

**Prof Mark New**

Pro-VC and Director

**African Climate & Development Initiative**

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## SUMMARY

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Mark New is Pro-Vice Chancellor for Climate Change and Director of the African Climate and Development Initiative (ACDI) at the University of Cape Town (UCT). He holds a joint appointment as Professor of International Development at the University of East Anglia, United Kingdom. As Pro-VC for Climate Change he is responsible for the ACDI and the coordination of cutting-edge research and teaching at UCT on the twin issues of low carbon and climate resilient development, from a strongly African perspective. The ACDI draws on the intellectual capital of the range of disciplines at UCT and external collaborators, to create the largest concentration of expertise in climate and development in Africa. Professor New is also the AXA Chair in African Climate Risk. His research programme is focused on quantifying and understanding the changing risk of climate on water and food security in southern Africa.

Professor New 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.

Prof New's 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 work on climate change scenarios includes the United Nations Development Programme (UNDP) climate change profiles which provide a consistent set of climate scenarios for over fifty developing countries, and scenarios for islands of the Caribbean as part of the CARIBSAVE project; a key interest with regard to scenarios has been approaches to represent uncertainty in future climate. His research on impacts and adaptation has addressed broader adaptation policy issues around high-end climate change and dangerous climate impacts, approaches to adaptation decision making under uncertainty. Much of this work has been applied through the lens of water resource planning.

## EXPERTISE

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- Observed climate change detection and attribution;
- Climate model evaluation and climate scenario development;
- Climate impacts assessment and adaptation planning;
- Water resources, agriculture, biodiversity and nexus issues;
- Decision making under uncertainty;
- Interdisciplinary research methodologies and approaches;
- Has consulted and advised a range of organisations on climate and development issues, including the World Bank, the ADB and AfDB, DfID, USAID, and WWF.
- Country experience in Africa, South Asia, South America, Europe; South Africa, Lesotho, Botswana, Namibia, Mozambique, Zambia, Rwanda, India, Nepal, Peru, Chile, Brazil, and several Caribbean states.

## QUALIFICATIONS/EDUCATION

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**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.

## EMPLOYMENT

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### **2016 – Present**

AXA Chair in African Climate Risk, AXA research Fund.

### **2011 – Present**

Pro-Vice Chancellor and Director, African Climate and Development Initiative, University of Cape Town. Research Professor of International Development at the University of East Anglia, United Kingdom.

### **2011 – 2013**

Research Professor in Climate Science, School of Geography & Environment, Oxford University.

### **2007 – 2011**

Reader in Climate Science, School of Geography & Environment, Oxford University.

Official Student in Geography, Christ Church.

### **2005 – 2007**

University Lecturer, School of Geography & Environment, Oxford University.

Official Student in Geography, Christ Church.

### **1999 – 2005**

Departmental Lecturer, School of Geography & Environment, Oxford University.

College Lecturer, Christ Church.

### **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, SA Navy, Cape Town.

## PROFESSIONAL RECOGNITION

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- Recipient: first research chair in African Climate Risk, awarded by the AXA Research Fund (2017-2021).
- Steering Committee, CLIMWARN Programme, UNDP (2013 – 2015).
- Member: technical advisory committee, South African Long-Term Adaptation Scenarios; Steering Committee, 3rd International Adaptation Conference, Fortaleza, Brazil, May 2014; and Convener, 1st SA Adaptation Colloquium, December 2013 (2013-2014).
- Chair, UCT Working Group on Interdisciplinary Research; Editorial Board Member, Environmental Research Letters; Steering Committee, 2nd International Adaptation Conference, Arizona, USA, July 2012; and Steering Committee, International Conference on Water Security, Oxford, UK, April 2012 (2012 – 2014).
- Awarded: Thomson Reuters [2012 TrustLaw Innovation Award](#) for “an ambitious, landmark project with the potential to facilitate the evolution of the entire social and impact investment sector”.

- Recognised: International Speaker, Keynote Speaker and Panellist including at UN New York & Geneva.

## SELECTED ACADEMIC/ RESEARCH LEADERSHIP AND EXTERNAL CONTRIBUTIONS

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### **2015 – Present**

Member, Africa Future Earth Science Committee.

### **2013 – Present**

Editor, Environmental Research Letters.

Member, SA Global Change Science Committee.

Executive Committee, African Centre for Cities, UCT.

### **2013 – 2015**

Steering Committee, CLIMWARN Programme, UNDP.

### **2013 – 2014**

Member of technical advisory committee, South African Long Term Adaptation Scenarios.

Steering Committee, 3rd International Adaptation Conference, Fortaleza, Brazil, May 2014.

Convener, 1st SA Adaptation Colloquium, December 2013.

### **2012 – 2014**

Chair, UCT Working Group on Interdisciplinary Research.

Editorial Board Member, Environmental Research Letters.

Steering Committee, 2nd International Adaptation Conference, Arizona, USA, July 2012.

Steering Committee, International Conference on Water Security, Oxford, UK, April 2012.

### **2010 – 2011**

Guest Editor, Philosophical Transactions of the Royal Society, A.

Author for chapter in UK Government Foresight report on Migration: The potential for high end climate change and environmental tipping points as a driver of migration.

### **2009 – 2010**

Advisory Board, World Bank Ganges Strategic Basin Assessment.

Guest Editor, Themed Issue of Philosophical Transactions of the Royal Society, on 4 Degrees of Climate Change.

### **2008**

Member of User Advisory Panel, UK Climate Impacts Program 2008 Scenarios.

### **2008 continued**

Member, EPSRC Grant Panel.

Keynote Speaker, Dangerous Rates of Change Conference, Exeter, September 2008.

### **2007 – 2011**

Program Leader, Tyndall Centre for Climate Change Research, Oxford Node.

Contributing and reviewing author, IPCC WG1 & WG2, 2007.

Editor, Geophysical Research Letters, 2007-2009.

### **2007**

Keynote Speaker, IPCC-TGICA Expert Meeting- Integrating Analysis of Regional Climate Change and Response Options, Fiji, June 2007.

Invited Speaker, British Council INYS Workshop on Climate Change and Health, Bern, March 2007.

## **2006 - 2010 (continued)**

Co-Leader and then Leader, Climate Systems and Policy Research Cluster, School of Geography & Environment, Oxford University.

Convener, International Conference, 4 Degrees and Beyond, 2009.

Editor, Geophysical Research Letters, 2006-2009.

## **2004 – 2006**

Consultant, Science Museum, WWF, UNDP, BBC, Channel 4, DfID, DfT.

Seconded to WMO/CLIVAR Expert team on Climate Change Detection, Monitoring and Indices.

Member, NERC Grant Panel A, 2005, 2006.

External Reviewer, Centre for Ecology and Hydrology five year strategy, 2006.

Organiser, WMO/CLIVAR Extremes Workshops, South Africa, and India, 2005.

External Reviewer, UK Met Office 5-yr climate observation research strategy, 2004.

Keynote Speaker, 5th Int. Conference Statistical Climatology, Cape Town, 2004.

## **1998 – 2003**

NERC Peer Review College, 2003 onward.

Contributing and reviewing author, IPCC WG1 & WG2, 2001.

Contributing Author, IPCC 3rd & 4th Assessment Reports.

Expert Reviewer, IPCC 4th Assessment Report, Chapters on Africa and Water.

Skye Visiting Research Fellow, University of Cape Town.

Journal reviews for Science, Nature, PNAS, Climatic Change, Geophysical Research Letters, Journal Geophysical Research, Journal of Climate, International Journal of Climatology, Climate Research, Journal of Hydrology, HESS, Area, etc.

International Grant Reviewer, USA NSF, South Africa NSF, Austria ZSF, Netherlands ERS.

## **SELECTED RESEARCH PROJECTS**

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- Research Chair: “First successional chair in African Climate Risk” (AXA Research Fund, €1.35 million over 15 years, 2017 - 2032)
- PI: “Joint Attribution of Biophysical and Economic Impacts of Hydroclimatic Extremes”(Climate Initiative programme of the BNP Paribas Foundation, €998,422, 2017 – 2018)
- PI: ‘Problems and Solutions for Climate Change resilience and Adaptation in Mozambique” (UNDP MOZ, \$108 573; 2016 -2017)
- PI: FCFA SCD – Review of climate change scientific capacity development initiatives in Africa (CDKN, £60k, 2014-2015)
- PI: AgriSmart - Development of a climate change response strategy and implementation plan for the Western Cape (Western Cape Government, ZAR 3 Million, 2014-2016)
- PI: ASSAR: Adaptation at Scale in Semi-Arid Regions (IDRC/DFID Collaborative Adaptation Research in Africa and Asia Programme, CAD\$ 13.5 Million; 2014-2018).
- Co-I: Food System Governance, Food Security and Land Use in Southern Africa (SAFGOV) (Belmont Forum Collaborative Action – Food Security and Land Use Change, 2014-2015; €50k).
- PI: CARIAA: Collaborative Adaptation Research in Africa and Asia, Proposal Development Grant (IDRC/DFID, CAD\$ 80,000; 2013).
- PI: The Food-Energy-Water Nexus and Local Development Planning (British High Commission Prosperity Fund, £75,000; 2013-2015).
- PI: Near-term Climate Change, Agriculture and Food Security (CCAFS/ILRI, 2012-2014, \$230k).
- Co-PI: Climate Change Scenarios and Evaluation of Climate Models for East Africa, West Africa and the Indo-Gangetic Plain (CCAFS & ILRI, £120k, 2010-2011).

- Co-I: National Climate and Low Carbon Development Strategy for Rwanda (Climate and Development Knowledge Network (CDKN) and the DFID, £300k, 2010-2011).
- PI: Dangerous Climate Change Assessment Project (UK DECC/AVOID & Wallace Foundation, £100k, 2009-2010).
- PI: Resilient and Adaptive Water Systems – ARCC WATER (EPSRC, £1.2M, 2009-2012).
- PI: CARIBSAVE – Climate Change and Tourism in the Caribbean (DfID, £950k, 2009-2011).
- PI: Regionalised narrative climate change scenarios for Nepal (DfID, £42k).
- Co-PI: Tyndall Centre Phase 3, Oxford Node (Research Councils UK, £250k; 2009-2010).
- PI: A coupled land-surface atmosphere model for cloud forests (Microsoft Research & John Fell Fund; £360k; 2008-2010).
- Co-PI: Tyndall Centre Phase 2, Oxford Node (Research Councils UK, £800k; 2006-2009).
- Co-PI: TROBIT: Tropical Biomes in Transition (Natural Environment Research Council, £140k; 2006-2010).

## SELECTED CONSULTANCIES

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- Localised climate change scenarios for Mopani and Namakwa district municipalities (SANBI/NIE, 2014)
- Long term adaptation scenarios for South Africa (SANBI/GIZ, 2013)
- Climate Research Coordination in South Asia (DfID, 2011)
- Climate4Classrooms (Royal Met. Society, 2010-2011)

## SELECTED PUBLICATIONS

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### 2017

Cole, Megan J., Bailey, Richard M., **New, M. G.** 2017. Spatial variability in sustainable development trajectories in South Africa: provincial level safe and just operating spaces. *Sustainability Science*, p. 1-20.

Nyamwanza, A.M., **New, M. G.**, Fujisawa, M., Johnston, P., & Hajat, A. 2017. Contributions of decadal climate information in agriculture and food systems in east and southern Africa. *Climate Change*, p. 1-14. DOI: 10.1007/s10584-017-1990-4.

Tschakert, P., Barnett, J., Ellis, N., Lawrence, C., Tuana, N., **New, M.**, Elrick-Barr, C., Pandit, R., & Pannell, D. 2017. Climate change and loss, as if people mattered: values, places, and experiences. *WIREs Climate Change*, e476 (8): p. 1-19.

### 2016

Dieppois, B., Pohl, B., Rouault, M., Keenlyside, **New, M.**, N., Lawler, D.M., & Keenlyside, N. 2016. Observed decadal variability of southern African rainfall, their teleconnections, and uncertainties. Conference: EGU General Assembly 2016, At Vienna, Volume: 18

Nyamwanza, A.M. and **New, M.**, 2016. Anticipatory adaptation and the role of decadal climate information in rural African livelihood systems: lessons from the Mid-Zambezi Valley, Zimbabwe. *International Journal of Climate Change Strategies and Management*, 8(2). DOI: <http://dx.doi.org/10.1108/IJCCSM-03-2015-0029>

### 2015

Dieppois, B., Pohl, B., Rouault, M., **New, M.**, Keenlyside, N., & Lawler, D. 2015. 'Decadal variability of summer Southern African rainfall'. Proceedings of the South African Society for Atmospheric Science. 29 November to 2 December, 2015. pp. 1-4.

Fujisawa, M., Kobayashi, K., Johnston, P., **New, M.** 2015. 'What Drives Farmers to Make Top-Down or Bottom-Up Adaptation to Climate Change and Fluctuations? A Comparative Study on 3 Cases of Apple Farming in Japan and South Africa'. *PLoS ONE*, 10 (3): e0120563. DOI: 10.1371/journal.pone.0120563.

Clark, K. E., West, A. J., Hilton, R. G., Asner, G. P., Quesada, C. A., Silman, M.R., Saatchi, S.S, et al. incl. **New, M.** 2015. 'Storm-triggered landslides in the Peruvian Andes and implications for topography, carbon cycles, and biodiversity'. *Earth Surface Dynamics Discussions*, 3: 631-688. DOI: 10.5194/esurfd-3-631-2015.

#### 2014

Cole, M., Baily, R., & **New, M.** 2014. 'A national barometer for inclusive sustainable development in South Africa.' *Proceedings of the National Academy of Sciences of the United States of America*, 1 (42): E4399–E4408, DOI: 10.1073/pnas.1400985111.

Ziervogel, G., **New, M.**, et al. 2014. 'Climate change impacts and adaptation in South Africa'. *Wiley Interdisciplinary Reviews: Climate Change*, 5 (5): 605–620. DOI: 10.1002/wcc.295.

#### 2013

Rahiz, M. & **New, M.** 2013. '21st Century Drought Scenarios for the UK'. *Water Resources Management*, 27 (4): 1039-1061. DOI: 10.1007/s11269-012-0183-1

Karmalkar, A. V., **New, M.**, et al. 2013. 'A review of observed and projected changes in climate for the islands in the Caribbean'. *Atmosfera*, 26 (2), 283-309. Available: <http://www.revistas.unam.mx/index.php/atm/article/view/36417/33195> [2016, January 26]

Clark, K. E., et al. incl. **New, M.** 2013. 'New views on “old” carbon in the Amazon River: Insight from the source of organic carbon eroded from the Peruvian Andes.' *Geochemistry, Geophysics, Geosystems* 14 (5): 1644-1659. DOI: 10.1002/ggge.20122

Fung, F., Watts, G., Lopez, A., Orr, H., **New, M.**, & Extence, C. 2013. 'Using Large Climate Ensembles to Plan for the Hydrological Impact of Climate Change in the Freshwater Environment.' *Water Resources Management* 27 (4): 1063-1084. DOI 10.1007/s11269-012-0080-7

Garrick, D., De Stefano, L., Fung, F., Pittock, J., Schlager, E., **New, M.**, & Connell, D. 2013. 'Managing hydroclimatic risks in federal rivers: a diagnostic assessment.' *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 371. DOI: 10.1098/rsta.2012.0415

Maharaj, S. S. & **New, M.** 2013. 'Modelling individual and collective species responses to climate change within Small Island States.' *Biological Conservation* 167: 283-291. DOI: 10.1016/j.biocon.2013.08.027

#### 2012

Butt, N., **New, M.**, et al. 2012. 'Shifting dynamics of climate-functional groups in old-growth Amazonian forests.' *Plant Ecology & Diversity*, 7 (1-2): 267-279. DOI: 10.1080/17550874.2012.715210.

Halladay, K., **New, M.**, et al. 2012. 'Cloud frequency climatology at the Andes/Amazon transition: 1. Seasonal and diurnal cycles.' *Journal of Geophysical Research:Atmospheres*, 117 (D23). DOI: 10.1029/2012JD017770.

Rahiz, M., & **New, M.** 2012. 'Spatial coherence of meteorological droughts in the UK since 1914.' *Area* 44 (4): 400-410. DOI: 10.1111/j.1475-4762.2012.01131.x

#### 2011

**New, M.**, et al. 2011. 'Migration and Global Environmental Change: SR8: The possible impacts of high levels of climate change in 2060 and implications for migration.' Report for the UK Government Foresight Project on Migration and Global Environmental Change, 56 pp.

Willis, K. J., **New, M.** et al. 2011. 'Quantification of UV-B flux through time using UV-B-absorbing compounds contained in fossil Pinus sporopollenin.' *New Phytologist*: 192 (2): 553–560. DOI: 10.1111/j.1469-8137.2011.03815.x

**New, M.**, et al., Eds. 2011. '4 degrees and beyond: the potential for a global change of 4+ degrees and its implications.' Themed Issue of *Philosophical Transactions of the Royal Society A*, 369, 4–5. DOI: 10.1098/rsta.2010.0304.

Fung, F., **New, M.**, et al. 2011. 'Water availability in +2 degrees C and +4 degrees C worlds.' *Philosophical Transactions of the Royal Society A* 369 (1934): 99-116. DOI: 10.1098/rsta.2010.0293.

## 2010

**New, M.** 2010. 'Water security in an uncertain world'. *SciDev.net*, 3, Retrieved from <http://goo.gl/w22A>

McSweeney, C., **New, M.**, et al. 2010. 'The UNDP Climate Change Country Profiles Improving the Accessibility of Observed and Projected Climate Information for Studies of Climate Change in Developing Countries. *Bulletin of the American Meteorological Society*, 91, 157-166.

Fung, F, Lopez, A., & **New, M.** (Eds). 2010. 'Modelling the Impact of Climate Change on Water Resources.' Wiley, Chichester.

Butt, N., **New, M.**, et al. 2010. 'Diffuse radiation and cloud fraction relationships in two contrasting Amazonian rainforest sites. *Agric. Forest Meteorol.* 150 (3): 361-368. Retrieved from [http://www.yadvindermalhi.org/uploads/1/8/7/6/18767612/butt\\_2010\\_\\_cloud\\_fraction\\_two\\_contrasting\\_sites\\_afm\\_.pdf](http://www.yadvindermalhi.org/uploads/1/8/7/6/18767612/butt_2010__cloud_fraction_two_contrasting_sites_afm_.pdf)

Hofstra, N., **New, M.** et al. 2010. 'The influence of interpolation and station network density on the distributions and trends of climate variables in gridded daily data.' *Climate Dynamics*, 35 (5): 841-858. DOI: 10.1007/s00382-009-0698-1

## 2009

**New, M.**, et al. 2009. 'Mind the gap - Policymakers must aim to avoid a 2C temperature rise, but plan to adapt to 4C.' *Nature Reports Climate Change* 3: 143-144.

**New, M.** & McSweeney, C. 2009. 'Climate and invasive species: the limits to climate information Invasive Species in a Changing Climate.' In C. Perrings, et al. CUP: 30-41.

Butt, N., **New, M.**, et al. 2009. 'Spatial patterns and recent trends in cloud fraction and cloud-related diffuse radiation in Amazonia.' *Journal of Geophysical Research*, 114 (D21): 1-9. DOI: 10.1029/2009JD012217.

Hofstra, N., **New, M.**, et al. 2009. 'Testing E-OBS European high-resolution gridded data set of daily precipitation and surface temperature.' *Journal of Geophysical Research*, 114 (D21): 101. DOI: 10.1029/2009JD011799.

Lopez, A., **New, M.**, et al. 2009. 'From climate model ensembles to climate change impacts and adaptation: A case study of water resource management in the southwest of England.' *Water Resource Research*, 45 (W08419). DOI: 10.1029/2008WR007499.

## 2008

Butt, N., **New, M.**, et al. 2008. 'Floristic and functional affiliations of woody plants with climate in western Amazonia.' *Journal of Biogeography* 35 (5): 939-950.

Haylock, M. R., **New, M.**, et al. 2008. 'A European daily high-resolution gridded data set of surface temperature and precipitation for 1950-2006.' *Journal of Geophysical Research*, 113 (D20119). DOI: 10.1029/2008JD010201.

Hofstra, N., **New, M.**, et al. 2008. 'Comparison of six methods for the interpolation of daily, European climate data.' *J. Geophys. Res.* 113 (D21110): DOI:10.1029/2008JD010100.

Hofstra, N., & **New, M.** 2008. 'Spatial variability in correlation decay distance and influence on angular-distance weighting interpolation of daily precipitation over Europe.' *Int. J. Climatol.* Retrieved from: <http://dx.doi.org/10.1002/joc.1819>.

Mahe, G., et al. incl. **New, M.** 2008. 'Comparing available rainfall gridded datasets for West Africa and the impact on rainfall-runoff modelling results, the case of Burkina-Faso.' *Water SA* 34 (5): 529-536.

## 2007

**New, M.** 2007. 'Probabilistic regional and local climate projections: false dawn for impacts assessment and adaptation?' Keynote Talk. IPCC-TGICA Regional Meeting: Integrating Analysis of Regional Climate Change and Response Options, Nadi, Fiji, IPCC Working Group 1.

**New, M.**, et al. 2007. 'Challenges in using probabilistic climate change information for impact assessments: an example from the water sector.' *Philosophical Transactions of the Royal Society A*, 365 (1857): 2117-2131.

Araujo, M. B., & **New, M.** 2007. 'Ensemble forecasting of species distributions.' *Trends Ecol. Evol.* 22 (1): 42-47.

Botkin, D. B., et al. incl. **New, M.** 2007. 'Forecasting the effects of global warming on biodiversity.' *Bioscience* 57 (3): 227-236.

Stainforth, D. A., et al. incl. **New, M.** 2007. 'Issues in the interpretation of climate model ensembles to inform decisions.' *Philosophical Transactions of the Royal Society A*, 365 (1857): 2163-2177.

Willis, K. J., et al. incl. **New, M.** 2007. 'Testing the impact of climate variability on European plant diversity: 320 000 years of water-energy dynamics and its long-term influence on plant taxonomic richness.' *Ecology Letters*, 10: 673-679.

## 2006

**New, M.**, et al. 2006. 'Evidence of trends in daily climate extremes over southern and west Africa.' *J. Geophys. Res.* 111 (D14), 102. DOI: 10.1029/2005JD006289

Alexander, L. V., et al. incl. **New, M.** 2006. 'Global observed changes in daily climate extremes of temperature and precipitation.' *J. Geophys. Res.* 111: D05109.

Harrison, P. A., et al. incl. **New, M.** 2006. 'Modelling climate change impacts on species' distributions at the European scale: implications for conservation policy.' *Env. Sci. Policy* 9 (2): 116-128.

Kaplan, J. O. & **New, M.** 2006. 'Arctic climate change with a 2oC global warming: Timing, climate patterns and vegetation change.' *Climatic Change* 79 (3): 213-241.

Kelin-Tank, A., et al. incl. **New, M.** 2006. 'Changes in daily temperature and precipitation extremes in central and south Asia.' *J. Geophys. Res.* 111 (D16), 105. DOI: 10.1029/2005JD006316.

Lopez, A., **New, M.**, et al. 2006. 'Two approaches to quantifying uncertainty in global temperature changes.' *J. Climate* 19 (19): 4785-4796.



Tadross, M. A., et al. incl. **New, M.** 2006. 'MM5 simulations of interannual change and the diurnal cycle of southern African regional climate.' *Theoret. Appl. Climatol.* 86 (1-4): 63-80.

## 2005

**New, M.** 2005. 'Arctic climate change with a 2°C global warming. Evidence and Implications of Dangerous Climate Change in the Arctic.' L. D. Rosentrater et al. Oslo, WWF: 1-15.

Bharwani, S., et al. incl. **New, M.** 2005. 'Multi-agent modelling of climate outlooks and food security on a community garden scheme in Limpopo, South Africa. *Phil. Trans. Royal. Soc. B* 360 (1463): 2183-2194.

Efthymiadis, D., **New, M.** et al. 2005. 'On the reconstruction of seasonal oceanic precipitation in the presatellite era.' *J. Geophys. Res.* 110 (D6): art. no.-D06103.

Hulme, M., et al. incl. **New, M.** 2005. 'Global warming and African climate change: a re-assessment.' *Climate Change in Africa*. P. S. Low. Cambridge, CUP: 29-40.

Mark, B. G., et al. incl. **New, M.** 2005. 'Tropical snowline changes at the last glacial maximum: A global assessment.' *Quaternary International* 138: 168-201.

von der Heyden, C. J. & **New, M.** 2005. 'Differentiating dilution and retention processes in mine effluent remediation within a natural wetland on the Zambian Copperbelt.' *Applied Geochemistry* 20 (7): 1241-1257.

## 2004 and earlier

Barboni, D., et al. incl. **New, M.** 2004. 'Relationships between plant traits and climate in the Mediterranean region.' *Journal of Vegetation Science*, 15 (5): 635-646.

Mitchell, T. D., et al. incl. **New, M.** 2004. 'A comprehensive set of climate scenarios for Europe and the globe.' (Research Report. Tyndall Working Paper No. 55). University of East Anglia, Norwich: Tyndall Center for Climate Change Research.

von der Heyden, C. J. & **New, M.** 2004. 'Groundwater pollution on the Zambian Copperbelt: deciphering the source and the risk.' *Science of the Total Environment*, 327 (1-3): 17-30.

von der Heyden, C. J. & **New, M.** 2004. 'Sediment chemistry: a history of mine contaminant remediation and an assessment of processes and pollution potential.' *Journal of Geochemical Exploration*, 82 (1-3): 35-57

**New, M.**, et al. 2003. 'Sensitivity of southern African climate to soil moisture.' *CLIVAR-Exchanges*, 8 (2/3): 45-47.

**New, M.** 2002. 'Climate change and water resources in the southwest Cape, South Africa.' *South African Journal of Science* 98 (7/8): 369-376.

von der Heyden, C. J., & **New, M.** 2003. 'The role of a dambo in the hydrology of a catchment and the river network downstream.' *Hydrology and Earth Systems Sciences*, 7 (3): 339-357.

Swann, M., et al. incl. **New, M.** 2003. 'Tropical oceans and the predictability of southern African rainfall in the HadCM3 coupled climate model.' *CLIVAR-Exchanges*, 8 (2/3): supplementary paper.

**New, M.**, et al. 2002. 'A high-resolution data set of surface climate for terrestrial land areas.' *Climate Research*, 21: 1–25.

- Booth, T. H., et al. incl. **New, M.** 2002. 'A new world climatic mapping program to assist species selection.' *For. Ecol. Manag.* 163(1-3): 111-117.
- Mitchell, T. D., M. Hulme & **New, M.** 2002. 'Climate data for political areas.' *Area* 34 (1): 109-112.
- New, M.**, et al. 2001. 'Precipitation measurements and trends in the twentieth century.' *International Journal of Climatology* 21 (15): 1889-1922.
- New, M.**, & Hulme, M. 2000. 'Representing uncertainty in climate change scenarios: a Monte-Carlo approach.' *Integrated Assessment* 1: 203-213.
- Hulme, M., et al. incl. **New, M.** 2001. 'African climate change: 1900-2100.' *Climate Research* 17: 145-168.
- Carter, T. R., et al. incl. **New, M.** 2000. 'Climate change in the 21st century - interim characterizations based on the new IPCC emissions scenarios.' Finnish Environment Institute. Helsinki. 148pp.
- New, M.**, et al. 2000. 'Representing twentieth-century space-time climate variability. Part II: Development of 1901-1996 monthly grids of terrestrial surface climate.' *Journal of Climate*, 13 (13): 2217-2238.
- New, M.**, et al. 1999. 'Representing twentieth-century space-time climate variability. Part I: Development of a 1961-90 mean monthly terrestrial climatology.' *Journal of Climate*, 12: 829-856.
- New, M.**, & Schulze, R. E. 1996. 'Hydrologic sensitivity to climate change in the Langrivier catchment, Stellenbosch, South Africa and some implications for geomorphic processes.' *Zeitschrift Geomorphol. Supplementband* 107: 11-34.
- Hulme, M., et al. incl. **New, M.** 1999. 'Global climate scenarios for fast-track impacts studies.' *Global Environmental Change Supplementary Issue*: S3-S19.
- Jones, P. D., **New, M.** et al. 1999. 'Surface air temperature and its changes over the past 150 years'. *Reviews of Geophysics* 37 (2): 173-199.
- Hulme, M., & **New, M.** 1997. 'Dependence of large-scale precipitation climatologies on temporal and spatial sampling.' *J. Climate* 10 (5): 1099-1113
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## SUPERVISION OF STUDENTS

### Current and Recent Post-doctoral Supervision

**Admire Nyamwanza** (2014 – present)

*Climate Change Adaptation in Africa.*

**Salma Hegga** (2014 – present)

*Vulnerability, adaptation and governance in Southern Africa.*

**Modathir Zaroug** (2014 – present)

*Climate trends and projections in semi-arid regions of Africa.*

**Muhammad Rahiz** (2013 – 2015)

*Added value of next-generation climate models for agricultural risk and adaptation assessment in Africa.*

**Bastien Dieppo** (2014 – 2015)

*Vulnerability of South African Climate.*

**Marie-Ange Baudoin** (2014)

*Capacity of organisations to access adaptation funding.*

**Mariko Fujisawa** (2013 – 2015)

*Climate change, Adaptation in Africa.*

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## **Doctoral Supervision**

**Irene Kunamwene** (2015 – present)

*Comparison of well-being and vulnerability approaches for understanding climate change impacts and adaptation: A case study of the Onesi constituency, Omusati region, Namibia.*

**Kulthoum Omari** (2015 – present)

*Governance of drought management in Botswana.*

**Margaret Angula** (2015 – present)

(TBC)

**Megan Cole** (2012 – present)

*Safe and just operating spaces at the national scale: South Africa.*

**Jagadishwor Karmacharya** (2011 – 2015)

*The added-value of high resolution regional climate model simulations in the Himalaya.*

**Muhammad Rahiz** (2010 – 2013)

*Droughts in future climate change in the United Kingdom.*

**Magdalena Bennet** (2010 – present)

*Climate change, hydrology and species relationships in the Chilean Altiplano.*

**Gareth Walker** (2010 – 2014)

*Water demand management in the UK.*

**Kathryn Clark** (2009 – 2014)

*Role of landslides in the Peruvian Andes in determining forest ecology and carbon transport.*

**Shobha Maharaj** (2008 – 2012)

*Climate change, species distribution and forest conservation, Trinidad & Tobago.*

**Kate Halladay** (2008 – 2012)

*Climate and Andean montane forests: the role of clouds.*

**Nathalie Butt** (2007 – 2011)

*Response of Amazon forest species to observed climate change.*

**David Stainforth** (2008 – 2011)

*Uncertainty and confidence in predictions of climate change.*

**Nynke Hofstra** (2007 – 2010)

*Changes in daily climate and runoff trends in Europe.*

**Gillian Kay** (2004 – 2008)

*Mechanisms of southern African rainfall variability in coupled climate models.*

**Natasha Kuruppu** (2003 – 2009)

*Impacts on water sector adaptation strategies in Kiribati.*

**Constantin von der Heyden** (2000 – 2004)

*Wetland processes in Zambia.*

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## **Doctoral Examining**

Internal examiner for 6 DPhil theses, Oxford University

External examiner for 12 PhD theses, incl. University of Cape Town, Leeds University, University of East Anglia, University of Kwa-Zulu Natal, University of Pretoria.

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## **Masters Supervision**

### **2005-2011**

Course Director for MSc in Water Science, Policy & Management, Oxford University; supervision of approximately 4 dissertations per year.

### **2012-present**

Academic Director, MSc in Climate Change and Sustainable Development, University of Cape Town, approximately three dissertations per year.

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## **Recent Masters Dissertation Supervisions**

**Shayan Boumand** (2015 – 2016)

*Environmental Sustainability of South Africa's National Development Plan.*

**Delfin Vilissa** (2015 – 2016)

*Climatic vulnerability of horticultural value-chains in Mozambique.*

**Peliwe Jubase** (2015 – 2016)

*Mechanisms causing heat-waves in Limpopo basin, South Africa and Botswana.*

**Grete Simanauskaite** (2013 – 2014)

*Knowledge, perceptions and engagement with renewable energy in South Africa: a case study of Matzikama municipality, Western Cape.*

**Akeel Hajat** (2013 – 2014)

*Farmers' sensitivity to decadal climate variability: the case of Malawi.*

**Cabral Wicht** (2012 – 2013)

*Public understanding of climate change in low-income communities.*

**Anna Law** (2011 – 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.*

