



MELANIE DOUZIECH

SCIENTIFIC COLLABORATOR
PROJECT MANAGER

ABOUT

I am currently working as scientific collaborator and project manager at Agroscope, the Swiss centre of excellence for agricultural research. I am developing methods to assess the sustainability of agricultural technologies. I have a strong experience in life cycle assessment applied to innovative technologies, renewable energy technologies, and ecotoxicological impact estimations. I am confident in uncertainty and variability quantification methods, prospective LCA approaches and sustainability assessment methods.

PERSONAL SKILLS

Project organisation
Reliable
Fast learner
Motivated

CONTACT

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SOCIAL

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CURRENT ACTIVITY

SCIENTIFIC COLLABORATOR - PROJECT MANAGER

Agroscope (CH) | Since February 2022

- Developing a framework for the sustainability assessment of innovative technologies in agriculture (Life Cycle Costing, Social Life Cycle Assessment, Environmental Life Cycle Assessment)
- Development of impact categories (ecotoxicity)
- Methodological developments of social Life Cycle Assessment
- Evaluation of the sustainability of different food products (alternatives to meat and milk, Protected Designation of Origin products)

RESEARCH ACTIVITY

RESEARCH ASSISTANT / ASSOCIATE RESEARCHER

Center Observation, Impact, Energy (O.I.E.) (FR) | Since Jan 2020

- Improving and promoting the life cycle assessment methodology for the environmental impact assessment of energy pathways using concepts such as prospective LCA
- Parametrization of life cycle inventories

PHD CANDIDATE

Radboud University (NL) | Oct 2015 - Oct 2019

- Reliability in chemical footprint modelling of consumer products
- Combining in silico methods for the chemical effect assessment

VISITING PHD CANDIDATE

Norsus (NO) | Aug - Oct 2018

- Mixed effect modelling of chemical migration from packaging into food

VISITING PHD CANDIDATE

Safety and Environmental Assurance Center Unilever (UK) | Nov 2016 - Jun 2018

- Estimation of chemical inventories (country, wastewater treatment plants)

VISITING MSC STUDENT

NTNU (NO) | April - Aug 2015

- MSc Thesis - LCA of wave and tidal energy technologies

INTERN

NIWA (NZ) | Aug - Dec 2014

- Internship comparing climatic model precipitation predictions

EDUCATION

Bachelor and Master in Environmental Engineering from the Swiss Federal Institute of Technology Zurich, CH, 2010-2015

University entrance diploma from the Secondary School Kirchenfeld, CH, 2007-2010

High School, Belgium School of Kigali, RW, 2003-2007

AWARDS

PhD Thesis Prize of the Royal Netherlands Chemical Society 2018-2020

SETAC Europe/ Rifcon Best Publication Award 2018

Safety and Environmental Assurance Centre Unilever PhD Award for Science Communication 2018

PUBLICATION RECORD

16 publications in total
9 first author publications
H-index : 11

SELECTED PARTICIPATION IN RESEARCH PROJECTS WITH PUBLIC/PRIVATE FUNDING

DURAOP

Sustainability assessment of products of protected designation of origin | 2023

- Funding body: Promotion économique du Canton de Fribourg
- Contribution: Project acquisition, project manager
- 5 partners: Agroscope, Interprofessions du Gruyère, Vacherin fribourgeois, Charcuterie AOP, Association Suisse AOP-IGP

FUTURS ENERGETIQUES (RTE)

Support in the environmental impact assessment of the future energy scenarios developed by RTE | 2020-2022

- Funding body: RTE
- Contribution: Project acquisition, Project Co-Manager
- 2 partners: Centre O.I.E., RTE

LIF-OWI

Environmental, Socio-economic and Technological challenges for LIFe cycle assessment of Offshore WInd farms | 2021-2023

- Funding body: ANR and ADEME (French Agency for ecological transition)
- Contribution: Project acquisition, work package leader
- 10 partners: Centre O.I.E., France Energies Marines, EDF, ENGIE, INNOSEA, Naval Energies, NTNU (Norway), Rte, Vallourec, TOTAL.

PRODIGIO

Developing early-warning systems for improved microalgae PROduction and anaerobic DIGestION | 2021-2023

- Funding body: European Union (Horizon 2020 Grant No.101007006)
- Contribution: co-supervision of PhD student
- 8 partners from France, Germany, Norway, Spain and Taiwan.

GEOENVI

Tackling the environmental concerns for deploying geothermal energy in Europe | 2018-2021

- Funding body: European Union (Horizon 2020 Grant No.818242)
- Contribution: coordinating activities on the LCA of geothermal power plants
- 16 partners from public and private organizations in Belgium, France, Iceland, Italy, Hungary, Turkey.

RELIEF

RELIability of product Environmental Footprints | 2015-2018

- Funding body: European Union (Horizon 2020 Grant agreement No 641459)
- Contribution: PhD candidate
- 8 partners: Radboud University, Unilever U.K., NTNU, Stanford University, University of Surrey, Greendelta GMBH, Norsus, IUCN

TECHNICAL SKILLS

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|------------------------|-----|
| Matlab, GIS, R, Python | +++ |
| Office MS Suite | +++ |
| USEtox, SimpleTreat | +++ |
| OpenLCA | +++ |
| Simapro | +++ |
| EPI Suite, ECOTOX | ++ |
| Java | + |

LANGUAGES

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|----------------|-----------------|
| French, German | Bilingual |
| English | Proficiency |
| Dutch, Spanish | Basics (B1, A2) |

TOP 5 PUBLICATIONS

- Douziech, M., et al. (2023). Life cycle assessment of prospective trajectories: A parametric approach for tailor-made inventories and its computational implementation.
- Douziech, M., et al. (2021). How Far Can Life Cycle Assessment Be Simplified? A Protocol to Generate Simple and Accurate Models for the Assessment of Energy Systems and Its Application to Heat Production from Enhanced Geothermal Systems
- Douziech, M., et al. (2020). Reliable and representative in silico predictions of freshwater ecotoxicological hazardous concentrations.
- Douziech, M., et al. (2019). Confronting variability with uncertainty in the ecotoxicological impact assessment of down-the-drain products.
- Douziech, M., et al. (2018). Quantifying variability in removal efficiencies of chemicals in activated sludge wastewater treatment plants—a meta-analytical approach. .

TOP 5 PRESENTATIONS

- Douziech, M., Life Cycle Environmental Impacts of Hydrogen Production Scenarios Considering the Evolution of the Future French Electricity Supply Mix, SETAC Europe 31st Annual Meeting, Online, Mai 3-6, 2021
- Douziech, M., Reliability in chemical footprint modelling of consumer products, Horizon 2020 MSCA-ITN cluster event "Clean Water" in Girona, Spain, October 22, 2019
- Douziech, M., Reliable and representative in silico predictions of freshwater ecotoxicological hazardous concentrations, 19th Annual Congress of EUSAAT in Linz, Austria, October 10-13, 2019.
- Douziech, M., Drivers of variability and uncertainty in the chemical footprint of shampoos, SETAC Europe 28th Annual Meeting in Rome, Italy, May 14-18, 2018.
- Douziech, M., The influence of spatial and technological parameters on the removal efficiencies of surfactants and fragrances in activated sludge wastewater treatment. SETAC Europe 27th Annual Meeting in Brussels, Belgium, May 8-11, 2017

OTHER ACTIVITIES

ORGANISING SCIENTIFIC ACTIVITIES

Workshops, project meetings, training seminars, dissemination activities (webinars, online trainings) | Since 2015

REVIEWING

Reviewer for several journals (e.g. ES&T, EI, Int Jour LCA) | Since 2018
Member of the Editorial board of Environmental Evidence | Since 2020
Review Editor of "Quantitative Sustainability Assessment" (Frontier) | Since 2021

TEACHING EXPERIENCE

TEACHING THE CONCEPT OF LIFE CYCLE ASSESSMENT

O.I.E. | Since 2020

SUPERVISING AND DESIGNING EXERCISES (MSc and BSc)

O.I.E. | Since 2020

DESIGNING BACHELOR COURSES

O.I.E. / Radboud University | Since 2015

SUPERVISION OF MASTER AND BACHELOR STUDENTS

O.I.E. / Radboud University | Since 2015