

# Professor Mark New

## Curriculum Vitae

Internationally recognised institute director, research leader and programme manager in climate change science, impacts and adaptation, bringing over twenty years of experience across education, research, policy and practice domains.



**Publications:** 123

**Citations:** 13,753

**h-index:** 39

**NRF Rating:** B1

**PI:** 20 Projects

**Supervision:** 53 Masters, PhDs and Postdocs

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**Profiles:** [ORCID](#) | [Publons](#)

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### SUMMARY

Mark New is Pro-VC for Climate Change, Director of the African Climate and Development Initiative (ACDI) and AXA Research Chair in African Climate Risk at the University of Cape Town (UCT). As Pro-VC for Climate Change he is responsible for the ACDI and the coordination of interdisciplinary research and teaching on problems at the intersection of climate change and development, from an explicitly African perspective.

He has a BSc Hons in Geology from UCT, an MPhil in Environment and Development from Cambridge, and a PhD in Geography from Cambridge. Prior to his current posts, he was, from 1999-2011 Lecturer, Reader and then Professor of Climate Science at the School of Geography, University of Oxford, and from 1995-1999 Senior Research Fellow at the Climatic Research Unit, University of East Anglia.

In addition to his senior management positions, Mark has over twenty-five years' experience in climate change research, teaching and project management. His research has encompassed detection of climate change trends, climate modelling and scenarios, assessment of uncertainty in climate projections and impacts, and climate change adaptation.

His current research focuses on climate change impacts and adaptation, with a Southern African and African focus, in the context of the Global South, with a particular focus on: (i) improved understanding of climate processes, climate projections, climate risk and attribution; (ii) climate impacts and adaptation, especially with regard to water, agriculture and food security; (iii) barriers and enablers of climate adaptation and resilience.

He has served in a range of science and policy coordination, advisory and editorial roles, including as Editor for Global Environmental Change and Environmental Research Letters, as an author on a number of IPCC reports, including as Coordinating Lead Author for Chapter 17 of the current Working Group II Sixth Assessment, a science committee member for the World Adaptation Science Programme, and as a member of the 2018 Review Panel for the World Climate Research Programme.

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### EXPERTISE

- Institutional strategy development, programme implementation and senior management
- Interdisciplinary and transdisciplinary research theory and practice
- Research proposal development, fund raising and research management
- Postgraduate and professional curriculum development
- Climate change detection and attribution, including extreme event impact attribution
- Climate model evaluation and climate scenario development

- Climate impact assessment and adaptation planning
  - Water resources, agriculture, biodiversity and nexus issues
  - Decision making under uncertainty
  - Science communication and stakeholder engagement
  - National and sub-national climate policy development
  - Advisor and consulting to a range of organisations on climate and development issues, including the World Bank, the ADB and AfDB, DFID, USAID, WWF, SADC and the South African Government.
  - Country experience in Africa, South Asia, South America, Europe; South Africa, Lesotho, Botswana, Namibia, Mozambique, Ghana, Kenya, Mauritius, Zambia, Rwanda, India, Nepal, Peru, Chile, Brazil, and several Caribbean states.
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## **EDUCATION AND QUALIFICATIONS**

- PhD, Geography, Cambridge University, United Kingdom, 1998.
  - MPhil, Environment and Development, Cambridge University, United Kingdom, 1992.
  - BSc Hons, Geology, University of Cape Town, South Africa, 1987.
  - BSc, University of Cape Town, South Africa, 1986.
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## **EMPLOYMENT**

### **2011-Present**

Pro-VC and Director, African Climate and Development Initiative, University of Cape Town

### **1999-2011**

Lecturer / Reader / Professor in Climate Science, School of Geography & Environment, Oxford University

### **1995-1999**

Senior Research Associate, Climatic Research Unit, University of East Anglia

### **1988-1991**

Exploration Geologist, Southern Oil Exploration Corp., Cape Town

### **1981-1983**

National Service, South African Navy, Cape Town

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## **AWARDS AND EXTERNAL POSITIONS**

2019: Apolitical 100 most influential people in climate policy

2018: Piers Sellers Prize for world leading contribution to solution-focused climate research

2017-Present: AXA Research Chair in African Climate Risk, University of Cape Town

2013-Present: Professor / Emeritus Professor in International Development, University of East Anglia

2011-2013: Visiting Professor of Climate Science, University of Oxford

2019-present: Coordinating Lead Author, IPCC Sixth Assessment Working Group II

2017-present: Editor, Global Environment Change

2012-present: Editorial Board, Environmental Research Letters

2006-2010: Editor, Geophysical Research Letters

2018-present: World Adaptation Science Programme, Science Committee  
 2018-2019: Review Panel, World Climate Research Programme  
 2015-present: South African Global Change Science Committee  
 2013-present: Executive Committee, African Centre for Cities, UCT  
 2012-2015: Chair, UCT Working Group on Interdisciplinary Research, 2012-2014  
 2007-2011: Program Leader, Tyndall Centre for Climate Change Research, Oxford Node  
 2010-2020: Scientific Steering Committee, Adaptation Futures Conference Series  
 2018: Lead Organiser, "Adaptation Futures 2018" International Conference, Cape Town  
 2010: Lead Organiser, "4 Degrees and Beyond" International Conference, Oxford

## KEY RECENT PUBLICATIONS

**New, M**, et al (2020). Attribution of anthropogenic climate influence on drought insurance risk and premiums, *Nature Climate Change*: under review.

Conway, D., **New, MG**, et al., 2019: The need for bottom-up assessments of climate risks and adaptation in climate-sensitive regions. *Nature Climate Change*, doi:10.1038/s41558-019-0502-0.

Scott, D., H. Davies and **M New**, Eds., 2019: Mainstreaming Climate Change in Urban Development: Lessons from Cape Town. UCT Press, Cape Town, South Africa, 348 pp.

Ford, J. D., et al, incl. **M New** (2019). Changing access to ice, land and water in Arctic communities. *Nature Climate Change*.

Gordon, IJ, Bawa, K, et al, incl. **New, M**, (2019). Forging future organizational leaders for sustainability science, *Nature Sustainability*, 2: 647-49.

Cundill, G., et al incl., **M New**, (2018). Large-Scale Transdisciplinary Collaboration for Adaptation Research: Challenges and Insights. *Global Challenges* 0(0): 1700132.

## MOST CITED PUBLICATIONS

Alexander, LV, et al, incl. **M. New** et al. (2006). Global observed changes in daily climate extremes of temperature and precipitation. *Journal of Geophysical Research Atmospheres* 111(5). (Cited by 2018)

**New, M**, M Hulme and P Jones (2000). Representing twentieth-century space-time climate variability. Part II: Development of 1901-96 monthly grids of terrestrial surface climate. *Journal of Climate* 13(13): 2217-2238. (Cited by 1520)

**New, M**, D Lister, M Hulme, et al. (2002). A high-resolution data set of surface climate over global land areas. *Climate Research* 21(1): 1-25. (Cited by 1462)

Araujo, MB and **New, M** (2007). Ensemble forecasting of species distributions, *Trends In Ecology & Evolution*, 22: 42-47. (Cited by 1402)

**New, M**, M Hulme and P Jones (1999). Representing twentieth-century space-time climate variability. Part I: Development of a 1961-90 mean monthly terrestrial climatology. *Journal of Climate* 12(2-3): 829-856. (Cited by 1369)

Haylock, MR, N Hofstra, AMG Klein Tank, **MG New**, et al. (2008). A European daily high-resolution gridded data set of surface temperature and precipitation for 1950-2006. *Journal of Geophysical Research Atmospheres* 113(20). (Cited by 1124)

## SELECTED KEYNOTE AND INVITED TALKS

**New, MG** (2020). "Quantifying the influence of anthropogenic climate change on insurance risk." In *Insurance in Africa in a Changing Climate*. Cape Town: SANTAM & UN Principles for Sustainable Insurance Initiative.

- New, MG** (2019). "Using climate science to inform humanitarian responses to natural disasters." In *The evolution of humanitarian response to the climate crisis*. Paris, France: BNP Paribas Foundation Climate & Biodiversity Initiative.
- New, MG** (2017). "Higher Education for Delivering the SDGs in Africa." In *7th World Sustainability Forum*. Cape Town.
- New, M**, Cole, M. and Barmand, S. (2016). "Is South Africa on a Sustainable Development Trajectory?" In *6th International Conference on Sustainability Science*. South Africa.
- New, M** and Cole, M. (2013). "Safe and Just Operating Spaces at Different Scales: Useful Metrics or Advocacy Gimmick." In *The Southern African Programme on Ecosystem Change and Society (SAPECS) Colloquium: Frontiers of Social-Ecological Research*. Cape Town, South Africa.

## RECENT POPULAR SCIENCE PUBLICATIONS

- New, M** (2019). "Climate explained: how much of climate change is natural? How much is man-made?" In *The Conversation*.
- Rebelo, A., Le Maitre, D. L., **New, M**, et al. (2019). "What science tells us about fire hazards facing Cape Town and its surrounds." In *The Conversation*.
- New, M** (2018). "What the latest assessment on global warming means for southern Africa." In *The Conversation*.
- New, M**, Wolski, P. and Otto, F. (2018). "Global warming has already raised the risk of more severe droughts in Cape Town." In *The Conversation*.
- Bouwer, R., Nkemelang, T. and **New, M** (2018). "What global warming of 1.5°C and higher means for Botswana." In *ASSAR Information Brief, 12*. Cape Town: University of Cape Town.
- New, M** (2018). "How strong are climate adaptation knowledge systems in semi-arid regions?" In *CARIAA Blog*. Ottawa, Canada: IDRC.
- Bouwer, R., Nkemelang, T. and **New, M** (2018). "What global warming of 1.5°C and higher means for Ethiopia." In *ASSAR Information Brief, 12*. Cape Town: University of Cape Town.

## RECENT MAJOR RESEARCH PROJECTS

PI: *TSITICA - Transforming social inequalities through inclusive climate actions*. [UKRI GCRF, 2020-2023, UKP 2.0 M].

TSITICA is a collaborative research project between the Universities of Cape Town, Ghana, Nairobi, Bristol, LSE and East Anglia, which aims to build the evidence base on how climate risk intersects with poverty and inequality, and how national climate actions mandates under the UNFCCC and the Nationally Determined Contribution process can be targeted and reduction of multi-dimensional poverty and inequality.

PI: *SAF-ADAPT - South Africa Flanders Adaptation Research and Training Programme*. [UKRI GCRF, 2020-2025, EURO 2.4 M].

SAF-ADAPT brings together three South African universities - Cape Town, Fort Hare and Venda - with a consortium of Belgian universities - led by KU Leuven - to: (i) train a cohort of twenty MSc, PhD and Post-doctoral researchers; (ii) fill key adaptation knowledge gaps through student research; (iii) develop knowledge products and data that supports national adaptation practice needs; (iv) provide professional training in adaptation to technical staff in government and civil society.

PI: *PLAN: Building African Capacity for Climate & Development Challenges*. [UKRI GCRF, 2019-2022, UKP 0.6 M].

PLAN aims to support the development of a research and teaching network within around the African Research Universities Alliance Centre of Excellence, led by the Universities of Cape Town, Ghana and Nairobi.

Co-PI: *SEBEI - Socio-economic Benefits of Ecological Infrastructure*. [DANIDA & DFC, 2018-2020, DKO 2 M].

SEBEI aims to develop an evidence-based integrated framework and prototype "investment case" for strengthening water-related Ecological Infrastructure (EI). It has undertaken a (i) systematic review of the literature to establish linkages between investment in EI and poverty alleviation and livelihoods, (ii) a typology of EI interventions in South

Africa, (iii) new methods for remote sensing monitoring of EI in mountainous catchments, (iv) advance hydrological modelling of the EI investment hydrological “dividend”, (v) built a transdisciplinary community of practice between research, policy and implementation actors, and (vi) modelled the viability of a range of different financial investment approaches.

PI: *ASSAR - Adaptation at Scale in Semi-Arid Regions*. [IDRC & DFID, 2014-2018, CAD 13 M].

ACDI was the overall lead of ASSAR, a project with a total budget of \$11M, distributed across a consortium of five lead organisations and a further 12 partner organisations. ASSAR aimed to improve understanding of climate change in semi-arid areas across Africa and Asia, preparing the communities and governments for the potential impacts of climate change. The ASSAR project results in 130 peer reviewed publications, and over 100 science-policy and science-practice communications products.

## FULL LIST OF RESEARCH PROJECTS

- PI: *SAF-ADAPT - South Africa Flanders Adaptation Research and Training Programme*. [UKRI GCRF, 2020-2025, EURO 2.4 M].
- PI: *TSITICA - Transforming social inequalities through inclusive climate actions*. [UKRI GCRF, 2020-2023, UKP 2.0 M].
- PI: *ARUA-CD: Building African Capacity for Climate and Development Challenges*. [UKRI GCRF, 2019-2022, UKP 0.6 M].
- Co-PI: *SEBEI - Socio-economic Benefits of Ecological Infrastructure*. [DANIDA & DFC, 2018-2020, DKO 2 M].
- Co-PI: *Impact of solar radiation management on drought and heat extremes in Southern Africa and associated influence on the regional agriculture*. [TWAS & UNESCO, 2018-2020, USD 120 K].
- Co-I: *Climate Change and Indigenous Food System Security (IHACC 2)*. [Canadian Tri-Councils (CIHR, N., SSHRC),, 2017-2021, CAD 120 K].
- PI: *Exploring the evidence of Water-Energy-Food nexus linkages to sustainable local livelihoods and wellbeing in South Africa*. [Water Resource Commission, 2017-2020, ZAR 2.3 M].
- Co-PI: *Joint attribution of Biophysical and Economic Impacts of Hydroclimatic Extremes*. [Initiative, B. P. F. C. a. B., 2017-2020, UKP 360 K].
- PI: *Defining South Africa’s Climate Adaptation Research Agenda*. [GIZ & South Africa Department of Environmental Affairs, 2017-2018, ZAR 0.95 M].
- PI: *Enhancing capacities to use climate change data to inform decision making*. [African Development Bank, 2016-2018, USD 180 K].
- PI: *Problems and Solutions for Climate Change resilience and Adaptation in Mozambique*. [UNDP, 2016-2017, USD 160 K].
- Co-PI: *Towards sustainable economic development in water constrained catchments: tools to empower decision making*. [WaTer Research Commission & Western Cape Government, 2015-2017, ZAR 900 K].
- PI: *Southern African Regional Universities Association Curriculum Innovation Network*. [UNDP, 2015-2016, ZAR 3.5 M].
- The ACIDI was the lead partner in a consortium of southern African universities that recently developed a Master’s curriculum in ‘Climate Change and Sustainable Development’.
- PI: *ASSAR - Adaptation at Scale in Semi-Arid Regions*. [IDRC & DFID, 2014-2018, CAD 13 M].
- PI: *Development of a climate change response strategy and implementation plan for the Western Cape agricultural sector*. [Western Cape Government, 2014-2016, ZAR 3.1 M].
- PI: *The Food-Energy-Water Nexus and Local Development Planning*. [British High Commission Prosperity Fund, 2013-2015, UKP 75 K].
- PI: *CARIAA: Collaborative Adaptation Research in Africa and Asia, Proposal Development Grant*. [IDRC & DFID, 2013, CAD 80 K].
- PI: *Shared visioning of development scenarios for Saldanha Bay*. [British High Commission Prosperity Fund, 2012-2013, UKP 12 K].
- Co-PI: *Climate Change Scenarios and Evaluation of Climate Models for East Africa, West Africa and the Indo-Gangetic Plain*. [CCAFS & ILRI, 2010-2011, UKP 120 K].
- Co-I: *National Climate and Low Carbon Development Strategy for Rwanda*. [Climate and Development Knowledge Network (CDKN) & DFID, 2010-2011, UKP 300k].
- PI: *Resilient and Adaptive Water Systems – ARCC WATER*. [EPSRC, 2009-2012, UKP 1.2 M].
- PI: *CARIBSAVE – Climate Change and Tourism in the Caribbean*. [DFID, 2009-2011, UKP 1.0 M].

- Co-I: *Regionalised narrative climate change scenarios for Nepal*. [DFID, 2009-2011, UKP 42 K].
- PI: *Dangerous Climate Change Assessment Project*. [AVOID (UK DECC) & Wallace Foundation, 2009-2010, UKP 100 K].
- PI: *A coupled land-surface atmosphere model for cloud forests*. [". (Microsoft Research & John Fell Fund, 2008-2010, UKP 360 K].
- PI: *Country Scale Climate Change Information for Developing Countries*. [UNDP, 2008, UKP 40 K].
- Co-PI: *Tyndall Centre for Climate Change Research, Phase 2 & 3, Oxford Node*. [Research Councils UK, 2006-2011, UKP 1.3 M].
- Co-I: *TROBIT: Tropical Biomes in Transition*. [UK Natural Environment Research Council, 2006-2010, UKP 140 K].
- PI: *Development of a framework for probabilistic climate change impacts assessment and policy decision-making*. [UK Environment Agency and Tyndall Centre for Climate Change Research, 2006-2009, UKP 180 K].
- Co-I: *ENSEMBLES: Ensemble-based predictions of climate change and its impacts*. [EU Integrated Project, 2004–2009, Euro 92 K].
- PI: *Quantification of uncertainty in regional and local climate change*. [UK Natural Environment Research Council & Daphne Jackson Trust, 2004–2006, UKP 40 K].
- PI: *Role of wetlands in ensuring water-security*. [UK Natural Environment Research Council, 2004–2005, UKP 26 K].
- Co-PI: *Climate outlooks and agent-based simulation of adaptation in Africa*. [Research, U. N. E. R. C. T. C. f. C. C., 2002–2004, UKP 200 K].
- PI: *Reconstruction of oceanic precipitation using time varying EOFs*. [UK Natural Environment Research Council, 2002–2003, UKP 30 K].
- PI: *Observed climate data for the World Water and Climate Atlas*. [Institute, I. W. M., 1998–2001, UKP 65 K].

## CURRICULUM DEVELOPMENT AND DELIVERY

2019: Developed (with OXFAM) a Massive Open Online Course (MOOC): *Research for Development*.

Presents the Research for Impact approach - a set of principles and practices that will help you to make your research more impactful. Traditionally, the goals and outcomes of research projects were to contribute knowledge and communicate this knowledge through academic publications and journal articles. But If we truly want our research to have an impact, we need to do research differently. Research that influences change in policy, practice, behaviour and attitudes.

2018: Developed (with UCT colleagues) the MOOC: *Climate Adaptation in Africa*.

The course explores how adaptation can help build resilience to climate change for vulnerable sectors and people in Africa. It examines adaptation in theory and in practice, through a focus on four sectors that are critically important for climate resilient development in Africa: Water Security, Agriculture and Food Security, Ecosystems and Ecosystem Services and Resilient Cities.

2014: Led development of SARUA open access MSc curriculum: *Climate Change and Sustainable Development*

Coordinate a consortium of southern African universities that developed a Master's curriculum in 'Climate Change and Sustainable Development'. The curriculum is available to Southern Africa Regional Universities Association member universities to adapt and deliver, either as a self-standing MSc level course, or as part of an existing course that wishes to bring in strong climate change components.

2011-present: Developed and directed ACIDI's interdisciplinary MSc: *Climate Change and Development*

Curriculum provides interdisciplinary training in climate change and sustainable development, with a focus on the issues of relevance to African development. Draws on lecturers and research supervisors from across the University of Cape Town. Curriculum spans sustainable development, physical climate science, climate policy and law, economics, with special core courses in low carbon development and climate adaptation.

2005-2011: Developed and directed Oxford interdisciplinary MSc: *Water Science, Policy and Management*

Led the scoping of the course, market needs assessment, and the development of the curriculum. Directed the course from inception to leaving Oxford in 2011. The course draws on lecturers from across Oxford university and the water industry to provide training in three dimension of sustainable water management: (i) science and technology, (ii) policy, economics and finance, and (iii) water management.

## POSTDOCTORAL SUPERVISION

- Rinchen Lama (India, 2020-present): *Climate resilient development pathways in semi-Arid regions.*
- Megan Lukas-Sithole (RSA, 2019-present): *Supporting the Africa contribution to the IPCC 6th Assessment.*
- Temitope Egbebiyi (Nigeria, 2020-present): *The influence of observed climate change on crop suitability in Central Africa.*
- Kamoru Abiodun Lawal (Nigeria, 2018-present): *Evaluation of climate models for attribution science in Africa.*
- Romaric Odoulami (Benin, 2018-present): *Attribution of human influence on African drought risk.*
- Petra Holden (RSA, 2018-present): *Modelling the role of nature-based solutions in reducing hydroclimatic risk.*
- Terence Epule (Cameroon, 2017-2018): *Vulnerability of staple foods to climate shocks in Uganda.*
- Chidiebere Ofoegbu (Nigeria, 2016-2018): *Climate adaptation knowledge systems in Africa.*
- Bastien Dieppois (France, 2014-2015): *Decadal variability of climate over southern Africa.*
- Modathir Zaroug (Sudan, 2014-2017): *Climate trends and projections in semi-arid regions of Africa.*
- Salma Hegga (Tanzania, 2014-2017): *Climate governance in semi-arid Southern Africa.*
- Admire Nyamwanza (Zimbabwe, 2014-2017): *Climate information needs for rainfed farming in Southern Africa.*
- Marie-Ange Baudoin (Belgium, 2014): *Capacity of organisations to access adaptation funding.*
- Mariko Fujisawa (Japan, 2013-2015): *Climate information needs for deciduous fruit farm planning.*
- Muhammad Rahiz (Singapore, 2013-2015): *Added value of next-generation climate models for agricultural risk and adaptation assessment in Africa.*
- Neil McKellar (RSA, 2011-2013): *Climate trends and projections for South Africa.*
- Ana Lopez (UK, 2002-2007): *Assessing uncertainty in climate impacts models.*
- Fai Fung (UK, 2005-2010): *Modelling climate resilience in water resource systems.*
- Carol McSweeney (UK, 2009-2011): *Climate change scenarios for developing countries.*
- Dimitri Efthymiades (Greece; 2001-2003): *Reconstruction of oceanic precipitation from sparse observations.*

## PHD STUDENT SUPERVISION

- Nkemelang, T. (In progress). *Attribution of anthropogenic climate forcing of wildfire risk in the Southern Cape of South Africa*, PhD Thesis, University of Cape Town.
- Kunamwene, I. (In progress). *Namibia's Drought Policy: Lessons for Societal Wellbeing through Climate Adaptation*, PhD Thesis, University of Cape Town.
- Kimutai, J. (In progress). *Attribution of anthropogenic climate forcing of flood producing rainfall in Kenya*, PhD Thesis, University of Cape Town.
- Boulle, M. (In progress). *Knowledge for change, or more of the same? Knowledge systems and policy processes for the implementation of the Paris Agreement in Ghana, Kenya and South Africa*, PhD Thesis, University of Cape Town.
- Ansah, P. (In progress). *Constraints and opportunities for sustainable intensification of food production in northern Ghana*, PhD Thesis, University of Cape Town.
- Angula, M. N. (In progress). *An intersectional analysis of vulnerability and adaptive capacity to climate change in Namibia's Onesi Constituency*, PhD Thesis, University of Cape Town.
- Cole, M. (2017). *Tracking inclusive sustainable development at multiple scales: South Africa's safe and just operating spaces*, PhD Thesis, University of Oxford.
- Bennett, M. (2016). *Climate and biodiversity in the Andean Dry Puna*, PhD Thesis, University of Oxford.
- Walker, G. (2014). *An uncooperative community: revisiting water privatisation and commoditisation in England and Wales*, PhD Thesis, University of Oxford.
- Rahiz, M. (2014). *Droughts in future climate change in the United Kingdom*, PhD Thesis, University of Oxford.
- Clark, K. E. (2014). *Patterns and drivers of riverine particulate organic carbon transport in an Andean valley*, PhD Thesis, University of Oxford.
- Karmacharya, J. (2013). *The added-value of high resolution regional climate model simulations in the Himalaya.*, PhD Thesis, University of Oxford.
- Halladay, K. (2012). *Cloud characteristics of the Andes/Amazon transition zone*, PhD Thesis, University of Oxford.

- Stainforth, D. A. (2010). *Uncertainty and confidence in predictions of climate change*, PhD Thesis, University of Oxford.
- Hofstra, N. (2009). *Development and evaluation of a European daily high-resolution gridded dataset of surface temperature and precipitation for 1950-2006*, PhD Thesis, University of Oxford.
- Butt, N. (2009). *Patterns and trends in climate and ecosystem composition and dynamics in lowland Amazon rain forests*, PhD Thesis, University of Oxford.
- Kuruppu, N. (2008). *Confronting climate change and variability: enhancing adaptive capacity of water management in Kiribati*, PhD Thesis, University of Oxford.
- Kay, G. (2008). *Mechanisms of southern African rainfall variability in coupled climate models*, PhD Thesis, University of Oxford.
- Von der Heyden, C. (2004). *The role of wetlands in mitigating mine-related water pollution in the Copperbelt of Zambia*, PhD Thesis, University of Oxford.

## MSC STUDENT SUPERVISION

- Nemaikononi, K. (2020). *Changes in climate extremes at 1.5 C, 2.0 C and higher levels of global warming in South Africa*, MSc Thesis, University of Cape Town.
- Hall, A. (2020). *Attribution of human influence on 2015-2018 hydrological drought in the Berg River catchment, South Africa*, MSc Thesis, University of Cape Town.
- Dorbor, S. D. (2020). *Attribution-based Parametric Insurance: Towards Affordable Premiums*, MSc Thesis, University of Cape Town.
- Riedo, G. (2019). *Drought Response Mechanisms and Adaptation: An Analysis of Strategies Adopted by Wine Grape Farmers in the Western Cape*, MSc Thesis, University of Cape Town.
- McNicoll, R. (2019). *The importance of assumptions and variables in modelling the hydrological response of fynbos catchments to invasive alien trees*, MSc Thesis, University of East Anglia.
- Nkemelang, T. (2018). *Changes in climate extremes in Botswana at 1.5 and 2.0 degrees warming*, MSc Thesis, University of Cape Town.
- Mohamed, B. (2018). *An analysis of local perceptions of the role of drought in exacerbating contemporary pastoral conflict in northern Kenya*, MSc Thesis, University of Cape Town.
- Vilissa, D. (2016). *Vulnerability of Horticulture producers to Climate Variability and Change: The case of Boane District, Mozambique*, MSc Thesis, University of Cape Town.
- Simanauskaite, G. (2014). *Knowledge, perceptions and engagement with renewable energy in South Africa: a case study of Matzikama municipality, Western Cape*, MSc Thesis, University of Cape Town.
- Hajat, A. (2014). *The potential for utilisation of decadal climate information by farmers in Malawi*, MSc Thesis, University of Cape Town.
- Wicht, C. (2013). *Changing Climate, Changing Perceptions: A Socio-Economic Analysis of Public Perceptions on Climate Change*, MSc Thesis, University of Cape Town.
- Law, A. (2012). *Evaluating the cost-effectiveness of drought early warning-early response systems for food security: a cost-benefit analysis of Ethiopia's livelihoods, early assessment and protection (LEAP) system*, MSc Thesis, University of Oxford.
- Cullis, J. (2000). *Development of a spatial water poverty index in South Africa*, MSc Thesis, University of Oxford.
- Cartwright, A. (2000). *Impact of climate change on apple production in the SW Cape of South Africa*, MSc Thesis, University of Oxford.

## FULL PUBLICATION LIST BY YEAR

- Boone, C, et al, incl. **M New** (2020). Preparing interdisciplinary leadership for a sustainable future, Sustainability Science: in press.
- New, M**, et al (2020). Attribution of anthropogenic climate influence on drought insurance risk and premiums, Nature Climate Change: under review.
- New, M**, et al (2020). Towards attribution-based climate insurance: redefining who should pay for weather-related insurance. in Shearing, C. and Phelan, L. (eds.), Insurance and climate change: a new risk landscape: in press



- Odoulami, R, **New, M**, et al (2020). Solar Radiation Management to lower future risk of "Day Zero" level droughts in Cape Town, Environmental Research Letters: in review.
- Gordon, IJ, Bawa, K, et al, incl. **New, M**, (2019). Forging future organizational leaders for sustainability science, Nature Sustainability, 2: 647-49.
- Conway, D. et al. incl. **M New**, 2019: The need for bottom-up assessments of climate risks and adaptation in climate-sensitive regions. Nature Climate Change, doi:10.1038/s41558-019-0502-0.
- Scott, D., H. Davies, T. Anna and **M New**, 2019: Reflections on the mainstreaming of climate change in urban development decision-making in the City of Cape Town. In: Mainstreaming Climate Change in Urban Development: Lessons from Cape Town [Scott, D., H. Davies and **M New** (eds.)]. UCT Press, Cape Town, South Africa, 302-321.
- Scott, D., H. Davies and **M New**, Eds., 2019: *Mainstreaming Climate Change in Urban Development: Lessons from Cape Town*. UCT Press, Cape Town, South Africa, 348 pp.
- Ziervogel, G, L. Pasquini, A Taylor and **M New**, 2019: Climate change challenges in African cities: four perspectives on progress and opportunities. In: Mainstreaming Climate Change in Urban Development: Lessons from Cape Town [Scott, D., H. Davies and **M New** (eds.)]. UCT Press, Cape Town, South Africa, 11-39.
- Ford, J. D., D. Clark, T. Pearce, L. Berrang-Ford, L. Copland, J. Dawson, **M New** and S. L. Harper (2019). "Changing access to ice, land and water in Arctic communities." Nature Climate Change.
- Maharaj, S. S., H. Asmath, S. Ali, J. Agard, S. A. Harris and **M New** (2019). "Assessing protected area effectiveness within the Caribbean under changing climate conditions: A case study of the small island, Trinidad." Land Use Policy **81**: 185-193.
- Cole, M. J., R. M. Bailey, J. D. S. Cullis and **MG New** (2018). "Spatial inequality in water access and water use in South Africa." Water Policy **20**(1): 37-52.
- Cole, M. J., R. M. Bailey, J. D. S. Cullis and **MG New** (2018). "Water for sustainable development in the Berg Water Management Area, South Africa." South African Journal of Science **114**(3-4).
- Cundill, G., B. Harvey, M. Tebboth, L. Cochrane, B. Currie-Alder, K. Vincent, J. Lawn, R. J. Nicholls, L. Scodanibbio, A. Prakash, **M New**, P. Wester, M. Leone, D. Morchain, E. Ludi, J. DeMaria-Kinney, A. Khan and M. E. Landry (2018). "Large-Scale Transdisciplinary Collaboration for Adaptation Research: Challenges and Insights." Global Challenges **0**(0): 1700132.
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## INVITED TALKS, CONFERENCE AND OTHER PRESENTATIONS

- New, MG** (2020). "Quantifying the influence of anthropogenic climate change on insurance risk." In *Insurance in Africa in a Changing Climate*. Cape Town: SANTAM & UN Principles for Sustainable Insurance Initiative.
- New, MG** (2020). "Adaptation science: what can we learn from COVID." In *Adaptation Futures 2020 Pre-Conference Webinar Series*. Virtual Conference: World Adaptation Science Programme.
- New, MG** (2019). "Using climate science to inform humanitarian responses to natural disasters." In *The evolution of humanitarian response to the climate crisis*. Paris, France: BNP Paribas Foundation Climate & Biodiversity Initiative.
- New, M** (2019). "Business Climate Change Risk in Africa." In *Peking University Global LEAD Innovators Program*. Cape Town: Graduate School of Business, University of Cape Town.
- New, MG** (2018). "The Cape Town Water "Crisis"." In *Climate Change, Agriculture and Health in Africa Radcliffe Accelerator Workshop*. Cambridge, USA: Harvard University.
- New, M** (2018). "The Role of Climate Change in the Cape Town Drought." In *Tyndall Centre and School of International Development Seminar, University of East Anglia*. Norwich, United Kingdom.
- New, MG** (2017). "Higher Education for Delivering the SDGs in Africa." In *7th World Sustainability Forum*. Cape Town.
- New, MG** (2016). "Biophysical and Social Facets of Climate Risks in the Context of Loss and Damage." In *Insuring climate and disaster resilience: Innovations and solutions for sustainable development*. Manila, Philippines: UNEP FI Principles for Sustainable Insurance Initiative & Philippine Insurers & Reinsurers Association.
- New, MG** (2016). "Transformational and Transformative Adaptation: What's the Difference?" In *South African Adaptation Colloquium*. Johannesburg, South Africa: South African Adaptation Network & University of the Witwatersrand.
- New, MG** (2016). "Transformational and Transformative Adaptation: What's the Difference?" In *2nd SA Adaptation Colloquium*. Johannesburg.
- New, MG** (2016). "Biophysical and social facets of climate risks in the context of loss and damage." In *2016 Forum of the Standing Committee on Finance: Financial instruments that address the risks of loss and damage associated with the adverse effects of climate change*. Manila, Philippines.
- New, MG**, et al (2016). "'Valuing" non-market loss and damage in the context of climate change." In *Adaptation Futures 2016*. Rotterdam, Netherlands.
- New, MG**, Cole, M. and Barmand, S. (2016). "Is South Africa on a Sustainable Development Trajectory?" In *6th International Conference on Sustainability Science*. South Africa.
- New, MG** (2014). "Food-energy-water nexus at different scales." In *17th National SANCIAS Symposium*. University of Western Cape, South Africa: Invited Keynote.
- New, MG** (2014). "Why mitigation is one of Africa's most important adaptation strategies." In *Adaptation Futures 2014*. Fortaleza, Brazil.
- New, MG** and Cole, M. (2013). "Safe and Just Operating Spaces at Different Scales: Useful Metrics or Advocacy Gimmick." In *The Southern African Programme on Ecosystem Change and Society (SAPECS) Colloquium: Frontiers of Social-Ecological Research*. Cape Town, South Africa.
- New, MG** (2012). "Next Generation Climate Modelling Outputs and Adaptation." In *Adaptation Futures 2012*. Tucson, Arizona.

- New, MG** (2011). "Water scarcity: Shortage of water or shortage of ideas?" In *Oxford Martin School Public Lecture Series: Is the planet full?* Oxford.
- New, MG** (2008). "Dangerous climate change in the Arctic." In *Dangerous Rates of Change Conference*. Exeter, UK.
- New, MG** (2007). "What kind of climate data are good enough for epidemiological modelling?" In *British Council INYS Workshop on Climate Change and Health*. Bern, Switzerland.
- New, MG** (2007). "Incorporating uncertainty into impact assessment and adaptation planning." In *Integrating Analysis of Regional Climate Change and Response Options*. Fiji: IPCC TGICA.
- New, MG** (2005). "Use of probabilistic climate change scenarios in impacts assessment." In *5th International Conference on Statistical Climatology*. Cape Town.