

# Drought and Water Scarcity: addressing current and future challenges

20 and 21 March 2019, Pembroke College, Oxford University, UK

Programme

V1.5

## Poster presentations

Person	Title
Harry West, University of the West of England, Bristol	Examining spatial variations in the utility of SPI as a 3-month-ahead environmental drought indicator
Ayiloben Kikon, National Institute of Technology Karnataka	Application of Optimized Machine Learning Technique in Drought Forecasting Using SPI
Damodar Bagale, Tribhuvan University, Kathmandu Nepal	Drought: a slow-onset, natural hazard in Kathmandu, Nepal
Sevilay Topcu, Cukurova University	Strategic Comparison of Past and Future Droughts in Turkey
Peter Anthony Cook, University of Reading	Variations in the West African Monsoon from reanalysis and model results
Feyera A. Hirpa et al., University of Oxford	Finding sustainable water futures in the Turkwel River basin, Kenya under climate change and variability
Hattie Roberts et al., Lancaster University	The effect of drought and dry conditions upon <i>Brassica napus</i> . L (oilseed rape; canola) the third most important oilseed crop worldwide, and the most valuable in Europe
Jie Xiang, Harper Adams University	Understanding mitigation of drought damage to rapeseed from spraying film antitranspirant
Wiza Mphande, Harper Adams University	Elucidating Drought Mitigation with Antitranspirants in Spring Wheat
Nikos Mastrantonas, CEH	Drought Libraries for enhanced resilience in long term water resource planning in the UK
Catherine Grasham, University of Oxford	A transdisciplinary approach to understanding drought risks in the Awash River basin, Ethiopia
Emma Cross <i>et al.</i> , Environment Agency	The 2018 heatwave; its impacts on people and the environment in Thames Area
John Bloomfield, Matthew Ascott, British Geological Survey	Understanding the impact of climate change on borehole yields from fractured aquifers

## Oral sessions: Wednesday 20 March, morning

		Room 1: Climatology and Hydrology	
Time	Session	Speaker	Title
10:00	Plenary	Chair: Jamie Hannaford, CEH	Welcome, and the ENDOWS Programme
10:20	Plenary	Guest speaker: Henny van Lanen, Wageningen University	The 2018 NW European Drought: warnings from an extreme event
10:45	Plenary	Len Shaffrey, Reading University	Has climate change increased the chance of events like the 1976 North West European drought occurring?
11:05	Plenary	Guest speaker: Rob Wilby, Loughborough University	Challenging the mantra of wetter-winters, drier summers in the UK
<b>11:30</b>	<b>Break</b>		
11:50	Plenary	Chair: Len Shaffrey, Reading University	Welcome
11:55	Plenary	Guest speaker: Massimiliano Pasqui, CNR	A customizable drought monitoring and seasonal forecasting service to support different users' needs
12:20	Plenary	Bramha Dutt Vishwakarma, University of Bristol	Novel metric for water stress from the Gravity Recovery And Climate Experiment (GRACE) satellite mission
12:40	Plenary	Pico pitches from poster presenters	
<b>13:00</b>	<b>Lunch</b>		

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## Wednesday 20 March afternoon

		Room 1: Climatology and Hydrology		Room 2: Drought impacts	
Time	Session	Speaker	Title	Speaker	Title
13:00	Lunch				
13:50	Parallel	Chair: Len Shaffrey, Reading University	Welcome	Chair: Ian Holman, Cranfield University	Welcome
14:00	Parallel	Jamie Hannaford, CEH	Reconstructing historic flow data to inform management of future hydrological extremes	Tom King, Lancaster University	The effect of the hot dry conditions of 2018 on natural ecosystems: findings from Wytham Woods, Oxfordshire
14:20	Parallel	Lucy Barker, CEH	How severe were historic hydrological droughts in the UK? Insights from a systematic characterisation and ranking of events back to 1891	Jill Thompson, UWE	Impact of reduced rainfall on the growth and development of plants in British semi-natural grassland: a rainfall manipulation study
14:40	Parallel	John Bloomfield, BGS	Characterising the effects of major episodes of drought on groundwater at the national to continental scale	Daniela Anghileri, University of Southampton	Strengthening research capabilities for addressing water and food security challenges in sub-Saharan Africa
15:00	Parallel	Matt Fry, CEH	The Historic Droughts Inventory: an accessible archive of past drought impact information for the UK from diverse documentary sources	Stephen McGuire, SEPA	Assessing the impacts of water scarcity in Northeast Scotland through the summer of 2018
15:20	Break				
15:40	Parallel	Chair: Jamie Hannaford, CEH	Welcome	Chair: Nevil Quinn, UWE	Welcome
15:45	Parallel	Elizabeth Brock, Met Office, Katharine Smart, Anglian Water	Re-analysis of historical events using up to date extreme value techniques with particular reference to 'severe' events	Frederick Otu-Larbi, Lancaster University	Modelling the effects of drought stress on photosynthesis and latent heat fluxes
16:05	Parallel	Christopher Nankervis, Weather Logistics Ltd	Use of Copernicus seasonal climate forecast model data to improve the accuracy of long-term forecasts: the UK Summer Rainfall Insights project	Susan Davies, University of Edinburgh	Effective risk management against the threat of drought impacts on the Scottish timber industry
16:25	Parallel	Ragab Ragab, CEH	Study of the drought risk in different UK catchments under future climate and land use changes	Peter Kettlewell, Harper Adams University	Mitigating drought impact on crop yield by applying film-forming polymers
16:45	Break				
16:55	Plenary	Jamie Hannaford, CEH	Closing words		
17:10	Plenary	End of day			

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## Thursday 21 March morning

Room 1: Drought impacts, Communities, Drought planning & management			
Time	Session	Speaker	Title
10:00		Nevil Quinn, UWE	Welcome
10:20	Plenary	Kerstin Stahl, Freiburg University	Customizing drought indices to improve drought impact monitoring and prediction
10:45	Plenary	Guest speaker: Mike Morecroft, Natural England	Drought impacts on the natural environment and lessons for climate change adaptation
11:10	Plenary	Guest speaker: Ian Holman, Cranfield University	Taking lessons from the 2018 drought forward into increased drought resilience in the agricultural sector
<b>11:35</b>	<b>Break</b>		
11:55	Plenary	Chair: Lindsey McEwen, UWE	Welcome
12:00	Plenary	Guest speaker: Anne van Loon, Birmingham University	Feedbacks between drought and society
12:25	Plenary	Guest speaker: Victoria Williams, Environment Agency	The UK 2018 dry weather situation: looking ahead to 2019
12:50	Plenary	Pico pitches from poster presenters	
<b>13:10</b>	<b>Lunch</b>		

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## Thursday 21 March afternoon

		Room 1: Communities, Risk Perception & Communication		Room 2: Drought planning & management	
Time	Session	Speaker	Title	Speaker	Title
13:10	Lunch				
14:00	Parallel	Chair: Rebecca Pearce, Exeter University	Welcome	Chair: Jamie Hannaford, CEH	Welcome
14:10	Parallel	Kevin Grecksch, University of Oxford	Achieving water efficiency through social norms in the public sector	Granville Davies & Miranda Foster, Yorkshire Water	Water resources in Yorkshire, UK in 2018: drought management, perception and communication
14:30	Parallel	Ruth Larbey, UWE	Engaging consumers around water scarcity and water saving	Amanda Fencel (Ruth Langridge), University of California	Groundwater management in planning for drought: experience from California, USA
14:50	Parallel	Sandra Santos, Wageningen University	Improving institutional frameworks integrating local initiatives from communities exposed to drought and water scarcity in Ecuador	Mark Smith, Hydro-Logic Services Ltd	Recent trends in water resources planning and management, and implications for engaging on drought risk
15:10	Parallel	Antonia Liguori, Loughborough University	Learning around 'storying water' to build an evidence base to support better decision-making in UK drought risk management	Lindsey McEwen, UWE	Integrating science and narratives: a new interdisciplinary approach to develop drought mitigation strategies
15:30	Break				
		Room 1: Drought impacts		Room 2: Drought planning & management	
15:50	Parallel	Chair: Ian Holman, Cranfield University	Welcome	Chair: Lindsey McEwen, UWE	Welcome
15:55	Parallel	Cedric Laize, CEH	Relationship between a drought-oriented streamflow index and a series of riverine biological indicators	Sevilay Topcu, Cukurova University	Implementing Drought Management in Turkey: an institutional pathology
16:15	Parallel	Paul Whitehead, University of Oxford	Impacts of climate change on water quality affecting upland and lowland rivers, wetlands and delta systems	Amanda Fencel, University of California	Interconnections between Research on Groundwater, Drought and Climate Change
16:35	Parallel	Jaeyoung Lee, University of Oxford	Water quality modelling in the Severn-Thames river systems and the impact of a water transfer in drought	Caroline King & Daniel Tsegai, TBI & GeoData Institute	A review of methods for drought impact and vulnerability assessment
16:55	Break				
17:00	Plenary	Ian Holman, Cranfield University	Closing words		
17:15	Plenary	End of conference			