

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG



WATERSHED REPORT

10-21 September 2018

www.wits.ac.za/watershed



I ntroduction

Watershed: Art, science and elemental politics was convened at the University of the Witwatersrand to support interdisciplinary debate on the environment in order to promote understandings of climate change, policy, and the urgency of the water crisis in southern Africa. *Watershed* involved people working across and between disciplines on water and the environment, through different media, on knowledge about and appreciation of the natural environment, questions of global and local stewardship and custodianship, the politics of water insecurity, and the threat of water shortages on planetary survival.

Working with an organising committee of Wits academics from a range of science, humanities and art disciplines, Professor Lenore Manderson, from the Wits School of Public Health, conceptualised and directed this historic conference at Wits from September 11th to 21st. Subtitled *Art, science and elemental politics*, the programme was driven by that conviction that broadly interdisciplinary collaboration, that include art research practices and Humanities perspectives, are as necessary as physical science investigations in order to engage with the massive implications of climate change and pollution, ecological crises and environmental justice, to engage with the future of water in South Africa.

The conference brought together artists, engineers, social and natural scientists, and activists, recognising them as people working in distinctive ways on knowledge systems, stewardship, water insecurity and threats to planetary survival. Practicing artists from India, USA, Peru, and South Africa were a central component of *Watershed*, presenting their work in the form of installations; performance interventions and walks; poetry and book readings; and exhibitions across the Wits campus; while also engaging with the discourse of scientists, engineers, social scientists, and activists in panel discussions and seminars.

Credits

WITS units: WSOA (The Wits School of Arts), Oceanic Humanities for the Global South (SLLM/WISER), CiWARD (Centre in Water Research and Development), and IBES (Institute at Brown for Environment and Society).

Organising Committee: Lenore Manderson, David Andrew, Christo Doherty, Isabel Hofmeyr, Craig Sheridan; Assistants: Zanele Madiba, Tobias Manderson-Galvin; Origins Centre Curator: Tammy Hodgskiss; Zines design and Production: Pxsy on a Plinth.

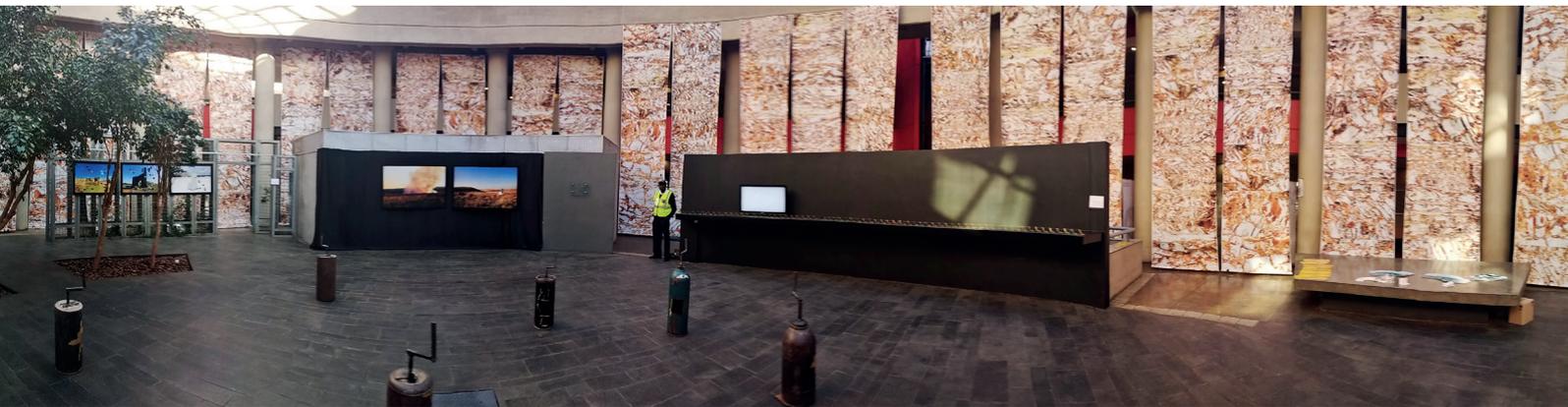
Across the University and beyond, among others: Tegan Bristow, Reghana Burns, Blossom Catling, Ferna Clarkson, Robin Drennan, Michelle Gallant, Emma Ketzie, Boniswa Khumalo, Ndhubazi Kubayi, George Mahashe, Beverley Manus, Deborah Minors, Pam Moodley, Magcina Nyoni, Tanya Schonwald, Oupa Sibeko and Bie Venter.

INSTALLATIONS AND PERFORMANCES

Atul Bhalla (India), *Looking for Lost Water (Explorations at the Cradle)*.

Chamber of Mines Atrium, September 10-21.

Photographs and performative photographs, video with sculptural and textual interventions.



Yvette Christiansë (South Africa), *Poetry Reading and Words on Water: Southern African Literatures and the Oceans*,

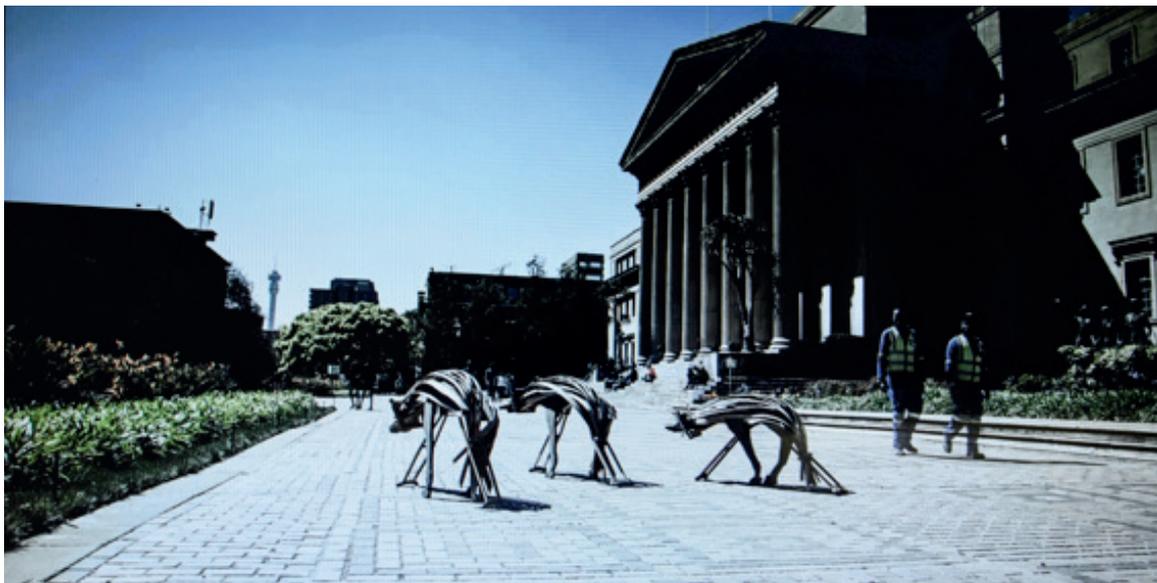
WiSER, September 13 and 14.

Poetry reading, lecture

Hannelie Coetzee (South Africa) *Synanthrope Series II: Hyena*.

Origins Centre, September 10-21.

Sculptures, reclaimed and found wood; stop-frame animation. September 15, guided walk.



Christine Dixie (South Africa), *Below the Sediments*.
Origins Centre, September 10-21.
Polymer, brushed steel. September 11: Short talk and Q & A

Brian House (USA), *Acid Love*.
Tshimologong Precinct, August 31 - September 21. Installation.
Chemical bottles, acid mine waste water, bricks, wired speakers.

Richard Ketley (South Africa), *O° | 32°*.
Anthropology Museum, Robert Sobukwe Block, September 10-21.
Acrylic, tracing paper.

Mark Lewis (South Africa), *Watermark*.
Origins Centre, September 10-21.
Photography, 2 sets of 8 photographs (16 photographs)

Zen Marie (South Africa), *Paradise Fallen*. fem of colour | intersectional studio platform,
September 17-22. Video, paper-based, photographic, and performative work. September
19:
Moderated discussion and Q & A with Charne Lavery.

Lucia Monge (Peru), *Mi Niño, Your Dry Spell, Their Waterfall*.
Origins Centre, September 10-21.
Sculpture and photography installation. September 11: Short talk and Q & A



Marcus Neustetter (South Africa), *Against the Shed*.
Gate 7, Yale Road to Chamber of Mines September 11 Performance.
Livestream produced by Christo Doherty.

Tania Olsson (South Africa), *Waterpas* (spirit level).
Anthropology Museum, Robert Sobukwe Block, September 10-21.
Mixed media.

Stacey Rozen (South Africa), *Drink at your own Risk*.
Anthropology Museum, Robert Sobukwe Block, September 10-21.
Yarn bomb (wire, empty water bottles, other plastic items, plastic yarn)

Raymond Shihawu (South Africa), *H2Woe-Mati*.
Anthropology Museum, Robert Sobukwe Block, September 10-21. Acrylic paint, board.

Myer Taub (South Africa), *Tracing the Spruit (Southern Performance Research Under Interesting Themes)*. Various venues. September 12, 16.
Performance/walk.

Wendy Woodson (USA), *Sourcing the Stream*.
Origins Centre, September 10-21. Video installation, original sound, text and voice.

RESEARCH POSTERS

Anthropology Museum, Robert Sobukwe Block, September 10-21

Poster presentations, September 13, 12:00-13:00

Jenny Broadhurst, Future Water Institute, UCT, *Exploring the Relationship between Mining, Water and Communities*

Jenny Broadhurst and Sue Harrison, Future Water Institute, UCT, *Resource Efficient Approach for Mitigating Acid Mine Drainage Pollution Risks associated with Coal Waste*

Kirsty Carden and Neil Armitage, Future Water Institute, UCT, *Development and Management of Water Sensitive Design Community of Practice Programme*

Aurelie Deroubaix, Life Sciences Imaging Facility, Wits

Mystecia Kanengoni, Anthropology, UCT, *Commodification of Water has left Highfields Residents in Anguish*

Tamlyn Naidoo, Chemical and Metallurgical Engineering, *Piloting a Combined Metallurgical Slag/Sugar Cane Bagasse Process for Treating Acid Mine Drainage*

John Ndiritu, School of Civil and Environmental Engineering, Wits. *Please Take Care! Water is Listening to what you are Thinking! Energised Water and the Rate of Seedling Development and Crop Growth.*

Kavisha Patel, Chemical and Metallurgical Engineering, *Design, Construction and Testing of a Laboratory Scale Membrane Distillation Bioreactor for Water Purification*

Letlakana Sebata, Wits Business School, *Technological Innovation for Urban Water Resilience and Sustainability in South Africa*

Ruth Stephenson, *The Development of An Adapted Residence Time Distributed Technique combined with CWM1*

Kevin Winter, Future Water Institute, UCT, *The Water Hub*

Kevin Winter and Andrew Bennett, Future Water Institute, UCT, *Liesbeek Life Plan: Enabling a 'Community of Practice' for Water Sensitive Design in Cape Town*

Chamber of Mines Atrium

Busisiwe Mashiane, Chemical and Metallurgical Engineering, Wits, *Slow Sand Water Filtration for Domestic Use*. Mezzanine, September 10-21. Installation

Sibanye Stillwater Digital Mining Laboratory (DigiMine), Guided tours, September 11, 13 and 14

DAILY PROGRAMME

17:00 - 19:00 Chamber of Mines Atrium

Watershed: Opening and Reception

Dance performance: Thirst - Bokamoso Malahlela, Megan Miller, Nkosinathi Mashaba, Sarah Buckland, Sibongile Palesa Nkosi, Lesedi Ramokgotswa and Thandokhule Myeni (Theatre and Performance, WSOA)

Welcome and introduction to Vice-Chancellor: Lenore Manderson

Welcome: Professor Adam Habib

Description of art programme and introduction of Professor Gbadamosi: David Andrew

Keynote address: Professor Raimi Gbadamosi, WiSER, *The Possibility of Imagining Something New*

Academic programme: Isabel Hofmeyr, African Literature and WiSER

Performance with live streaming: Marcus Neustetter, *Against the Shed*



Thursday, September 13

09:00-12:00 Anthropology Museum, Robert Sobukwe Block

Workshop: Digital Ethnography and Environmental Crisis

Facilitators: Thomas Pringle, Brown and Christo Doherty, WSOA

How can digitally networked devices help visualize and broadcast regional crises? Does the documentary visibility gained by digitally networked devices work to reproduce structural inequalities driving the problems?

12:00-14:00 Anthropology Museum, Robert Sobukwe Block



Flash Lectures and Presentations

Chairperson: David Andrew

Melinda Barnard, Anthropology, Wits, *From Sun Powered to Submerged: Finding the Energy to Power a Solar Airport once again*

Adelaide Chagopa, Law, Wits, *From Nine-to-One: A Single Catchment Management Agency for Sustainable and Equitable Use of Water Resource*

Corey Glackin-Coley, Wits Humanities and Fordham University, NY, *Livelihoods and Opinions of Communities who will be Displaced or Impacted by the Polihali Dam*

Claudia Campisano, Anthropology, Wits, *Water in Morocco*

Gill Black and Jessica Drewett, Sustainable Livelihoods Foundation, CT, *Bucketloads of Health*, video (Xhosa, English subtitles, 13:17); Q & A.

15.00 -17.00 Centre for Sustainability in Mining and Industry, Seminar Room, Engineering
How Johannesburg and Gauteng can avoid a "Day Zero" experience

Chairperson: Mike Muller, Wits School of Governance

Panelists:

Mike Muller, Wits School of Governance: *Where Gauteng's Water Comes from and the*

Challenges of Keeping it Flowing;

Karen Seago, *Predicting the Unpredictable and Managing Uncertainty*

Gillian Maree, Gauteng City-Region Observatory: *Gauteng's Water Challenge in a Larger Context*

Speakers outlined the challenges of achieving water security in the city and province, and discussed how they can be addressed and what people in the province can do to help avoid the dramatic water restrictions as experienced in Cape Town.

Friday, September 14

Symposium: Words on Water: Southern African Literatures and the Oceans

10:00 -12:30 WiSER Seminar Room, Richard Ward Building Level 6

Chairperson: Brett Pyper

Yvette Christiansë, Barnard College, New York

Charne Lavery and Sarah Nuttall, WiSER and Isabel Hofmeyr, African Literature and WiSER



Yvette Christiansë described her work on slave registers. This was followed by a discussion with Charne Lavery, Sarah Nuttall and Isabel Hofmeyr.

Panel and Roundtable: Under the Surface: 140 years on

14:00 -16:30 Centre for Sustainability in Mining and Industry, Seminar Room, Engineering Building

Chairperson: Keith Breckenridge, WiSER

Panelists:

Atul Bhalla, Shiv Nadar University, Dehli;

Nancy Coulson, CSMI;

Mark Lewis, Johannesburg;

Marcus Neustetter, Johannesburg;

Robert Thornton, Wits Anthropology;

Deon Terblanche, Consultant: Weather, Climate and Environmental Services;

Coleen Vogel, Global Change Institute

Mining has dominated Johannesburg's history, as some of the art installations in *Watershed* demonstrate. In this roundtable, we considered the ways in which mining has affected the environment, including ground water and run-off, and we ask how the management of resources have changed - or might need to change - in the 21st century? What challenges do we face?

Tuesday, September 18

Symposium *Decolonizing Water*

10:15 -12:00 Exhibition Area, First Floor, Origins Centre

Chairperson: Bina Venkataraman, Massachusetts Institute of Technology

Panelists:

Thabo Lusithi, EMG (Environmental Monitoring Group);

Aja Marneweck, University of Western Cape;

Patrick Bond, Wits School of Governance

What does it mean to decolonize the narratives of water, the science disciplines that structure what we know and by what means, and the role of people in the everyday management, governance and stewardship of water?

Symposium *Territorial Waters, Politics and Regional Commons*

13:00 -14:40 Exhibition Area, First Floor, Origins Centre

Chairperson: Lenore Manderson, Wits School of Public Health and Institute at Brown for Environment and Society

Panelists: Clive Vinti, University of the Free State;

Mucha Musemwa, History, School of Social Sciences, Wits;

Mary Galvin, University of Johannesburg

Globally, regionally and locally, water is at the same time a commons, a public resource and often a privatised resource. Populations are suppressed and nation states controlled through water management and its abuse; economies are built on its sale or diversion. Panelists drew on their experience as researchers and civil activists to examine water politics and the implications of this for Lesotho, Zimbabwe, South Africa, and their neighbours.

Symposium *Action on Water: Climate Justice and People's Charters*

15:00 -17:00 Exhibition Area, First Floor, Origins Centre

Chairperson: Tracy-Lynn Humby, Wits School of Law

Panelists:

Vishwas Satgar, International Relations, School of Social Sciences, Wits

Ferrial Adam, University of Johannesburg;

Bina Venkataraman, Massachusetts Institute of Technology;

Jonathan Klaaren, WiSER



If water is a commons, what does it mean when access varies? How do we address the social inequalities that distort access to water? And how do climate change, drought, and water regulations and entitlements magnify social inequality?

Book Reading and Reception: *Writing on Water*

17:00 -18:30 Exhibition Area, First Floor, Origins Centre

Introduction: Isabel Hofmeyr; Speaker: Jacklyn Cock, *Writing the Ancestral River*

JACKLYN COCK, Professor Emeritus at Wits, discussed her recent book, *Writing the Ancestral River* an illuminating biography of the Kowie River in the Eastern Cape. This tidal river runs through a formative meeting ground of peoples who have shaped South Africa's history: Khoikhoi herders, Xhosa pastoralists, Dutch trekboers and British settlers. The latter introduced a new form of accumulation "settler capitalism," which commodified both land and labour with devastating consequences for the Xhosa.

Thursday, September 20

Symposium: *Water Futures, Digital Imaginations*

10:00 -12:30 IBM Conference Room, Tshimologong Precinct, 41 Juta Street, Braamfontein

Chair: Craig Sheridan

Panelists: Tapiwa Chiwewe, IBM Research Africa, *Big Data and Analytics for Water Sustainability in an Urban Planet*;

Henry Roman, Department of Science and Technology, *Changing Climate, Water Security and Data: Making Sense of Complex Futures*;

Gillian Maree, Gauteng City-Region Observatory, *Making Research Relevant and Evidence-based Policy Making: The Case of the Gauteng Water Security Plan*;

Amanda Lynch, IBES, Brown, *Emerging Pathways in Water Governance in the Anthropocene*

How do we bring together government and various publics to take account of climate change and water security? How does modelling future environments, use of big data and digitally generated visuals provide policy makers with models of the future.

Roundtable on Watershed: *Reflections on the Arts-Sciences Engagement at Watershed*

13:30 -15:30 Tshimologong Precinct

Chairperson: Christo Doherty

Panelists:

Amanda Lynch, Brown;
Atul Bhalla, Shiv Nadar;
Lenore Manderson, Wits and Brown;
Amber Abrams, Kent;
David Andrews, WSOA;
Craig Sheridan, CIWARD

The curation of the Watershed Conference deliberately brought together art works, in the form of installations, sculptures, photographs, video, and performative interventions, with scientific and activist discourses. In this concluding panel, a group of participants including artists and scientists from the conference will reflect on the implications of these engagements, including in furthering of Arts-Science collaborations in an African context.

OUTPUTS, OCTOBER 2018

Refer to Appendices A and B for additional Media coverage

Media cover *Radio Cii*, Cii Forum with Muhammad Sheik, 6 September 2018; *Kaya FM*, Breakfast with David (morning radio, David O'Sullivan), 18 September 2018; *EWN (Eyewitness News)*, interview with Ahmed Kajee, 18 September 2018; *Voice of Wits*, 19 September 2018

PUBLICATIONS

Manderson, L. 2018. Watershed: Place, policy and environmental crisis. *Voices 360*, September 10, <https://www.voices360.com/watershed-place-policy-and-environmental-crisis/>. Also published in *Weekend Argus* (Cape Town), *Sunday Tribune* (Durban) and *Sunday Independent* (Johannesburg), September 9: 18;

Manderson, L. 2018. Watershed moment to discuss approaches to water. Programme to tackle issues around our most precious natural resource. *Cape Times*, *The Mercury* (KZN), *Pretoria News*, September 13: 10

Hofmeyr, I, 2018. Oceans as empty spaces? Redrafting our knowledge by dropping the colonial lens. *The Conversation Africa*, September 6. <https://theconversation.com/oceans-as-empty-spaces-redrafting-our-knowledge-by-dropping-the-colonial-lens-102778>

Manderson, L. 2018. **Climate change, water and the spread of diseases: Connecting the dots differently.** *The Conversation Africa*, September 16. <https://theconversation.com/climate-change-water-and-the-spread-of-diseases-connecting-the-dots-differently-103111>; reprinted <http://www.wits.ac.za/news/latest-news/in-their-own-words/2018/2018-09/climate-change-water-and-the-spread-of-diseases.html>; <https://plumbingafrica.co.za/index.php/news-events/news/482-climate-change-water-and-the-spread-of-diseases-connecting-the-dots-differently>

Manderson, L. and Doherty, C. In press. Watershed: Art, science and elemental politics. *Art Africa*

ACKNOWLEDGEMENTS

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