

## Laura Batlle Bayer

Spanish, Catalan, English, Dutch (B2)



Education in agricultural engineering and environmental sciences. Experience in analysing the sustainability of food supply chains, both as a researcher and as a consultant. Knowledge in Microsoft office, R programming and LCA software's (GaBi and Simapro). Analytical skills and experience in scientific writing and reporting. Ability to work independently as well as in a team, solution-focused and enjoying challenges.

### WORK EXPERIENCE

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**RESEARCHER** at the UNESCO Chair in Life Cycle and Climate Change, ESCI-UPF, Barcelona  
June 2017 – present

Main activities:

- Research within the CERES (2017-2020) and KAIROS (2020-2023) projects, financed by the Spanish Ministry of Economy and Competitiveness. Main objective: to analyse the sustainability of the Spanish food system and to propose changes that increase the efficiency of natural resources use and reduce the environmental impact, especially, climate change.
- [ARECO](#) Post-doctoral research fellow (2021-2023) to assess the circularity of food distribution in Spain.
- Involvement within European projects: [EPS Sure](#) and [WASTE4GREEN](#)
- Writing scientific articles as well as assisting to international conferences.
- Writing projects proposals for national and international calls

**SUSTAINABILITY CONSULTANT** at Blonk Consultants, Gouda (The Netherlands)

March 2015 – Sep 2016

Consulting services:

- Life Cycle Assessment and Carbon footprints of agri-food products
- Advising agri-food companies on their environmental performance
- Developing and updating the Agri-footprint database

**ENVIRONMENTAL CONSULTANT** at Environmental Wise Pathways

Dec 2014 – Feb 2015

Three months contract to support the consulting team in writing a project proposal for sustainable agricultural value chains in Peru.

**RESEARCH ASSISTANT** at Utrecht University (The Netherlands)

Sep 2010 – Oct 2014

Research assistant within the research project: "Feedbacks between anthropogenic land use change and climate". Involved institutions: KNMI, PBL and Utrecht University.

Main objectives: Modelling and analysing the interactions and impacts between climate and land use change, writing reports and scientific articles

**RESEARCH FELLOWSHIP** at ISRIC – World Soil Information, Wageningen (The Netherlands)

May 2009 – Aug 2010

Modelling the soil organic carbon dynamics under different land uses (mainly soybean and pasture systems) in the Brazilian Cerrados.

## EDUCATION

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- 2018 – 2021 **Doctoral Researcher** in the PhD program of Chemical Engineering, Energy and Processes at the UNIVERSITY OF CANTABRIA.  
Expected date of the defense: March 2021
- 2006 – 2008 **MSc in Plant Science**, specialization in Natural Resources Management  
WAGENINGEN UNIVERSITY (Wageningen, The Netherlands)
- 2002 – 2006 **BSc in Agricultural Engineering**, specialization in Crop and Livestock Management.  
UNIVERSITAT POLITÈCNICA DE CATALUNYA (Barcelona, Spain)

## OTHER COURSES

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- 2017 80h **Water Footprint**, UdL
- 2017 3 days course on **GRI Certified Training Course**, BSD Consulting Spain
- 2014 150h **Life Cycle Assessment and Carbon Footprint**, UNED
- 1999 – 2002 **Environmental auditing and management**, IUSC

## SCIENTIFIC PUBLICATIONS

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- Batlle-Bayer, L.**, Bala, A., Aldaco, R., Vidal-Monés, B., Colomé, R., Fullana-i-Palmer, P., 2021. [An explorative assessment of environmental and nutritional benefits of introducing low-carbon meals to Barcelona schools](#). *Sci. Total Environ.* 756, 143879.
- Abejón, R., **Batlle-Bayer, L.**, Laso, J., Bala, A., Vazquez-Rowe, I., Larrea-Gallegos, G., Margallo, M., Cristobal, J., Puig, R., Fullana-i-Palmer, P., Aldaco, R., 2020. Multi-Objective Optimization of Nutritional, Environmental and Economic Aspects of Diets Applied to the Spanish Context. *Foods* 9, 1677. <https://doi.org/10.3390/foods9111677>
- Li, J., Song, G., Ma, S., Wan, B., **Batlle-Bayer, L.**, Zhang, D., Zhang, L., Fullana-i-Palmer, P., Zhang, S., 2020. [Dietary acculturation generates virtual carbon flow: The overlaid effects of geographically varied dietary patterns and population migration in urban and materials-flowing China](#). *J. Clean. Prod.* 276
- Batlle-Bayer, L.**, Bala, A., Roca, M., Lemaire, E., Aldaco, R., Fullana-i-Palmer, P., 2020. [Nutritional and environmental co-benefits of shifting to “Planetary Health” Spanish tapas](#). *J. Clean. Prod.*, 271.
- Batlle-Bayer, L.**, Bala, A., Albertí, J., Xifré, R., Aldaco, R., 2020c. [Food affordability and nutritional values within the functional unit of a food LCA. An application on regional diets in Spain](#). *Resour. Conserv. Recycl.* 160.
- Batlle-Bayer, L.**, Aldaco, R., Bala, A., Puig, R., Laso, J., Margallo, M., Vázquez-rowe, I., Maria, J., Fullana-i-palmer, P., 2020b. [Environmental and nutritional impacts of dietary changes in Spain during the COVID-19 lockdown](#). *Sci. Total Environ.* 748, 1–6.
- Aldaco, R., Hoehn, D., Laso, J., Margallo, M., Ruiz-salmón, J., Cristobal, J., Kahhat, R., Villanueva-rey, P., Bala, A., **Batlle-Bayer, L.**, Fullana-i-palmer, P., Irabien, A., Vazquez-rowe, I., 2020. [Food waste management during the COVID-19 outbreak: a holistic climate, economic and nutritional approach](#). *Sci. Total Environ.* 742
- Batlle-Bayer, L.**, Aldaco, R., Bala, A., Fullana-i-Palmer, P., 2020a. [Toward sustainable dietary patterns under a water-energy-food nexus life cycle thinking approach](#). *Curr. Opin. Environ. Sci. Heal.* 13, 61–67.
- García-Herrero I., Margallo M., Laso J., **Batlle-Bayer L.**, Bala A., Fullana-i-Palmer P., Vazquez-Rowe I, Gonzalez MJ, Amo-Setien F., Durá MJ, Sarabia C., Abajas R., Quiñones A., Irabien A., Aldaco R. [Nutritional data management of food losses and waste under a life cycle approach: Case study of the Spanish agri-food system](#). *Journal of food composition and analysis*, 82, September. (2019)
- Batlle-Bayer L.**, Bala A., Lemaire E., Albertí, J., García-Herrero I., Aldaco R. and Fullana-i-Palmer, P. [An energy- and nutrient-corrected functional unit to compare LCAs of diets](#). *Sci. Total Environ.* 23, 175–179 (2019)
- Batlle-Bayer, L.**, Bala, A., García-Herrero, I., Lemaire, E., Song, G. Aldaco, R. and Fullana-i-Palmer, P. [The Spanish Dietary Guidelines: A potential tool to reduce greenhouse gas emissions of current dietary patterns](#). *J. Clean. Prod.* 213, 588–598 (2019)

- Laso J., Hoehn D., Margallo M., García-Herrero I., **Batlle-Bayer L.**, Bala A., Fullana-i-Palmer P., Vázquez-Rowe I., Irabien A. and Aldaco R. [Assessing Energy and Environmental Efficiency of the Spanish Agri-Food System Using the LCA/DEA Methodology](#). *Energies*, 11 (12),3395. (2018)
- Song G., Gao X., Fullana-i-Palmer P., Lv, D., Zhu, Z., Wang, Y., and **Batlle-Bayer, L.** [Shift from feeding to sustainably nourishing urban China: A crossing-disciplinary methodology for global environment-food-health nexus](#). *Sci. Total Environ.* 647, 716–724. <https://doi.org/10.1016/j.scitotenv.2018.08.040> (2019)
- García-Herrero, I., Hoehn, D., Margallo, M., Laso, J., Bala, A., **Batlle-Bayer, L.**, Fullana, P., Vázquez-Rowe, I., Gonzalez, M.J., Durá, M.J., Sarabia, C., Abajas, R., Amo-Setien, F.J., Quiñones, A., Irabien, A., Aldaco, R., [On the estimation of potential food waste reduction to support sustainable production and consumption policies](#). *Food Policy* 115. <https://doi.org/10.1016/j.foodpol.2018.08.007>. (2018)
- Batlle-Bayer, L.**, van den Hurk, B. J. J. M., Müller, C. and van Minnen, J. (2014) [The impact of land-use change on the sensitivity of terrestrial productivity to precipitation variability: a modelling approach](#). *Earth Syst. Dynam. Discuss.*, 5, 585-616, 2014. doi:10.5194/esdd-5-585-2014
- Van den Hurk, B., Seneviratne, S.I. and **Batlle-Bayer, L.** (2012) [Land cover change – To what degree](#). *Pages news*, 20, 1, Pg.22.
- van Vuuren, D.P, **Batlle-Bayer, L.**, Chuwah, C., Ganzeveld, L., Hazeleger W., van den Hurk, B., van Noije, T., O'Neill, B. and Strengers B.J. (2012): [A comprehensive view on climate change: coupling of earth system and integrated assessment models](#). *Environ. Res. Lett.* 7 024012 doi:10.1088/1748-9326/7/2/024012.
- Batlle-Bayer, L.**, Batjes, N.H., and Bindraban P. (2010): [Changes in organic carbon stocks upon land use conversion in the Brazilian Cerrado: A review](#). *Agriculture, Ecosystems and Environment* 137 (2010) 1-2 01/2010

## ORAL PRESENTATIONS & POSTERS IN CONFERENCES

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- Batlle-Bayer L.**, Bala A, Lemaire E, Albertí J, García-Herrero I, Aldaco R and Fullana-i-Palmer P. A novel Functional Unit to compare diet LCAs. 12<sup>th</sup> International Conference on Life Cycle Assessment of Food. 13 – 16 October 2020. LCA Food 2020.
- Batlle-Bayer L.**, Abejón R, Margallo M, Laso J, Vázquez-Rowe I, Bala A, Fullana-i-Palmer P, Aldaco R, 2020. Looking for optimal spanish dietary patterns: optimization of environmental, economic and nutritional aspects of food diets. 12<sup>th</sup> International Conference on Life Cycle Assessment of Food. 13 – 16 October 2020. LCA Food 2020.
- Batlle-Bayer L.**, Bala A, Lemaire E, Albertí J, García-Herrero I, Aldaco R and Fullana-i-Palmer P. A novel Functional Unit to compare diet LCAs. SETAC Europe 30<sup>th</sup> Annual Meeting. . 3-7 May 2020.
- Batlle-Bayer L.**, Bala A, Lemaire E, Albertí J, Aldaco R and Fullana-i-Palmer P. How to compare the impacts of our food choices? Proposing a new approach. 9<sup>th</sup> International Conference on Life Cycle Management, Technical University of Poznan, 1-4 September 2019.
- Batlle-Bayer L.**, Bala A, Lemaire E, Albertí J, García-Herrero I, Aldaco R and Fullana-i-Palmer P. A novel corrected Function Unit to compare LCA of diets. Anque-iccecibiq 2019 3<sup>rd</sup> international congress of chemical engineering. 19 – 21 June 2019, Santander.
- Lemaire E, **Batlle-Bayer L.**, Bala A, Blanca G, Puig R, Aldaco R and Fullana-i-Palmer P, 2019. The GHG emissions and nutritional quality of a meal for 2 people. The case of Spanish tapas eaten at a restaurant. SETAC EUROPE 29th annual meeting. One environment. One Health. Sustainable Societies. 26-30 May 2019, Helsinki.
- Batlle-Bayer L.**, Bala A, Lemaire E, Blanca-Alcubilla G, García-Herrero I, Aldaco R, Puig R, Fullana-i-Palmer, P. (2018) *Diet matters: the case of Spain*. 11th International Conference on LCA of Food 2018. 17-19 October 2018, Bangkok, Thailand. (Oral). Best student Presenter Award
- Lemaire E, **Batlle-Bayer L.**, Bala A, Blanca-Alcubilla G, García-Herrero I, Xifré R, Puig R, Aldaco R, Fullana-i-Palmer P. (2018) A fair comparison of GHG emissions and nutritional quality of four ready meals. 11th International Conference on LCA of Food 2018. 17-19 October 2018, Bangkok, Thailand. (Póster)
- Batlle-Bayer L.**, Bala Gala, A, Fullana-i-Palmer P (2018) Assessing the GHG emissions of Spanish diets” 9<sup>o</sup> Congreso Internacional de Química de la ANQUE.17-20 Junio, Murcia. (Oral)

- Batlle-Bayer L**, Bala Gala, A, Fulla-i-Palmer P and Aldaco R. (2018) *Estimating the Carbon Footprint of the average Spanish diet. Future inventory requirements and policy recommendations*. SETAC Europe 28<sup>th</sup> Annual Meeting, 13-17 May, Rome, Italy (Póster)
- Batlle-Bayer L**, Durlinger B and Broekema R. *Comparative LCA of bread baked in novel Low Energy ovens and conventional ovens*. EXPO 2015, LCA for “feeding the planet and energy for life”. (Póster)
- Batlle-Bayer L**, van den Hurk, BJJM and Strengers, B. *A conceptual framework for regional feedbacks in a changing climate*. Viena, Austria. European Geoscience Union General Assembly, 2012. (Póster)
- Batlle-Bayer, L**, and van den Hurk, BJJM. *Sensitivity of vegetation carbon and Net Primary Productivity (NPP) to precipitation variability*. Grindelwald, Switzerland. Summer School “Climate Change, Extremes and Ecosystem Services”, 2011. (Póster)
- Batlle-Bayer, L**, Batjes, N and Brindraban, P. *Soil Organic Carbon dynamics in soybean-based cropping systems in the Brazilian Cerrados*. Hohenheim, Stuttgart, Germany: ELLS Scientific Student Conference on Climate Change, 2010.