chapter 14 in: Giampietro M, Aspinall R, Ramos Martín J and Bukkens S (ed). Resource Accounting in Sustainability Assessments: Exploring the nexus between land, water, food, energy, wealth and population. Routledge. 2014

Reports

1. **Madrid-López C,** de Tomás Pascual A, Sierra-Montoya M, Soleymani-Fard R, Nebot-Medina R. ENBIOS as MuSIASEM checker. Deliverable 2.1. SEEDS Project. forth

2. de Tomás Pascual A, Sierra-Montoya M, Nebot-Medina R, Soleymani-Fard R, **Madrid-López C**. Socio-environmental metabolic pattern and associated impacts of energy system scenarios. Deliverable 2.2. SEEDS project. 2023

3. **Madrid López C,** Pérez Sánchez C, Schibline A, Sierra Montoya M, Harasta N, Cassinello M, Soleymani-Fard R, Ceglarz A. Report on identification of barriers and information needs for ENBIOS modelling in the Catalan case study. JUSTWIND4ALL project reports. 2023

4. Pérez Sánchez C, Sierra-Montoya M, & **Madrid-López C**. (2023). Identificación de necesidades de información de actores clave para la transición energética: Reflexionando sobre los aspectos sociales y ambientales en modelización. M18 LIVEN Project. 2023
5. **Madrid López C,** Talens Peiró L, Martin N, Süsser D, Lilliestam J, Stavrakas V, Flamos A. Model development to match ENVIRO, QTDIAN and ATOM to user needs. Deliverable 2.4. Sustainable Energy Transitions Laboratory (SENTINEL) project 2022
6. **Madrid-López C,** Talens-Peiro L. Martin N, Nebot R. The ENBIOS Module. Deliverable 2.2. Sustainable Energy Transitions Laboratory (SENTINEL) project 2021
7. **Madrid-López C,** Diana Süsser; Vassilis Stavrakas; Johan Lilliestam; Alessandro Flamos; Laura Talens-Peiro; Nicholas Martin. Model development to match ENVIRO, QTDIAN and ATOM to user needs. Deliverable 2.4. Sustainable Energy Transitions Laboratory (SENTINEL) project 2021
8. Martin N, Talens-Peiro L Süsser D, GaschnigH, Lilliestam J, **Madrid López C**. Observed trends and modelling paradigms on the social and environmental aspects of the energy transition. Deliverable 2.1. Sustainable Energy Transitions Laboratory (SENTINEL) project (1.0). 2020
9. **Madrid-Lopez C.** "Quantitative assessment of multidimensional narratives: Participatory Sustainability analysis of shale gas extraction scenarios in the EU." MAGIC (H2020–GA 689669) Project Deliverable 6.5. ICTA-UAB, Spain. 2019
10. **Madrid-Lopez C.** Is shale gas dead? IANEX project. PIOF-GA-2013-623593. Final report. 2020
11. Giampietro M, Aspinall RJ, Bukkens SGF, Cadillo Benalcazar J, Diaz-Maurin F, Alessandro Flammini, Gomiero T, Kovacic Z, **Madrid C,** Ramos-Martín J, Serrano-Tovar T. An Innovative Accounting Framework for the Food-Energy-Water Nexus. Environment and Natural Resources Management Working Paper, 56. United Nations Food and Agriculture Organization. 2013
12. Navarro F & **Madrid C**. Analysis of the Spanish-Andalusian Virtual Water Balance Using Multi Regional Input Output. UAB, Department of Applied Economics Working Papers Series 3/12. 2012
13. **Madrid C** and Cabello V. Re-Opening the Black Box in Societal Metabolism: The Application of MuSIASEM to Water. ICTA Working Papers on Environmental Sciences. 2011
14. Tabara JD, Roca E & **Madrid C**. Developing New Methods and Tools for the Integrated Sustainability Assessment of Water. The MATISSE Project and the Ebro River Basin. Matisse Working papers, 8. 2006
15. Tabara JD, Elmqvist B, Ilhan A, **Madrid C**, Olson L, Schilperoord M, Valkering P, Wallman P & Weaver P. Participatory Modelling for the Integrated Sustainability Assessment of Water: the World Cellular Model and the MATISSE Project. Matisse Working papers, 9. 2006
16. Boada M, Canto S, Cazorla-Clariso X, Costeja M, Domene E, Domenech L, Gomez FJ, Lopez F, **Madrid C**, Mayo S, Meerganz G, Miro N, Muñiz S, Roca E, Sauri D, Tabara JD & von Igel W. Sustainable Water Management in Spain According to the Water Framework Directive and Agenda 21. Keys of Internal Basins of Catalonia. LIFE Survey Report. 2005

Data

1. **Madrid-López C**, Enervoldsen P, Miljanović Rusan A, Petrick K, Sierra-Montoya M, & Xydi G. Open access technical database to advance impact assessment and energy modelling for wind energy. Database Structure. Deliverable 1.1. (Version Draft) 2023
2. **Madrid-López C**. Calliope-ENBIOS process Dictionary (Version 2) [Data set]. 2022
3. **Madrid-López C**. CORINE land cover - Catalan land cover taxonomy dictionary for metropolitan Barcelona. (Version 1) [Data set]. 2022
4. Martin N, **Madrid López C**, Talens Peiró L. Dictionary of ENBIOS processors, Euro-Calliope inputs and ecoinvent .spold filenames (1.2) [Data set]. 2021
5. **Madrid López C**, MAGIC Deliverable D6.5: Shale gas development in the EU 10Km radius well grid scenario (Version 1) Zenodo. 2019

Software/Scripts

1. **Madrid-López C**, Soleymani R, de Tomás-Pascual A, Sierra-Montoya M. ENBIOS 2: Environmental and socioeconomic system analysis.
2. **Madrid-López C.** Watermet: a workflow for EU-Water-Framework-Directive compliant regionalized assessment of periurban agricultural systems.
3. **Madrid-López C.** IANEX: a workflow for assessing the economic viability and environmental feasibility of shale gas implementation scenarios in Europe.

Research Projects

Direction of projects – Current total funds managed: 965k€ (** finished)

1. **JUSTWIND4ALL**: *Just and effective governance for accelerating wind energy.* 2022-2025
   Funded by: Horizon Europe-CL5-2022-101083936
   Managed Budget: 399,375 Euros
   Total Budget: 2.9 Mill Euros
   Role: Partner PI, WP 1 leader.
2. **CCS-B30**: *Ciencia ciudadana y sostenibilidad en el territorio de la B30.* 2023-2025
   Funded by: Spanish foundation for Science and Technology (FECYT).
   Total Budget: 55,000 Euro
   Role: PI.
3. **ETOS**: *The sustainable Energy Transition in Open Source* 2022-2024
   Funded by: Agencia Estatal de Investigación, TED 2021
   Budget: 180,000 Euros. Role: PI
4. **LIVEN:** *Living lab on environmental assessment for energy modelling.* 2021-2024
   Funded by: Agencia Estatal de Investigación, Retos JIN, PID2020-119565RJ-I00.
   Budget: 181,500 Euros. Role: PI
5. **SEEDS:** *Stakeholder-Based Environmentally Sustainable and Economically Doable Scenarios for the Energy Transition.* 2021-2024
   Funded by: CHIST-ERA-19-CES-004. Agencia Estatal de Investigación. PCI2020-120710-2.
   Managed Budget: 149,986 Euros
   Role: Partner PI. WP2 leader.
6. **CARE**: *Citizen Arenas for improved Resources management & Environmental quality.* 2022-2023
   Funded by: ECIU-SMARTER project. EC- H2020-101016888.
   Budget: 22,000 Euros
   Role: Partner PI, Location Coordinator
7. **SENTINEL:** *Sustainable energy Transitions laboratory.* 2019-2022
   Funded by: European Commission, Horizon 2020.
   Managed Budget: 396,379 Euros
   Total Budget: 4.9 Mill Euros
   Role: Partner PI. WP2 leader.
8. **IANEX**: *Integrated Assessment of the Water-Energy Nexus. Hydraulic Fracturing*. 2015-2018
   Funded by: European Commission, 7th Framework Program, Marie Curie Program.
   Budget: 254,474 Euros
   Role: PI, Researcher.

Participation in Research Projects

1. **NEXUSNET:** *WEF nexus for a low-carbon economy in Europe and beyond.* 2021-present
   Funded by: COST, European Cooperation in Science and Technology.
   Action CA20138
   Roles: Spanish representative in Management Committee
   Member of WG1: Monitoring and modelling the Nexus

2. *Municipis resilients a les pandèmies mitjançant el nexe de l'agricultura de proximitat, energia, aigua i residus. Del pilot al municipi.* 2021-2022
   Funded by: Government of Catalonia.
   Role: Responsible for participatory rooftop use analysis.

3. **URBAG:** *Urban Vegetation and Agriculture.* 2019-2022
   Funded by: European Commission, ERC Consolidator.
   Role: External collaborator – Water metabolism.

4. **MAGIC:** *Moving Towards Adaptive Governance in Complexity.* 2016-2019
   Funded by: European Commission, Horizon 2020 Program, Water-2b.
   Roles:
   Part of the proposal writing coordination team
   Case study coordinator: Shale Gas
   Data researcher
   Engagement organizer

5. *Assessment of European Agriculture Water Use and Trade under Climate Change.* 2012-2015
   Funded by: European Cooperation in Science and Technology (COST).
   Action ES1106.
   Role: Invited expert in Group 3 –Sustainability Assessment.

6. *Sharing Water and Environmental Values: Peace Construction Efforts in Cyprus*. 2011-2012
   Funded by: International Catalan Peace Institute (ICIP). Government of Catalonia, Spain.
   Role: Water footprint expert.

7. *Política Pública y Análisis Económico* 2010-2012
   Funded by the Spanish Ministry of Education and Science

8. *CREPE: Cooperative Research on Environmental Problems in Europe*. 2008-2010
   Funded by: European Commission, 7th Framework Program
   Role: Researcher. Analysis of virtual water in Spain.

9. *MATISSE: Methods and Tools for Integrated Sustainability Assessment* 2005-2006
   Funded by: European Commission, 6th Framework Program.
   Role: Research assistant. Analysis of water use. Facilitation of workshops.
   Relevant: Water footprint at river basin level. Integrated water resources management. Use of participatory GIS. Focus group development and analysis.

10. *AQUAMED: Environmental Costs of Water Use in Menorca.* 2005-2006
    Funded by: European Commission, INTERREG BIII. Program.
    Role: Research assistant. Analysis of environmental costs of water supply.

11. *HarmoniCOP: Harmonizing Collaborative Planning* 2005
    Funded by: European Commission, 5th Framework Program.
    Role: Research assistant. Focus group organization, facilitation, and analysis.
    Relevant: Integrated water resources management. Agenda 21. Water Framework Directive 2000/60/EC.

12. *LIFE Water Agenda* 2005
    Funded by: European Commission, LIFE04/ENV Program.
    Role: Research assistant, writing about the relevance of virtual water analysis for water management.

Contracts

1. *Development of Methodologies for the Biophysical Analysis of Prospective Planning.* 2014
   Funded by: Department of Planning and Development (SENPLADES). Government of Ecuador.
   Role: Researcher, coordinator water metabolism assessment team.

2. *Citrus-ProPlanet. Assessing the Water Footprint of Citric Fruits Sold by REWE.* 2013-2014
   Funded by: REWE supermarket chain.
   Role:
   Quantitative analysis of water use.
   Preparation, facilitation, and analysis of stakeholder workshops.

3. *The Water-Human Activity-Food-Land-Energy Nexus*. 2012-2013
   Funded by: FAO and German Society for International Cooperation (GIZ).

Role: Water Assessment and Indian Punjab WEF Nexus Case Study Coordinator.

4. *Water Satellite Accounting in Catalonia*. 2010-2011
Funded by: Statistics Institute (IDESCAT). Government of Catalonia, Spain.
Role: Research assistant. Analysis of water use in agriculture.

5. *GHG Emission Satellite Accounting in Catalonia*. Catalan Statistics Institute 2007
Funded by: Statistics Institute (IDESCAT). Government of Catalonia, Spain.
Role: Research assistant

Research Proposals Under Preparation

1. *Understanding today's energy transition environmental constraints to avoid them in the future.*
Applying to: European Research Council, Consolidator grant.

Competitive Grants, Fellowships and Awards

European Commission
Marie Curie International Outgoing Fellow.
2,5-year postdoctoral training at the School of the Environment, Yale University 2015-2017
Activity: Assessing patterns of economic viability and the environmental feasibility of shale gas in Pennsylvania, USA.
1-year postdoctoral training at the institute of Environmental Science and Technology, Universitat Autònoma de Barcelona 2017-2018
Activity: Analyzing shale gas development scenarios in Europe.

Hispano-American Input-Output Analysis Society (SHAIO)
Emilio Fontela Prize for Young Researchers (shared with F. Navarro). 2011
Award for best student paper on the SHAIO conference.
Paper Title: Analysis of the Spanish-Andalusian Virtual Water Balance Using Multi-Regional Input-Output Analysis (In Spanish).

Government of Spain
FPU2006. Fellowship of the National Faculty Training Program 2007- 2011
Budget: ~100,000 Euro.
Activity: Writing PhD thesis "The water metabolism of socio-ecosystems."

VIAJES 2009. Research stays grants. (Stay at King's College) 2009
Budget: ~ 7,000 Euro.

Government of Catalonia
BE-2007. Research Stay Fellowship. (Stay at Twente University) 2007
Budget: ~ 20,000 Euro.

Research Abroad

Yale University. School of Forestry and Environmental Studies. Center for Industrial Ecology. New Haven, CT. USA. Jan 2015 – Jul 2017
Postdoctoral fellow
30 months
Activity: Study the socio-economic metabolism of the shale gas sector in Pennsylvania, USA.

Universidad Amazónica Ikiam. Centro de Prospectiva Estratégica. Quito, Ecuador. June-July 2014
Predoctoral visitor
1.5 months
Activity: Leader of water assessment, researcher on water metabolism assessment.

King's College London. Department of Geography. London, United Kingdom. Sept-Dec 2009
Predoctoral visitor
4 months

Activity: Definition of the conceptual framework of water metabolism joining engineering, economics, and geopolitics.

University of Twente. Department of Water Engineering and Management. Enschede, The Netherlands. Oct 2007-May 2008
Predoctoral visitor
7 months
Activity: Analyzing the water demands of vegetable production for export in Andalusia, Spain.

Teaching

Graduate courses

Environmental Sustainability of Processes and Products (Graduate Core, 6 ECTS, Spring, English) Since 2019/20 Ongoing
MSc in Biological and Environmental Engineering
Department of Chemical, Biological and Environmental Engineering.
Universitat Autònoma de Barcelona

Renewable Energy and Decarbonization (Graduate, 4 ECTS, Spring, English) Since 2023/24 Ongoing
MSc in Sustainability Management
ESADE business school. Universitat Ramón Llull.

Ecological Economics (Graduate Core, 1 ECTS, Spring, English) 2022/23
MSc on Interdisciplinary Studies in Environmental, Economic and Social Sustainability
Institut de Ciència i Tecnologia Ambientals. Universitat Autònoma de Barcelona.

Industrial Ecology (Graduate, 1.5 ECTS, Fall, English) 2020/21 2021/22
MSc on Interdisciplinary Studies in Environmental, Economic and Social Sustainability
Institut de Ciència i Tecnologia Ambientals. Universitat Autònoma de Barcelona

Undergraduate courses

Environmental Sustainability Perspectives (Undergraduate, 2 ECTS, Spring, English) 2022/23 Ongoing
Bachelor in Business Administration program (BBA)
Joint program in BBA and Bachelor in Artificial Intelligence (BAI)
ESADE business school.
Universitat Ramón Llull.

Introduction to Economics and Environmental Economics. (Undergraduate, 3 ECTS) 2006/07 2008/09 2009/10
Bachelor in Environmental Sciences.
Department of Applied Economics
Universitat Autònoma de Barcelona.

Teaching innovation and cooperation projects

Capacity Building for Common Management of Water Resources and the Environment. 2012
Funded by: Spanish Agency for International Development and Cooperation (AECID).
Roles: Lecturer of the course: Water footprint and virtual water trade
Student supervision in Colombia.

Proyectos multi-asignatura como herramientas de abstracción e integración de contenidos (AICO) en el marco de los ODS. 2020
Project approved for recognition but not funded and withdrawn
Role: Proposal writing and coordination

Courses on teaching skills attended

Higher Education Teacher-Training Program. UAB (7 ECTS credits) 2020-2021
Activity 1. Teaching in the new teaching-learning context
Activity 2. Oral discourse in the academic ambit: practicums.
Activity 3: How to evaluate university-students' learning.
Activity 4: Teaching-Innovation Experiences.

Activity 5: Class observation.
Activity 6: Course Planning.
Activity 7: The Teaching File.

TIC resources and applications to improve and optimize teaching and learning processes (10 h) *2020*
Teaching and Innovation Unit. UAB.

How to include gender perspective in teaching (8h) *2019*
Teaching and Innovation Unit. UAB.

Other teaching

Module 5. The challenge of water accounting 2017- present
MOOC: Sustainability of Social-Ecological Systems: Nexus between Water, Energy and Food
Universitat Autònoma de Barcelona for Coursera.

Integrated Assessment of the WEF Nexus. (Graduate) 2012 to 2016
Liphe4 Scientific Society Summer schools. Editions

PhD Students

Graduated

1. ***Nick Martin***. Expanding the role of environmental, material and bio-economic factors in energy transition decision making. Graduated February 2023.
   Qualification: A with Honors.
   Current position: postdoc fellow, Universitat Autònoma de Barcelona, Spain.
2. ***Susana Toboso Chavero***, Integration of the food, energy and water nexus on city's rooftops: the Roof Mosaic. Graduated September 2021.
   Qualification: A with Honors. International recognition.
   Current position: Postdoctoral Fellow. Erasmus Rotterdam University, The Netherlands.
3. ***Irais Argelia Vázquez***. Análisis regional sistémico para evaluar el impacto ambiental y las implicaciones en la política de cambio climático. El caso de estudio de Puebla, México. Graduated January 2021.
   Qualification: A with Honors. International recognition.
   Current position: Senior Lead at Climate Bonds Initiative, Mexico.

Ongoing

4. ***Alejandro caballeros Finkelstein***. "Artificial intelligence, climate modelling and energy optimization: how to integrate them to support the energy transition." Defense by December 2026. Funded by the project SEEDS.
5. ***Cristina Pérez-Sanchez***. "The role of rural energy communities in the energy transition in Spain." Defense by July 2026- Funded by a FPU fellowship, Government of Spain.
6. ***Miquel Sierra Montoya.*** "How can socio-environmental modelling help to overcome barriers in the implementation of wind energy." Defense by December 2025. Funded by the project JUSTWIND4ALL.

MSc Students

Ongoing

1. ***Alexander de Tomás Pascual.*** There is no plan A. Analyzing the environmental option space of suboptimal energy transition scenarios. MSc EBA. UAB. Evaluation in February 2024.
2. ***Pablo García Casado.*** Are the new bio-dissolvents more sustainable than traditional ones? MSc EBA. UAB. Evaluation in June 2024.
3. ***Luiggi Ballardo.*** Analyze the life cycle impacts of water use in schools with a citizen science perspective. MSc ISAES. UAB. Evaluation in June 2024.

4. ***Faisal Qadir.*** Develop a new LCIA method that is compatible with the environmental evaluation of renewable energy project permitting. MSc ISAES. UAB. Evaluation in June 2024.
5. ***Yuyang Teng.*** Analyzing the energy transition in urban agriculture in AMB. MSc ISAES. UAB. Evaluation in June 2024.

Graduated

6. ***Camilo Ruiz***. Comparing onsite and offsite environmental impacts of the energy transition in Spain. MSc ISAES. ICTA-UAB. Graduated September 2023. LikedIn profile.
7. ***Maria Cassinello***. The treatment of biodiversity in the evaluation of renewable energy projects in Spain. MSc ISAES. ICTA-UAB. Graduated in September 2023. LinkedIn profile.
8. ***Nicole Harasta***. Offshore Wind Farm Planning and Socioecological trade-offs: Wake-Induced Primary Productivity Disruptions. MSc ISAES. ICTA-UAB. Evaluation in June 2023. LinkedIn profile.
9. ***Alejandro Caballeros***. An energy transition without externalization? Implications of CO2 emissions embodied in international trade for the success of the PNIEC scenarios. MSc ISAES. ICTA-UAB. Graduated June 2023. LinkedIn Profile.
10. ***Aina Brichs***. Scenarios of energy transition in Spain with Calliope. MSc Modelling for Science and Engineering. Department of Mathematics, UAB. Graduated June 2022. LinkedIn profile.
11. ***Marie Cloarec***. Environmental performance of future integrated district heating systems: A case study for Sweden. Graduated 2021. LinkedIn profile
12. ***Friedrich Brämer***. The material dependency of photovoltaics in the EU Energy Roadmap 2050. Graduated 2021. LinkedIn profile
13. ***Joaquin Amenabar***. Life cycle assessment of energy planning: environmental impacts of the Spanish electricity generation 2015-2030. Graduated 2021. LinkedIn profile
14. ***Nicole Rodas***. Georreferencia de Flujos de Agua en la agricultura urbana de Cerdanyola del Vallès. Graduated 2020. LinkedIn profile
15. ***Laia Herranz***. The carbon footprint of Knowledge in UAB. Graduated 2020. Linked in profile

Dissemination

Invited Talks

1.	How to link energy modelling with climate modelling? A proposal from ENBIOS. NEXTGEM project hackathon, May 2023. Madrid, Spain.	2023
2.	Invited chair of the session *Modelling social factors in onshore wind energy expansion*. IIAE webinar series. March 2023. Online.	2023
3.	*The sustainable energy transition needs more than climate neutral: Perspectives from ENBIOS*. RGI Deep Dives for the Energy transition. July 2022. Online	2022
4.	*Can Urban Agriculture be Sustainable for Water Resources?* EGU21 press conference PC1. Improving food security: new techniques. April 2021. Online	2021
5.	*Social Metabolism as a Tool to Analyze Fracking.* NGO Censat Agua Viva. Colombia. Online	2016
6.	*An Industrial Ecology Analysis of Shale Gas Development.* Workshop on Shale Gas. Extractives Interest Group. Yale School of Forestry and Environmental Studies.	2017
7.	*Methods for the Analysis of the WEF Nexus.* The WEF Nexus in the Post 2015 Agenda. From Conceptual Framework to Practical Application. NGO ONGAWA (Engineering for Human Development). Madrid, Spain.	2014
8.	*Developing MuSIASEM Grammars for Water* Studies. National Water Secretariat of Ecuador. Quito, Ecuador.	2014
9.	*MuSIASEM for Water*. Workshop on Water Metabolism. Pablo de Olavide University. Seville.	2012

10. *A Study of the Water Metabolism of the Fruit and Vegetable Production and Trade in Andalusia, Spain*. Project WU0120 meeting. UK Department of Environment, Food and Rural Affairs (DEFRA), London, United Kingdom. 2009
11. *The Water Metabolism of the Economy*. Meeting of the internal project to assess the Water Footprint of Spain. Spanish Ministry of Environment. Madrid, Spain. 2009

Conference & session organization

1. Scientific Committee. International Conference on Socio-Environmental Footprints. Basque Country University. Bilbao June 2024. 2024
2. Scientific Committee. 11th International Conference of Industrial Ecology. International Society for Industrial Ecology & Leiden University. July 2023. 2023
3. Scientific Committee. Industrial Ecology Day. A 24 hour, round the globe conference. Session Chair: The challenges of the sustainable energy transition. Online. November 2022 2022
4. Session Chair. Modelling the synergies between energy and other policies. Session at the Energy Modelling Platform for Europe 2022: Acting on the ambitions to a net-zero EU: roadblocks, challenges, and opportunities. Online, October 2022 2022
5. Session Chair. Environmental assessment for energy modelling and policy. Session at the Energy Modelling Platform for Europe 2021: Re-energizing sustainable transitions in Europe. European Commission. Brussels, October 2021 2021
6. Coordinator of the Organizing Committee. 2nd ICTA Spring Symposium. 2019
7. Chair Session 3.10/4.10. Stop the Buzzword: closing persistent gaps in the implementation of the Water-Energy-Food Nexus. Water Science for Impact Conference. Wageningen, The Netherlands 2018
8. Discussion Leader. Gordon Research Seminar on Industrial Ecology. Les Diableret. May 2018. 2018
9. Organizing Chair. I Conference of the Spanish Association for Ecological Economics. Barcelona, Spain. 2011
10. Chair. Session 5.4: Social Metabolism and Water. Biannual Conference of the International Society for Ecological Economics. Applying Ecological Economics for Social and Environmental Sustainability. Nairobi, Kenya. 2008

Conference Participation

1. *A systematic study on the greenhouse emissions from a community composting system implemented in a primary school at Universitat Autònoma de Barcelona, Spain.* RETASTE conference. Rethink food resources, losses, and waste 2023. Athens, Greece. 2023
2. *Integrating environmental parameters in energy system modeling*. 11TH International Conference on Industrial Ecology. Leiden, NL. July 2023 2023
3. *Can we design urban agriculture without contradicting the water framework directive?* 11TH International Conference on Industrial Ecology. Leiden, NL. July 2023 2023
4. *On Toast - Environmental Impacts of High-Protein Options for Bread Toppings* 11TH International Conference on Industrial Ecology. Leiden, NL. July 2023 2023
5. *Environmental Assessment of Energy Planning: the case of Spain.* 11TH International Conference on Industrial Ecology. Leiden, NL. July 2023 2023
6. *An energy transition without externalization?.* International Conference on Advanced Research methods and analytics. Seville, Spain. June 2023. 2023
7. *Including balance of trade in energy system optimization: a first prototype of Calliope Spain.* International Conference on Advanced Research methods and analytics. Seville, Spain. June 2023. 2023
8. *Crowd modelling socially acceptable, techno-economically viable and environmentally feasible pathways for the energy transition.* International Conference on Advanced Research methods and analytics. Seville, Spain. June 2023. 2023

9. *Implementing community composting in primary schools: First experiences at Universitat Autònoma de Barcelona, Spain.* The 2nd International Electronic Conference on Processes. Online May 2023. 2023
10. *How sustainable is your clean energy pathway?* Exploring EU energy scenarios with ENBIOS. Gordon Research Conference on Industrial Ecology. Newry, (ME), USA. 2022
11. *Towards the integration of environmental and bio-economic indicators in energy systems modelling.* 13th International Conference on Applied Energy. Online. December 2021. 2021
12. *How clean is our clean energy system? The ENBIOS package as complement of energy system optimization models.* Energy Modelling Platform for Europe 2021: Re-energizing sustainable transitions in Europe. European Commission. Online, October 2021 2021
13. *Identifying roadblocks on the pathway to a cleaner future. Raw material supply factors in the modelling and planning of sustainable energy systems.* Presentation, 20th European Roundtable Sustainable Consumption and Production (ERSCP 2021), BIWAES 21: Advanced energy systems. Online, September 2021 2021
14. *Coupling socio-technical transitions with environmental impacts for a truly sustainable governance of energy systems.* 5th International Conference on Public Policy. Barcelona. July'21. 2021
15. *How clean is your 'clean' energy? The ENVIRO module for energy system models.* European GeoScience Union General Assembly. Online. April 2021. 2021
16. *Food vs water security in cities: A georeferenced sustainability assessment of periurban agriculture in metropolitan Barcelona using water vulnerability maps.* European GeoScience Union General Assembly. Online. April 2021. 2021
17. *Development of an environmental and Bio-economic assessment for Energy System models: the case of ENBIOS*. Energy Modelling Platform for Europe 2020: Modelling Climate Neutrality for the European Green Deal. European Commission. Online, October 2020 2020
18. *Challenges in modelling energy systems environmental impacts.* Open Energy Modelling Workshop. Berlin, Germany. January 2020. 2020
19. *Quantitative methods meet social concerns: participatory design of indicators for nexus analysis.* Water Science for Impact. Wageningen. The Netherlands, June 2018 2018
20. *The concepts of fund and flow improve the design of water indicators in Industrial Ecology.* Gordon Research Conference on Industrial Ecology. Les Diablerets, Switzerland. June 2018 2018
21. *Shale gas for a low carbon economy, the limitations we must consider.* Biennial International Workshop Advances in Energy Studies BIWAES. Napoli, Italia. September 2017. 2017
22. *An Industrial Ecology Perspective of the Future of Shale Gas in the US.* International Society for Industrial Ecology Conference. Chicago (IL), USA. June 2017 2017
23. *The Complexity of 'Fracking': An Analysis of the Shale Gas Sector that is Relevant for Decision-Making.* Biennial Conference of the International Society for Ecological Economics. Washington DC, USA. June 2016 2016
24. *Shale Gas for a Low Carbon Economy? The Limitations We Have to Consider.* Gordon Research Conference on Industrial Ecology. Stoweflake (VE), USA. June 2016 2016
25. *Embracing Complexity in Industrial Ecology: Dealing with the Water-Food-Energy Nexus.* International Society for Industrial Ecology Conference. Surrey, UK. June 2015 2015
26. *An Integrated Assessment of Spanish Strawberry Production and its Impacts*. European Geographical Union General Assembly. Vienna, Austria. April 2014 2014
27. *The Incoherence between Agriculture and Water Policies in Andalusia. A Societal Metabolism Perspective*. IV EUGEO Conference: Europe, what's next? Changing geographies and geographies of change. Rome, Italy. 2013
28. *Analizando el Metabolismo Hídrico de los Socio-Ecosistemas: Fundamentos teóricos y metodológicos.* VIII Congreso Ibérico sobre Gestión y Planificación del Agua. Lisboa, Portugal. Diciembre 2013. 2013
29. *Analyzing Water Metabolism in Socio-Ecological Systems: A Multi-Scale Integrated Approach*. EGU Leonardo Topical Conference Series on the Hydrological Cycle. Hydrology and Society: 2012

Connections between Hydrology and Population Dynamics, Policy making and Power generation. Turin, Italy.

30. *Por qué sufrimos una delusión con respecto al uso del agua y cómo remediarlo. Analizando el uso del agua desde el metabolismo hídrico.* XIII Jornadas de Economía Crítica. Sevilla Febrero 2012. 2012
31. *Assessment of Virtual Water Embedded in Trade Between Andalusia and the Rest of Spain with a Multi-Regional Input-Output Model (MRIO)*. IV Conference on Input Output Analysis. Madrid, Spain. 2011
32. *Multi Scale Integrated Assessment of Socio-Ecological Metabolism of Water.* ESEE 2011: Advancing Ecological Economics: Theory and Practice. Istanbul, Turkey. 2011
33. *An Assessment of Almeria's Virtual Water Flows by Agricultural Products Exported to United Kingdom and its Implications for the Water Management*. ISEE 2010: Advancing Sustainability in a Time of Crisis. Oldenburg, Germany. 2010
34. *Indicadores de Sostenibilidad Hídrica, Agua Virtual y Huella Hídrica. Una necesaria revisión conceptual y metodológica y una aplicación al comercio de agua entre Andalucía y el Reino Unido.* XII Jornadas de Economía Crítica. Febrero 2010. Zaragoza. 2010
35. *Virtual Water, Water Footprint and Other Indicators of Water Sustainability. A Conceptual and Methodological Review.* ESEE 2009: Transformation, innovation, and adaptation for sustainability. Ljubljana, Slovenia. 2009
36. *The Water Metabolism of the Society: Global Forces with Local Consequences*. ISEE 2008: Applying Ecological Economics for Social and Environmental Sustainability. Nairobi, Kenya. 2008
37. *Virtual Water in the Economy. The Case of Fruit and Vegetable Production in Andalusia, Spain*. ISEE 2006: Ecological Sustainability and Human Well-being. New Delhi, India. 2006
38. *Participatory Modeling of Water System Sustainability. The World Cellular Model and The Matisse Project.* International Conference on Sustainability Measurement and Modelling. Barcelona, Spain. 2006
39. *Methods and Tools for Integrated Sustainability Assessment. Possible Applications for the Economic Evaluation of the Integration and Participatory Provisions of European Water Framework Directive (WFD)*. International Workshop on Hydro Economic Modeling and Tools for Implementation of the European Water Framework Directive. Valencia, Spain. 2006

Departmental Talks

1. *The challenges of the sustainable energy transition. Insights from the SENTINEL project and beyond.* ICTA Summer day. Universitat Autònoma de Barcelona. June 2023 2023
2. *The sustainable energy transition needs more than climate-neutral: Perspectives from SENTINEL, SEEDS and LIVEN.* ICTA Symposium. Universitat Autònoma de Barcelona. 2021
3. *The Complexity of 'Fracking': (Towards) an Analysis of the Shale Gas Sector that is Relevant for Decision-Making.* Center for Industrial Ecology Lunch Seminar Series. Yale University. 2015
4. *Visualizing Fracking.* Yale School of Forestry and Environmental Studies Hackathon. 2015
5. *The Water Metabolism of the Society: A Set of Global Forces with Local Consequences.* ICTA Lunch Seminar Series. 2010
6. *Examples of Applications of MuSIASEM to the Study of Pattern of Water Metabolism*. ICTA research workshop. 2010
7. *Socioeconomic Metabolism and Water.* Seminar Series. Department of Economics and Economic History. Universitat Autònoma de Barcelona. 2010

Research Skill Courses Attended

1. Brightway 2 for LCA practitioners
   ICTA MdM Courses. UAB. 40h. 2023

2. Advanced LCA. 2022
Aalborg University. 3 ECTS
3. Regionalized life Cycle Assessment with the Brightway 2.5 Software. (20 hours) 2022
LCA 2.0 Consulting. Barcelona
4. Managing teams (8h) 2021
Teaching and Innovation Unit. UAB.
5. Writing an ERC proposal. Discussion with successful applicants (3h) 2021
ICTA MdM Courses. UAB.
6. Spatial Analysis (GIS) with R (35h) 2021
ICTA MdM Courses. UAB.
7. A skills upgrade for Postdocs (20 h) 2021
ICTA MdM Courses. UAB.
8. How to include gender perspective in Research (8h*)* 2019
Teaching and Innovation Unit. UAB.
9. R Programming for Data Science Program. John Hopkins University. Coursera. 2015/16
10. Topología en espacios de matrices y sistemas Leontief -Sraffa. Seminario de la Universidad de Santiago de Compostela. 2011
11. Integrated analysis of complex, adaptive systems. *Marie Curie Summer Schools in Emerging Theories and Methods in Sustainability Research (Themes)*. *Event IV*. Brighton, UK. European Society for Ecological Economics. (ESEE). 2009
12. Summer school on multi-scale integrated analysis of societal and ecological metabolism (MuSIASEM) for participatory assessment of sustainability issues, ICTA, UAB. 2008
13. Methods and tools for environmental appraisal and policy formulation themes. *Marie Curie Summer Schools in Emerging Theories and Methods in Sustainability Research (Themes). Event III.* Lisbon, Portugal. ESEE. 2008
14. ¿Es Posible otra economía? Economía Ecológica: Aspectos conceptuales y aplicaciones. Curso de verano de la Universidad Pablo de Olavide. Carmona . 2008
15. Institutional analysis of sustainability problems. *Marie Curie Summer Schools in Emerging Theories and Methods in Sustainability Research (Themes). Event II.* Vysoké Tatry, Slovakia. ESEE. 2007
16. Participatory GIS, mapping, and visualization in local-level spatial planning. Enschede, The Netherlands. International Institute for Geo- Information Science and Earth Observation. 2006
17. GIS for water resources. Universidad de Almeria. 2005

Academic Service

Scientific Communities

Board Member. International Society for Industrial Ecology. 2022- 2026

Grant Evaluation

Agencia Estatal de Investigación, Gobierno de España. 2021- present
COST, European Commission. 2020- present
FONDECYT Chile 2020- present

PhD Evaluation Committees

Follow-up evaluation for the PhD program in Applied Economics. UAB. 2019, 2020
Evaluation board of PhD program In Environmental Science and Technology, ICTA 2018-present

Teaching quality

Member of the teaching commission. MSc in Biological and Environmental Engineering, UAB. 2021-present

Member of the working group to redesign the BSc program in Environmental 2019

Sciences at UAB. Worked on the design of the new study plan.

Journal Peer-review

Revista Iberoamericana de Economía Ecológica, Journal of Cleaner Production, Journal of Industrial Ecology, Water Resources Research, Ecological Economics, Bioscience, Ecology and Society, Ecological Indicators, Environmental Science and Technology, Environmental Science and Policy, Resource Conservation and Recycling, Energy Research and Social Science, Applied Energy, among others.

Working groups

Member of the responsible travel policy working group. ICTA-UAB 2020-2022
Member of the Alumni working group. ICTA-UAB 2019-2021

Representation

Representative of pre and postdoctoral researchers in different UAB management boards. 2010-2020
Coordination of ICTA_AQUA informal discussion group on water. ICTA-UAB 2011-2012
Representative of undergraduate students in Pablo de Olavide University management council. 2000-2004

Outreach & Transfer

Transfer courses taught

Introducció a la Sostenibilitat Ambiental. Course for Municipality Technical Staff. 2023
UAB permanent formation program. 40 h. Catalan. Course design and lecturer

L'Aigua, un recurs escàs. Session of the "Crazy about Science" Program for highschoolers. 2023
Fundació Catalunya La Pedrera. Catalan
Role: Course design and lecturer

Interviews

"*El repte urbanístic: el planejament i els instruments de gestió en la transició energètica*" 2023
Invited panelist to the debate series "Equitat social i transició energètica"
Recorded session for Filmin. Fundació Catalunya La Pedrera

Interview for the action group Cerdanyola Feminist Education: "the role of women in research" 2021

Interview for Catalunya Radio about plane travel sustainability 2020

Talks

Researcher at the Barcelona Researcher's nights
Workshop: Understanding the resource dependency of the global economy. 2018

Mentoring

Mentor of the Global Women´s Network for the Energy Transition
Mentees: Sanaz Kamyar, Iran. 2022/23
Mentor of the Experimenta Program for Highschools, FECYT. 2022
Science mentor at community schools (6th-8th grade). New Haven (CT), USA. 2015-2017