

# MARIËSSE VAN SLUISVELD

Dr. Mariësse van Sluisveld is a researcher with extensive knowledge of energy and climate policy assessment in line with global climate agreements. She has expertise in quantitative computational modelling, scenario and data analysis and data visualization. Her specialty is defining and testing the plausibility of quantitative metrics on systems change by fusing multiple competing sources of information together.



## EDUCATION

2017  
|  
2012

- **PhD Macro-energy systems and future change**  
Utrecht University & PBL Netherlands Environmental Assessment Agency
  - 📍 Utrecht/ Bilthoven, The Netherlands
  - Thesis title: "[2C through different lenses](#)"
- **MSc Environmental Sciences**  
Utrecht University
  - 📍 Utrecht, The Netherlands
  - Thesis title: Paradox in Packaging Optimization
- **BSc Environmental Sciences**  
Utrecht University
  - 📍 Utrecht, The Netherlands
  - Thesis title: Olivine: The underdog in climate mitigation

## RESEARCH EXPERIENCE

current  
|  
2014

- **Researcher circular and net-zero economies**  
PBL Netherlands Environmental Assessment Agency
  - 📍 The Hague, The Netherlands
  - Energy system analyst in EU funded projects like H2020 REINVENT (Industry decarbonisation) and FP7 PATHWAYS (actor behaviour)
  - Deputy coordinator of the Dutch circular economy work programme at PBL Netherlands Environmental Assessment Agency
- **Researcher Industry Decarbonization**  
Lund University
  - 📍 Lund, Sweden
  - Scenario analyst in projects on industry decarbonisation (EU H2020 REINVENT) and the petrochemical industry (VKR foundation)

[Download a PDF of this CV](#)

## CONTACT INFO

Utrecht, The Netherlands  
 [mariesse.vansluisveld@pbl.nl](mailto:mariesse.vansluisveld@pbl.nl)

## ONLINE VENUES

[mariessevansluisveld/](#)  
 [marieyesse.github.io](#)  
 [twitter.com/marieyesse](#)  
 [github.com/marieyesse](#)  
 [ORCID](#), Google Scholar  
 [Impactstory](#)

## SKILLS

Scenario evaluation  
 Data analytics  
 Science Communication  
 Event planning  
 R, HTML, CSS

## LANGUAGES

Dutch  
 English  
 German  
 French

2014  
|  
2012

- **Researcher Global Change Modelling**  
Utrecht University 📍 Utrecht, The Netherlands
  - Energy system analyst on regional decarbonization strategies in line with the 2C climate objective for the EU FP-7 LIMITS and AMPERE projects

## EXTRACURRICULAR

current  
|  
2019

- **Member of the scientific working group on Evaluation and Diagnostics**  
Integrated Assessment Modelling Consortium 📍 International
  - The SWG Evaluation and Diagnostics fosters activities that help describe, document and understand the performance of integrated assessment models.
- **PBL Academy**  
PBL Netherlands Environmental Assessment Agency 📍 The Hague, The Netherlands
  - PBL Academy is the organisation at PBL that develops trainings and organizes events and lectures around the interface between science and policy

NOTE: I have also professionally developed myself by picking up board positions at:

- PBL Young** (2014-2016)
- YES-DC** (2013-2014)

2019  
|  
2017

## RESEARCH PAPERS

2021

- **Decomposition analysis of per capita emissions: a tool for assessing consumption changes and technology changes within scenarios**  
Environmental Research Communications 📍 Cited: 0x
  - NJ van den Berg, AF Hof, KI van der Wijst, L Akenji, V Daioglou, ...

2021

- **A race to zero - assessing the position of heavy industry in a global net-zero CO<sub>2</sub> emissions context**  
Energy and Climate Change 📍 Under review
  - van Sluisveld, M.A.E., de Boer, H.S., Daioglou, V., Hof, A.F., van Vuuren, D.P.

2020

- **Aligning integrated assessment modelling with socio-technical transition insights: An application to low-carbon energy scenario analysis in Europe**  
Technological Forecasting and Social Change 📍 Cited: 31x
  - MAE van Sluisveld, AF Hof, S Carrara, FW Geels, M Nilsson, K Rogge, ...

- 2020
- **Actors, decision-making, and institutions in quantitative system modelling**  
Technological Forecasting and Social Change  Cited: 11x
    - E De Cian, S Dasgupta, AF Hof, MAE van Sluisveld, J Köhler, B Pfluger, ...
  - **A European industrial development policy for prosperity and zero emissions**  
ECEEE  Cited: 3x
    - LJ Nilsson, M Åhman, F Bauer, K Ericsson, B Johansson, M van Sluisveld, ...
  - **From global to national scenarios: Bridging different models to explore power generation decarbonisation based on insights from socio-technical transition case studies**  
Technological Forecasting and Social Change  Cited: 2x
    - AF Hof, S Carrara, E De Cian, B Pfluger, MAE van Sluisveld, HS de Boer, ...
  - **Reflecting on the dynamics of decarbonisation**  
Cited: 0x  2020
    - H Bulkeley, J Stripple, DE Lagerqvist, F Bauer, MH Cooper, J Hasselbalch, ...
  - **Assessing the cumulative impacts of sectoral decarbonisation pathways for heavy industry**  
Cited: 0x  2020
    - MAE van Sluisveld, HS de Boer, V Daioglou, AF Hof, DP Van Vuuren
- 2019
- **Improved modelling of lifestyle changes in Integrated Assessment Models: Cross-disciplinary insights from methodologies and theories**  
Energy Strategy Reviews  Cited: 12x
    - NJ van den Berg, AF Hof, L Akenji, OY Edelenbosch, MAE van Sluisveld, ...
- 2018
- **Alternative pathways to the 1.5 C target reduce the need for negative emission technologies**  
Nature climate change  Cited: 270x
    - DP Van Vuuren, E Stehfest, DEHJ Gernaat, M Van Den Berg, DL Bijl, ...

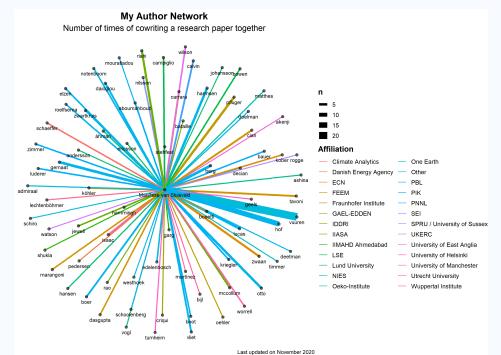
- 2018
- **Comparing future patterns of energy system change in 2° C scenarios to expert projections**  
Global Environmental Change  Cited: 7x
    - MAE Van Sluisveld, MJHM Harmsen, DP Van Vuuren, V Bosetti, C Wilson, ...
- 2017
- **Open discussion of negative emissions is urgently needed**  
Nature energy  Cited: 82x
    - DP Van Vuuren, AF Hof, MAE Van Sluisveld, K Riahi
- 2017
- **Low-carbon strategies towards 2050: Comparing ex-ante policy evaluation studies and national planning processes in Europe**  
Environmental Science & Policy  Cited: 6x
    - MAE van Sluisveld, AF Hof, DP van Vuuren, P Boot, P Criqui, FC Matthes, ...
- 2016
- **Exploring the implications of lifestyle change in 2 C mitigation scenarios using the IMAGE integrated assessment model**  
Technological Forecasting and Social Change  Cited: 63x
    - MAE van Sluisveld, SH Martínez, V Daioglou, DP van Vuuren
- 2015
- **Post-2020 climate agreements in the major economies assessed in the light of global models**  
Nature Climate Change  Cited: 157x
    - M Tavoni, E Kriegler, K Riahi, DP Van Vuuren, T Aboumabhoub, A Bowen, ...
- 2015
- **Comparing future patterns of energy system change in 2 C scenarios with historically observed rates of change**  
Global Environmental Change  Cited: 36x
    - MAE van Sluisveld, JHM Harmsen, N Bauer, DL McCollum, K Riahi, ...
- 2015
- **Impact of fragmented emission reduction regimes on the energy market and on CO<sub>2</sub> emissions related to land use: a case study with China and the European Union as first movers**  
Technological Forecasting and Social Change  Cited: 20x
    - SAC Otto, DEHJ Gernaat, M Isaac, PL Lucas, MAE van Sluisveld, ...

- 2015
- **Comparing future patterns of energy system change in 2°C scenarios with historically observed rates of change**  
ECN 📍 Cited: 0x
    - K Riahi, BCC van der Zwaan, DP van Vuuren, M Tavoni, D McCollum, ...
- 2014
- **Post-2020 climate agreements in the major economies assessed in the light of global models**  
ECN 📍 Cited: 0x
    - K Riahi, BCC van der Zwaan, DP van Vuuren, M Tavoni, T Kober, ...
- 2013
- **The paradox of packaging optimization—a characterization of packaging source reduction in the Netherlands**  
Resources, Conservation and Recycling 📍 Cited: 34x
    - MAE Van Sluisveld, E Worrell
  - **A multi-model analysis of post-2020 mitigation efforts of five major economies**  
Climate Change Economics 📍 Cited: 26x
    - MAE Van Sluisveld, DEHJ Gernaat, S Ashina, KV Calvin, A Garg, M Isaac, ...
  - **Material efficiency in Dutch packaging policy**  
Philosophical Transactions of the Royal Society A: Mathematical, Physical ... 📍 Cited: 13x
    - E Worrell, MAE van Sluisveld

## 📅 RESEARCH REPORTS

- 2020
- **D4.10 Assessing the cumulative impacts of sectoral decarbonisation pathways for heavy industry**  
EU H2020 deliverable (REINVENT) 📍 Published deliverable
    - van Sluisveld, M.A.E., de Boer, H.S., Daioglou, V., Hof, A.F., van Vuuren, D.P.
  - **D5.3 Integrated analysis of broader impacts**  
EU H2020 deliverable (REINVENT) 📍 Published deliverable
    - Hof, A.F., van Sluisveld, M.A.E., de Boer, H.S., van Vuuren, D.P
  - **D6.5 Implications for modelling decarbonization**  
EU H2020 deliverable (REINVENT) 📍 Published deliverable
    - van Sluisveld, M.A.E., Schneider, C., Lechtenboehmer, L.

I have collaborated with experts in the field of energy modelling, socio-technical studies, system dynamics, social sciences. My coauthor network consists of 26+ different research affiliations (see final page for big view)



Several studies have also been picked up in more popular writing and policy relevant reports:

- ✓ Sluisveld et al (2018) in [Carbon Brief](#)
- ✓ Sluisveld et al (2018) in [EnergiePodium](#)
- ✓ Citations in [IPCC AR5](#) in [IPCC SR1.5](#)

2019	<ul style="list-style-type: none"> <li> <b><i>Workshop report on Heavy Industry in Climate Change Mitigation scenarios</i></b>            EU H2020 deliverable (REINVENT)  Published deliverable            · Van Sluisveld, M.A.E., de Boer, H.S., Hof, A.H., van Vuuren, D.P., Schneider, C., Knoop, K., Saurat, M., Lechtenboehmer, S.         </li> </ul>
2018	<ul style="list-style-type: none"> <li> <b><i>European decarbonisation scenarios for industry</i></b>            EU H2020 deliverable (REINVENT)  Published deliverable            · van Sluisveld, M.A.E., de Boer, H.S., Hof, A.H., van Vuuren, D.P., Schneider, C., Lechtenboehmer, S.         </li> </ul>
2017	<ul style="list-style-type: none"> <li> <b><i>Existing visions and scenarios for European industry decarbonisation</i></b>            EU H2020 deliverable (REINVENT)  Published deliverable            · Schneider, C., Friege, J., Samedi, S., Lechtenboehmer, S., <b>van Sluisveld</b>, M.A.E., de Boer, H.S., Hof, A.H., van Vuuren, D.P.         </li> </ul>
2016	<ul style="list-style-type: none"> <li> <b><i>Low-carbon energy scenarios in six north-west European countries</i></b>            PBL Netherlands Environmental Assessment Agency  Report            · Mariesse <b>van Sluisveld</b>, Pieter Boot, Pieter Hammingh, Jos Notenboom, Detlef van Vuuren         </li> </ul>
2015	<ul style="list-style-type: none"> <li> <b><i>Implications of Long-Term Scenarios for Medium-Term Targets (2050)</i></b>            PBL Netherlands Environmental Assessment Agency  Report            · van Vuuren, DP, <b>van Sluisveld</b>, M, Hof, AF         </li> </ul>
2014	<ul style="list-style-type: none"> <li> <b><i>Long-term climate policy targets and implications for 2030</i></b>            PBL Netherlands Environmental Assessment Agency  Report            · van Vuuren, DP; Elzen; M. den, Hof; A, Roelfsema; M, Lucas; PL, <b>van Sluisveld</b>; M.A.E., Gernaat; DEHJ, Otto; AAC, Berg; M van den, Harmsen; JHM, Schaeffer; M, Admiraal, A,         </li> </ul>

## PRESENTATIONS & INVITED TALKS

2020-12-03	<ul style="list-style-type: none"> <li> <b><i>A race to the bottom - assessing net-zero emissions pathways for heavy industry</i></b>            IAMC 2020  Anymeets            · Invited talk at the 13th Annual Meeting of the Integrated Assessment Modeling Consortium         </li> </ul>
------------	--

I have actively engaged with peers and a variety of audiences. In some cases I have been rewarded external funding to disseminate results:

European Commissions & ICF travel funding for IAMC2019

2020-11-  
26

● ***Industry decarbonisation in the context of the European Green Deal: Lessons from REINVENT***

EC Knowledge sharing event



- Speaker during the session on "The European Green Deal: the transition to a carbon neutral economy in line with the Paris goals (incl. 2030 and 2050 climate targets)"

2020-  
09-15

● ***What differences has COVID-19 made to decarbonisation?***

Earth System Governance 2020



- Speaker during the Semi-Plenary Session on *COVID-19 and Zero Carbon? Emergent possibilities of climate responses in times of crises*

2020-  
06-17

● ***How to jump start industry decarbonization in the wake of the corona crisis?***

ECEEE/RENEW industry



- Discussion leader on the effects on "negative emissions"

2020-  
04-08

● ***Futuring application: The mystique of crunching numbers***

Lund University



- Guest lecture for "FMIN05 Climate as science and politics" (Environmental and Energy Systems course)

2019-12-  
02

● ***Comparing quantitative industry decarbonization perspectives towards 2050 for Europe***

Tsukuba International Congress Center

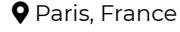


- Invited talk at the 12th Integrated Assessment Modeling Community 2019 meeting

2019-06-  
03

● ***To invest in lock-in or in structural change? Analysis of decarbonization strategies for heavy industry***

UIC-P Espaces Congrès



- Invited talk at the 38th International Energy Workshop 2019 meeting

2019-05-  
07

● ***Pathways & global sustainability science***

Utrecht University



- Invited guest lecture at the BSc Global Sustainability Science course 'Global Integration Project GEO2-2417'

2019-03-  
29

● ***Session: The time and speed of the transition and policy instruments to support the transition and local versus global participation***

NTNU



- Invited talk at the Industry Decarbonization Stakeholder workshop during the Energy Transition Week 2019

2018-11-  
29

● **Industry decarbonization by 2050**

Representation of the State of North Rhine-Westphalia to  
the European Union

📍 Brussels, Belgium

- Poster Presentation REINVENT scenarios at the *Understanding Innovation Dynamics for Low-Carbon Transitions in Resource-Intensive Industries* stakeholder workshop

2018-07-  
10

● **Scenarios for Decarbonising European Industries**

Haus der Industrie

📍 Vienna, Austria

- Invited talk at the European Calculator Expert Consultation

2015-11-  
16

● **Comparing future patterns of energy system change in 2C scenarios with historically observed rates of change**

Seminaris SeeHotel

📍 Potsdam, Germany

- Invited talk at the 8th Annual Meeting of the Integrated Assessment Modeling Consortium

2015-11-  
16

● **Comparing future patterns of energy system change in 2C scenarios with historically observed rates of change**

University of Sussex

📍 Brighton, United Kingdom

- Invited talk at the International Sustainable Transitions Conference 2015

2015-04-  
21

● **The feasibility of alternative mitigation scenarios**

The Senate House

📍 London, United Kingdom

- Invited talk at the WholeSEM, BE4 workshop

NOTE: I have also been very keen on bringing people and places together, to get some real-world insights on the subjects at hand. The following list elaborates on the platforms that I have helped to create.



(IEA WEO event 2018 @ PBL)

2019-03-  
27

● **Stakeholder workshop Heavy industry in climate change mitigation scenarios**

PBL Netherlands Environmental Assessment Agency

📍 The Hague, The Netherlands

- 20 participants, organized on behalf of the H2020 project REINVENT, inviting stakeholders from CEFIC, VNP, World Steel Association, IEA, Fraunhofer-ISI, FfE, Wuppertal Institute

2018-11-  
15

● **PBL Academy Lecture World Energy Outlook 2018**

PBL Netherlands Environmental Assessment Agency

📍 The Hague, The Netherlands

- 200 participants, inviting Fatih Birol (IEA) & Dutch Minister of Economic Affairs and Climate Policy Eric Wiebes (Min EZK) to talk

I have organized many of the activities under the banner of:

- ✓ FP7 and H2020 EU projects
- ✓ YES-DC (board 2013-2014)
- ✓ PBL Young (board 2014-2016)
- ✓ PBL Academy (commission 2018-2019)

2018-11-09

● ***IMAGE 3.2 advisory board meeting***

PBL Netherlands Environmental Assessment Agency  
📍 The Hague, The Netherlands

- With Jae Edmonds (PNNL), Bert Metz, Marcel Berk (Dutch Ministry of Economic Affairs and Climate Policy), Keywan Riahi (IIASA), Dolf Gielen (IRENA) and Rob Dellink (OECD) as part of the advisory committee, 16 participants

2018-11-09

● ***Symposium Changes in the interaction between science and policy, focusing on the development of energy and climate sciences and the application of modelling tools***

PBL Netherlands Environmental Assessment Agency  
📍 The Hague, The Netherlands

- inviting Jae Edmonds (PNNL), Leen Hordijk, Marcel Berk (Dutch Ministry of Economic Affairs and Climate Policy), Keywan Riahi (IIASA), Dolf Gielen (IRENA) and Rob Dellink (OECD) for a talk, (90 participants) PBL, Den haag

2016-06-10

● ***PBL round table Low-carbon energy scenarios in NW European countries***

Hotel Karel V  
📍 Utrecht, The Netherlands

- Participants from UK (UKERC), Germany (Oko-Institut, Fraunhofer-ISI), France (UPMF Grenoble), Denmark (Danish Energy Agency), Belgium (Federal Planning Bureau), the Netherlands (PBL) and the European Commission, 21 participants

2015-04-01

● ***Symposium The road to Paris <U+0096> Climate Change Policy & Practice***

Academy Hall  
📍 Utrecht, The Netherlands

- 65 participants, organized on behalf of Young Energy Specialists and Development Cooperation (YES-DC)

2015-04-01

● ***Symposium 'Successes and failures in the dialogue between science and policy***

Leeuwenberg church  
📍 Utrecht, The Netherlands

- 120 participants, organized by PBL Netherlands Environmental Assessment Agency for Leo Meyer

2014-11-15

● ***Congress The new world order - shifting geopolitics***

Academy Hall  
📍 Utrecht, The Netherlands

- 60 participants, organized on behalf of Young Energy Specialists and Development Cooperation (YES-DC)

2013-11-19

● ***Symposium The role of materials in the energy transition***

Academy Hall  
📍 Utrecht, The Netherlands

- 40 participants, organized on behalf of Young Energy Specialists and Development Cooperation (YES-DC)

2012-09-25

## Workshop *The feasibility of transitions in 2 degree scenarios*

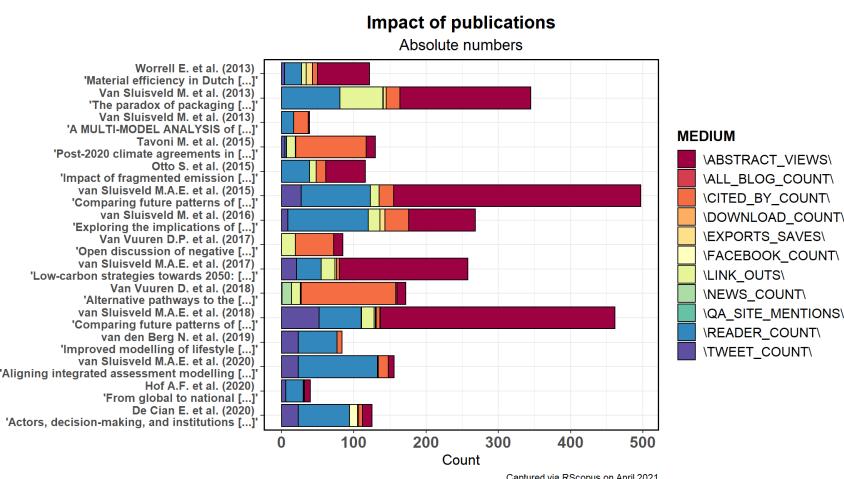
Pietershof

Utrecht, The Netherlands

- 25 participants, organized on behalf of the FP-7 projects  
RESPONSES/LIMITS

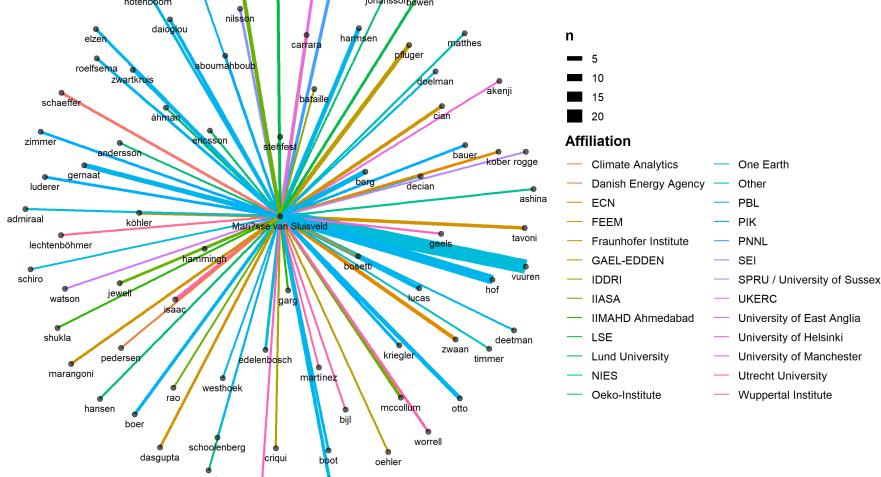
## ↗ OUTREACH

Publications



## ↗ AUTHOR NETWORK

**My Author Network**  
Number of times of cowriting a research paper together



NOTE: I have enjoyed collaborating with 26 different kinds of research institutes all over the globe.