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### **Diploma**

2006 Ph.D. in *Economy and Social Sciences*, **University of Geneva**, Switzerland

Thesis "Integrated Assessment of Climate Change: Contribution from Oracle-based optimisation" supervised by professors A. Haurie and J.-P. Vial.

### **Positions**

- 2018– Senior Scientist at FONDAZIONE CMCC — CENTRO MEDITERRANEO SUI CAMBIAMENTI CLIMATICI, Milan, Italy  
Department: RFF-CMCC, EUROPEAN INSTITUTE ON ECONOMICS AND THE ENVIRONMENT (EIEE)  
*Scientific computing, Integrated Assessment Modeling*
- 2012–2018 Senior Researcher at FEEM, FONDAZIONE ENI ENRICO MATTEI and Affiliate Researcher at CMCC, FONDAZIONE CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI, Milan, Italy
- 2009–2012 Post-doctoral Fellow at CRP HENRI TUDOR, Esch-Sur-Alzette, Luxembourg  
*Scientific computing, Energy system modeling*
- 2006–2009 Consultant at ORDECYS, Chêne-Bourg, Switzerland  
*Scientific computing, Energy/Optimization Modeling*
- 2006–2009 Post-doctoral Fellow at REME, EPFL, Lausanne, Switzerland  
*Scientific computing, Environmental economics modeling*
- 2002–2006 Ph.D. student at LOGILAB, HEC GENEVA, UNIVERSITY OF GENEVA, Switzerland  
*Research Assistant*

### **Scientific Publications**

52. H. van Soest, L. Aleluia Reis, L. Baptista, C. Bertram, J. Després, **L. Drouet**, M. Elzen, P. Frangkou, O. Fricko, S. Fujimori, N. Grant, M. Harmsen, G. Iyer, K. Keramidas, A. Köberle, E. Kriegler, A. Malik, S. Mittal, K. Oshiro, K. Riahi, M. Roelfsema, B. van Ruijven, R. Schaeffer, D. Silva Herran, M. Tavoni, G. Unlu, T. Vandyck, D. van Vuuren. *Global Roll-out of Comprehensive Policy Measures May Aid in Bridging Emissions Gap*, **Nature Communications**.

51. T. Hasegawa, S. Fujimori, S. Frank, F. Humpenöder, C. Bertram, J. Després, **L. Drouet**, J. Emmerling, M. Gusti, M. Harmsen, K. Keramidas, K. Oshiro, P. Rochedo, B. van Ruijven, A.-M. Cabardos, A. Deppermann, F. Fosse, P. Havlik, V. Krey, A. Popp, R. Schaeffer, D. van Vuuren, K. Riahi, *Land-based implications of early climate actions without global net-negative emissions*, **Nature Sustainability**, October 2021. DOI:10.1038/s41893-021-00772-w.
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49. F. Piontek, **L. Drouet**, J. Emmerling, T. Kompas, A. Méjean, C. Otto, J. Rising, B. Soergel, N. Taconet, M. Tavoni, *Integrated perspective on translating biophysical to economic impacts of climate change*, **Nature Climate Change**, 11, 563–572, June 2021. DOI:10.1038/s41558-021-01065-y.
48. C. Bertram, K. Riahi, J. Hilaire, V. Bosetti, **L. Drouet**, O. Fricko, A. Malik, L. Nogueira, B. van der Zwaan, B. van Ruijven, D. P. van Vuuren, M. Weitzel, F. Dalla Longa, H.-S. de Boer, J. Emmerling, F. Fosse, K. Fragkiadakis, M. Harmsen, K. Keramidas, P. N. Kishimoto, E. Kriegler, V. Krey, L. Paroussos, D. Saygin, Z. Vrontisi, G. Luderer, *Energy system developments and investments in the decisive decade for the Paris Agreement goals*, **Environmental Research Letters**, 16, 074020, June 2021. DOI: 10.1088/1748-9326/ac09ae.
47. M. Harmsen, E. Kriegler, D. van Vuuren, K.-I. van der Wijst, G. Luderer, R. Cui, O. Dessens, **L. Drouet**, J. Emmerling, J. Morris, F. Fosse, D. Fragkiadakis, K. Fragkiadakis, P. Fragkos, O. Fricko, S. Fujimori, D. EHJ Gernaat, C. Guivarch, G. C Iyer, P. Karkatsoulis, I. Keppo, K. Keramidas, A. Köberle, P. Kolp, V. Krey, C. Krüger, F. Leblanc, S. Mittal, S. V Paltsev, P. Rochedo, B. van Ruijven, R. D Sands, F. Sano, J. Strefler, E. Vasquez Arroyo, K. Wada, B. Zakeri, *Integrated assessment model diagnostics: key indicators and model evolution*, **Environmental Research Letters**, 16, 054046, Apr 2021. DOI: 10.1088/1748-9326/abf964.
46. S. Athanasoglou, V. Bosetti, **L. Drouet**, *Satisficing Framework for Environmental Policy Under Model Uncertainty*, **Environmental Modeling & Assessment** 26, 433–445, March 2021. DOI: 10.1007/s10584-020-02794-3.
45. P. Rafaj, G. Kiesewetter, V. Krey, W. Schöpp, C. Bertram, **L. Drouet**, O. Fricko, F. Shinichiro, M. Harmsen, J. Hilaire, D. Huppmann, Z. Klimont, P. Kolp, L. Aleluia Reis, D. van Vuuren *Air quality and health implications of 1.5–2°C climate pathways under considerations of ageing population: A multi-model scenario analysis*, **Environmental Research Letters** Jan 2021.
44. S. J. Smith, Z. Klimont, **L. Drouet**, M. Harmsen, G. Luderer, K. Riahi, D. P. van Vuuren, J. P. Weyant *The Energy Modeling Forum (EMF)-30 study on short-lived climate forcers: introduction and overview*, **Climatic Change** 163, 1399–1408, Dec 2020. DOI: 10.1007/s10584-020-02938-5.
43. S. J. Smith, J. Chateau, K. Dorheim, **L. Drouet**, O. Durand-Lasserve, O. Fricko, S. Fujimori, T. Hanaoka, M. Harmsen, J. Hilaire, K. Keramidas, Z. Klimont, G. Luderer, M. C. P. Moura, K. Riahi, J. Rogelj, F. Sano, D. P. van Vuuren, K. Wada *Impact of methane and black carbon mitigation on forcing and temperature: a multi-model scenario analysis*, **Climatic Change** 163, 1427–1442, Sep 2020. DOI: 10.1007/s10584-020-02794-3.
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41. M. Roelfsema, H. van Soest, M. Harmsen, D. van Vuuren, C. Bertram, M. den Elzen, N. Höhne, G. Iacobuta, V. Krey, E. Kriegler, G. Luderer, K. Riahi, F. Ueckerdt, J. Després, **L.**

- Drouet**, J. Emmerling, S. Frank, O. Fricko, M. Gidden, F. Humpenöder, D. Huppmann, S. Fujimori, K. Fragkiadakis, K. Gi, K. Keramidas, A. Köberle, L. Aleluia Reis, P. Rochedo, R. Schaeffer, K. Oshiro, Z. Vrontisi, W. Chen, G. Iyer, J. Edmonds, M. Kannavou, K. Jiang, R. Mathur, G. Safonov, S. Vishwanathan *Taking stock of national climate policies: the Paris Agreement needs to speed up implementation and scale up ambition* **Nature Communications**, 11(2096), Apr 2020. DOI: 10.1038/s41467-020-15414-6.
40. T. Schinko, **L. Drouet**, Z. Vrontisi, A. Hof, J. Hinkel, J. Mochizuki, V. Bosetti, K. Fragkiadakis, D. Van Vuuren, D. Lincke *Economy-wide effects of coastal flooding due to sea level rise: A multi-model simultaneous treatment of mitigation, adaptation, and residual impacts* **Environmental Research Communications**, 2(1), Dec 2019. DOI: 10.1088/2515-7620/ab6368.
  39. A. Markandya, E. De Cian, **L. Drouet**, J.M. Polanco-Martínez, F. Bosello *Building Risk into the Mitigation/Adaptation Decisions simulated by Integrated Assessment Models* **Environmental and Resource Economics**, 74(4), 1687–1721, Dec 2019. DOI: 10.1007/s10640-019-00384-1.
  38. S. Roe, C. Streck, M. Obersteiner, S. Frank, B. Griscom, **L. Drouet**, O. Fricko, M. Gusti, N. Harris, T. Hasegawa, Z. Hausfather, P. Havlík, J. House, G.-J. Nabuurs, A. Popp, M.J.S. Sánchez, J. Sanderman, P. Smith, E. Stehfest, D. Lawrence *Contribution of the land sector to a 1.5°C world* **Nature Climate Change**, 9, 817–828, Oct 2019. DOI: 10.1038/s41558-019-0591-9.
  37. J. Emmerling, **L. Drouet**, K.-I. van der Wijst, D. Van Vuuren, V. Bosetti, M. Tavoni *The role of the discount rate for emission pathways and negative emissions* **Environmental Research Letters**, 14(10), 104008, Oct 2019. DOI: 10.1088/1748-9326/ab3cc9.
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  35. M. Harmsen, O. Fricko, J. Hilaire, D. P. van Vuuren, **L. Drouet**, O. Durand-Lasserve, S. Fujimori, K. Keramidas, Z. Klimont, G. Luderer, L. Aleluia Reis, K. Riahi, F. Sano, S. J. Smith *Taking some heat off the NDCs? The limited potential of additional short-lived climate forcers' mitigation* **Climatic Change**, 163, 1443–1461, June 2019. DOI: 10.1007/s10584-019-02436-3.
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  33. S. Fujimori, T. Hasegawa, V. Krey, K. Riahi, C. Bertram, B. Bodirsky, V. Bosetti, J. Callen, J. Després, J. Doelman, **L. Drouet**, J. Emmerling, S. Frank, O. Fricko, P. Havlik, F. Humpenöder, J. Levin-Koopman, H. van Meijl, Y. Ochi, A. Popp, A. Schmitz, K. Takahashi, D. van Vuuren *A multi-model assessment of food security implications of climate change mitigation* **Nature Sustainability**, 2, 386–96, May 2019. DOI: 10.1038/s41893-019-0286-2.
  32. F. Babonneau, G. Corcos, **L. Drouet**, J.-P. Vial. *NeatWork: a tool for the design of gravity-driven water distribution systems for poor rural communities* **INFORMS Journal on Applied Analytics / Interfaces**, 49(2), 129–136, Apr 2019. DOI: 10.1287/inte.2018.0983.
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- K. Jiang, M. Kannavou, A. Kitous, E. Kriegler, G. Luderer, R. Mathur, M. Muratori, F. Sano, D. van Vuuren. *Looking under the hood: A comparison of techno-economic assumptions across national and global integrated assessment models* **Energy**, 172, 1254–1267, Apr 2019. DOI: 10.1016/j.energy.2018.12.131.
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  28. K. Ricke, **L. Drouet**, M. Tavoni, K. Caldeira. *Country-level Social Cost of Carbon*. **Nature Climate Change**, 8, 895–900, Oct 2018.
  27. G. Luderer, Z. Vrontisi, C. Bertram, O. Edelenbosch, R. Pietzcker, J. Rogelj, HS De Boer, **L. Drouet**, J. Emmerling, O. Fricko, S. Fujimori, P. Havlík, G. Iyer, K. Keramidas, A. Kitous, M. Pehl, V. Krey, K. Riahi, B. Saveyn, M. Tavoni, D. Van Vuuren, E. Kriegler. *Residual fossil CO<sub>2</sub> emissions in 1.5–2°C pathways*. **Nature Climate Change**, 8, 626–633, Jul 2018.
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  25. Z. Vrontisi, G. Luderer, B. Saveyn, K. Keramidas, L. Aleluia Reis, L. Baumstark, C. Bertram, H-S. de Boer, **L. Drouet**, K. Fragkiadakis, O. Fricko, S. Fujimori, C. Guivarch, A. Kitous, V. Krey, E. Kriegler, E Broin, L. Paroussos, D. van Vuuren. *Enhancing global climate policy ambition towards a 1.5°C stabilization: a short-term multi-model assessment*. **Environment Research Letters**, 13(4), 044039, 2018.
  24. J. Rogelj, A. Popp, K. V. Calvin, G. Luderer, J. Emmerling, D. Gernaat, S. Fujimori, J. Strefler, T. Hasegawa, G. Marangoni, V. Krey, E. Kriegler, K. Riahi, D. P. van Vuuren, J. Doelman, **L. Drouet**, J. Edmonds, O. Fricko, M. Harmsen, P. Havlík, F. Humpenöder, E. Stehfest, M. Tavoni. *Scenarios towards limiting global mean temperature increase below 1.5°C*. **Nature Climate Change**, 8, 325–332, Apr 2018.
  23. I. Mouratiadou, M. Bevione, D. L. Bijl, **L. Drouet**, M. Hejazi, S. Mima, M. Pehl, G. Luderer. *Water demand for electricity in deep decarbonisation scenarios: a multi-model assessment*. **Climatic Change**, Volume 147, Issue 1–2, 91–106, March 2018.
  22. H.L. van Soest, L. Aleluia Reis, **L. Drouet**, D.P. van Vuuren, M.G.J. den Elzen, M. Tavoni, K. Akimoto, K.V. Calvin, P. Fragkos, A. Kitous, G. Luderer, K. Riahi. *Low-emission pathways in 11 major economies: comparison of cost-optimal pathways and Paris climate proposals*. **Climatic Change**, Volume 142, 491–504, June 2017.
  21. A. Gambhir, **L. Drouet**, D. McCollum, T. Napp, D. Bernie, A. Hawkes, O. Fricko, P. Havlik, K. Riahi, V. Bosetti, J. Lowe. *Assessing the Feasibility of Global Long-Term Mitigation Scenarios*. **Energies**, Volume 10, Number 1, Jan 2017.

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15. **L. Drouet**. *Energy economics: Cheap oil slows climate mitigation.* **Nature Climate Change**, Volume 6, pp 660–661, July 2016.
14. **L. Drouet**, J. Emmerling. *Climate policy under socio-economic scenario uncertainty.* **Environmental Modelling & Software**, Volume 79, Pages 334–342, May 2016.
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11. E. Igos, B. Rugani, S. Rege, E. Benetto, **L. Drouet**, D. Zachary, T. Haas. *Integrated environmental assessment of future energy scenarios based on economic equilibrium models.* **Metallurgical Research & Technology**, Volume 111, Number 3, Pages 179–189, 2014.
10. J. Farlin, **L. Drouet**, T. Gallé, D. Pittois, M. Bayerle, C. Braun, P. Maloszewski, J. Vandeborgh, M. Elsner and A. Kies. *Delineating spring recharge areas in a fractured sandstone aquifer*

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