Reframing Water and Climate Resilience

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University of Reading

institute of development studies

ecrea

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Water is the medium through which we experience many of the impacts of climate change: in droughts or floods, in melting glaciers, rising sea levels and more. Accordingly, visualisations of water or its absence have been at the core of climate change media discourse for decades and have shaped popular perceptions of this crisis. In recent years, 'water resilience' has increasingly been embraced as a tool for addressing the impacts of climate change and other ongoing stressors; not only as a tool of adaptation, but also a tool for mitigation that addresses the water-energy nexus and greenhouse gas emissions from water infrastructure. However, water resilience scholarship is still primarily focussed on the physical, technological and managerial aspects of the climate crisis, while issues of social justice, power and politics are at the margins of the debate. As such, the transformative potential of climate and water resilient futures goes unrecognised.

This symposium aims to bring together the overlapping conversations around resilience, climate, water, communication and politics in order to advance social justice and reduce climate-induced water vulnerability. This one-day event will follow in the footsteps of the 2008 STEPS Centre symposium, *Re-Framing Resilience*, which opened the door for critical resilience research which addresses aspects of power, politics and normativity in relation to resilience.

Throughout our one-day symposium we will engage with the following questions: What can we learn from over a decade of critical resilience research that can help us to confront the water and climate challenges which lie ahead? How can we put social justice at the core of climate and water resilience practice? How can water and climate resilience be imagined, communicated, represented and visualised differently?

This day brings together scholars, studies and practice-based knowledges which acknowledge that building climate/water resilience is a profoundly socio-political challenge. This day will present interdisciplinary approaches and perspectives on the diverse framing, narratives, imaginations and discourses of resilience promoted by local and global networks of actors.

The symposium is organised by:
University of Reading - Global Development Research Division
The Institute of Development Studies (IDS) - Resource Politics and Environmental Change Cluster
European Communication Research and Education Association (ECREA) - The Science and Environment Communication Section

For further information, please contact Shai Kassirer at s.kassirer@reading.ac.uk

Timetable:

10:00-11:15 Opening Keynote Talk:

Opening greetings by Prof. Melissa Leach (IDS).

Keynote lecture by Prof. Joanne Garde-Hansen (University of Warwick):

Amphibious Screens – Sustainable Cultures of Water

11:30-12:50 Session 1: News, Media and Water Resilience:

- Swati Jaywant Rao Bute (Jagran Lakecity University):
  Role of news channels in running media campaigns for water conservation projects in India

- Edson Capoano, Alice Balbé & Pedro Rodrigues Costa (University of Minho):
  Analysis of Brazilians comments on the water issue on Twitter

- Nelson Okorie (Pan-Atlantic University*):*
  Media Framing, Climate Change and issues of Water Security in South Africa

- Shai Kassirer (University of Reading):
  "Israel Is Drying, Again": Framing Resilience in Televised Water Conservation Campaigns

12:50-13:20 Break

13:20-14:40 Session 2: Water (in)Justice in Jamaica and India:

- Henrice Altink (University of York):
  "No water": the unequal impact of drought in Jamaica in the 1990s.

- Shruti Jain (Institute of Economic Growth Delhi) & Bhupen Singh (Uttarakhand Open University):
  Essentiality of Rights for Building Resilience Climate and Water Politics in Uttarakhand Himalaya

- Farhat Naz (Indian Institute of Technology Jodhpur*):*
  Dynamics of Water Access: Trust and Mistrust at the International Border Line

- Asrarul Haque Jeelani (Jawaharlal Nehru University):
  No Water No Votes: Electoral Right as a Political Tool for Dealing with Water Distress

15:00-16:20 Session 3: Water, Technology and Public Perception:

Chair: Prof. Michael Goodman, University of Reading

- Piotr Szpunar (University at Albany):
  Walled Shores, Waning Future

- Christina Walter (Universität Augsburg):
  Digital Technologies for Water Resilience? Examining the Discourse on Digital Water

- Biliana Gaume, Pascal Verhoest, Joke Bauwens, Petrus te Braak and Marijke Huysmans (Vrij Universiteit Brussel):
  Food for Thought A Survey on the Acceptance of Crops Grown with Treated Wastewater

- Ruhil Iyer (IDS), Jeremy Kohlitz (University of Technology Sydney), Nicole Klaesener-Metzner (UNICEF) & Sue Cavill, (UNICEF):
  Water management for hygiene and sanitation in the climate crisis: Programming lessons from South Asia and the Pacific

16:30-18:00 Closing Keynote Talk:

Dr Filippo Menga, University of Bergamo:

Spectacular Environments: Framing the Global Water Crisis in Troubled Times

Closing conversation co-chaired by Dr Shai Kassirer, University of Reading

Abstracts:

Session 1: News, Media and Water Resilience:

Role of news channels in running media campaigns for water conservation projects in India

Swati Jaywant Rao Bute - Jagran Lakecity University, India

In India television is still considered as an important and most reliable medium for information. In comparison to newspaper, radio and digital platforms television still has the highest viewership for news and information.

Climate change and water conservation are important projects of the present government in India. In India public and private news channels have different policies for content, Public broadcasting news channels normally work on government guidelines and broadcasting codes while private television news channels are free to select and telecast content of their choice. In the last few years we are seeing certain changes in the selection of news by the private news channels. Now it is mandatory for private news channels to give space to some public interest issues in their news telecast. Jal Shakti Abhiyan: Catch the rain and Jal Jeevan Mission: Har Ghar Jal (Water at every home) are two highly ambitious programs of Government of India

This paper will explore the role of public and private news channels in giving space to the cause in their routine telecast of news and making people aware about the government program for water conservation through content analysis. Role of opinion leaders and influencers in media campaign

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Analysis of Brazilians' comments on the water issue on Twitter

Edson Capoano, Alice Balbé, Pedro Rodrigues Costa - University of Minho, Portugal

This paper aims to analyze the tweets about water-related issues debated in Brazil. The analysed data comes from a universe of 17,000 Portuguese language tweets commenting on environmental news collected on Twitter from October 1, 2021, to March 17, 2022. In addition, the most used emotional terms are also discussed.

From the total collection, the selected sample of 281 tweets was based on the keywords "Brazil", "environment" and "water", in their Portuguese language equivalents, i.e “Brasil”, “meio ambiente” e “água”. Besides these main terms, it was identified that the most used terms in the comments were: "climate", "waters", "environment", "health", "energy" and "secretariat", totalling 1062 mentions among such words. After a relational analysis between terms and words, the most important themes related to the collected tweets were identified. The use of the terms environment and water are related to issues related to health, which is reflected by the link between the words treatment and sanitation; climate change and clean energy production are related by the link between the words climate and energy; and for water supply, especially in the form treated for human consumption, which is revealed by the relationship between the words supply and sanitation.

Regarding the qualitative analysis of the tweets, it can be noticed that the debate is more accentuated at the local and hyperlocal level than in the national debate, mainly by the use of the word Secretariat

- referring to municipal water management body - is one of the most used in the comments. Regarding the emotional polarity of the tweets, the emotion trust is the only one with a positive connotation, but it is above the use of other emotions with a negative connotation, such as fear, anger and disgust.

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Media Framing, Climate Change and issues of Water Security in South Africa

Nelson Okorie - Pan-Atlantic University, Nigeria.

In South Africa, there have been growing concerns about droughts, unpredictable rainfalls and increased temperature due to the global impact of climate change. This study examined media framing on issues of water security in South Africa. The study was premised on framing theory to understand the potential influence of media outlets as suppliers of messages on issues of climate change and water security in South Africa. Content analysis was used to generate qualitative and quantitative data to answer the research questions. In addition, the type of content analysis adopted for this study was the relational analysis, which was used to ascertain the existence and frequency of the concepts as well as to determine the relationship that exist between or among the concepts Importantly, 36 news videos were selected from four TV outlets in South Africa i.e. South African Broadcasting Corporation (SABC), Eyewitness News TV, eNCA and Newsroom Afrika TV. For this study, a hypothesis was tested to establish if there was a significant association between the direction of media framing and predominant issues on water security in South Africa. Chi-Square analysis was used to ascertain the association between the nominal variables. Furthermore, Contingency Co-efficient measure was used to determine the significance and direction of the association between the variables. The timeline adopted for the analysis was between March 2021 and March 2022 to achieve the objectives of the study. The findings of this study showed that critical and support frames were the predominant frames used to report issues of water security in South Africa. The direction of media framing focused on issues of infrastructure, water supply, standard and sanitation, policy implementation and pandemic Also, the findings of this study indicated several interventions to promote water security in different provinces in South Africa. One of the possible interventions was to utilize groundwater as an alternative water source to promote the sustainable development goal on universal and equitable access to safe and affordable drinking water. This study recommended that the media can partner with national governments and non-governmental agencies to spearhead projects towards sustainable water security in South Africa.

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“Israel is Drying, Again”: Constructing Resilience Discourses in Televised Water Conservation Campaigns

Shai Kassirer – University of Reading, UK

Water conservation campaigns (WCC) are a common tool for mitigating droughts and water scarcity by encouraging reductions in household consumption. This paper moves beyond examining the impact of WCCs on consumption to look at the ways in which these campaigns discursively construct notions of water resilience. By analysing eight televised WCCs produced by the Israel Water Authority from 2008 to 2018 in response to recurring droughts, this paper shows how discourses of resilience are audio-

visually and symbolically constructed and represented to the public. The results indicate that a variety of opposite and competing discursive strategies were used in these campaigns: motivational, informative or instructive, fear/hope, nationalistic/individualistic and eco-centric/anthropocentric. The longitudinal comparison reveals how the discourse of water resilience evolved over the years from resilience by *resistance* to *transformation* and *adaptation*, confined to depolitical ethical-individual behavioral change while ignoring government responsibility, systemic social-environmental causes of the problem, and climate change.

Session 2: Water (in)Justice in Jamaica and India:

"No water": the unequal impact of drought in Jamaica in the 1990s.

Henrice Altink - University of York, UK

Of all natural disasters, drought has the most far-reaching impact on societies and the environment. Although the Caribbean has long experienced droughts with huge losses, hurricanes and storms have received most scholarly attention. This paper tries to rectify this gap by examining the impact of a series of droughts that affected Jamaica in the 1990s, a decade when the island began to feel the impact of globalisation, a shift towards neoliberal governance, including in water provision, and climate change.

Like other natural disasters, the impact of drought is not felt equally across a society because of climatic factors and race, class, gender, and other inequalities. Based on a wide range of sources, including newspaper accounts and (i)NGO reports, and informed by a growing body of interdisciplinary work on water (in)justice, this paper sets out the unequal access to water during the droughts. It will show that urban areas were prioritised over rural areas and that farmers producing for export had greater access to water than those supplying the domestic market. But it will also show and explain some marked differences within urban and rural areas. For example, in rural areas women and children were most affected and residents of informal settlements in urban areas.

By showing that the impact of the droughts varied according to a range of social and spatial gradients throughout this challenging decade, this paper will add to the rapidly growing interdisciplinary field of water (in)justice, which has hitherto largely focused on contemporary water debates and struggles. This paper, on the other hand, takes a historical approach and places the series of droughts within a longer history of the marginalisation of African-Caribbean people.

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Essentiality of Rights for Building Resilience Climate and Water Politics in Uttarakhand Himalaya

Shruti Jain - Institute of Economic Growth Delhi; Bhupen Singh - Uttarakhand Open University

By request of authors, the abstract is not published.

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Dynamics of Water Access: Trust and Mistrust at the International Border Line

Farhat Naz - Indian Institute of Technology Jodhpur, India

By request of authors, the abstract is not published.

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No Water No Votes: Electoral Right as a Political Tool for Dealing with Water Distress

Asrarul Haque Jeelani - Jawaharlal Nehru University, New Delhi, India

In early post-independence India, damming and taming the rivers were the dominant idea of the development. The country had received aggressive attention for the international corporate-funded green revolution in the decades following. The intensive agricultural program that created ecological risks over-extracted the groundwater in its process. As a consequence, the water table depleted. However, on the other hand, engineering-dominated supply-oriented drinking water program with the top-down approach has been the perspective of water governance. A recent report by the Association of Democratic Reform says the performance of water-related governance is below average. The anthropocentric views of ecology and water resources collectively made the country hydrological distressed. Such circumstances led the Niti Ayog to reveal that 21 cities in India would be out of water. To deal with the water stress and governance issue, Indian citizens run the 'No Water No Votes' campaign, a recent phenomenon of election boycott. The study highlights the causes and implications of the boycott and its process.
The study used Qualitative Content Analysis of the editorials, opinions, and news articles concerning the election boycott for water. The articles published in Indian online news portals were analyzed to conceptualize the process and its implications.

In water distress regions, the people across India boycotted the state assembly and general election in 2019. Although it was initially a protest in water distress villages, the cities have adopted the idea. In Pune, 15 housing societies observed the 'No Water No Votes' campaign and many cities across the country. The long-term predicament of water scarcity, inaccessibility or unavailability of alternative water sources, irresponsive authority, and feeling of exclusion compel citizens to boycott elections (Figure). The movement materialized when citizens perceived voting right as the only potential option to use for negotiations. The threat of an election boycott has significant implications on the inclusion of the water issue in manifestos of the national parties, temporary arrangements, and media attention. However, the actual election boycott declined polling percentages and changes in leadership.

The anthropocentric view of ecology and rising state control and regulation over water resources have desponded the idea of common-pool resources, the community's role, and its participation. In such a situation, the electoral right evolved as a negotiating tool with the government to resolve water scarcity for sustainable hydro-resilient communities.

Session 3: **Water, Technology and Public Perception**

Walled Shores, Waning Future

Piotr Szpunar - University at Albany, NY, USA

In 2022 New York City's East River had its first floodgate installed, a decade after Hurricane Sandy placed increased focus on the vulnerability of a metropolis so close to sea level. The floodgate—300 meters from the southwest corner of the wall enclosing the 23rd Street Manhattan Veterans Affairs Hospital, on which hangs a plaque commemorating the height of the 2012 storm surge—is part of the city's $1.45 billion East Side Coastal Resiliency Project (ESCR). Just down the road, the southern portion of the East River Park has been razed as part of the ESCR's plan to bury the park in eight feet of landfill to create a floodwall and build a new park atop it. The plan has met much resistance from local residents—East River Park Action—after a less invasive plan created with much community involvement was unilaterally scrapped by the city.

Building on the "elemental turn" in media studies (Peters, 2015; Starosielski, 2019) and the increased focus on the futural in memory studies (Bond et al., 2016; Gutman et al., 2010; Szpunar and Szpunar, 2016) this paper is part of a project on lieux de futur—without adopting Nora's (1989) pejorative view of lieux as opposed to milieux—infrastructural sites intended to either bring about envisioned futures or help weather them. The East River shoreline is one such site, utilized here to examine the politics of resilience, community entanglements with the more-than-human (Whatmore, 2002), and the futural memory politics of a "watery sense of place" (Garde-Hansen et al, 2016). These come together in the figure of the floodwall. Human engineering has long attempted to control or attune to water cycles—though as part and parcel of "agrologistics" they may very well be part of the problem of the Anthropocene (Morton, 2016). Nevertheless, I utilize Wendy Brown's (2010) differentiation between medieval city walls and those proliferating on the borders of contemporary nation-states—the former encircles the sacred, binds, and pacifies while the latter signals the waning of sovereignty in the face of capital—to think through the contemporary significance of the floodwall as a mnemotechnology in the politics of materializing the future in the present.

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Digital Technologies for Water Resilience? Examining the Discourse on Digital Water

Christina Walter - Universität Augsburg

Global climate change impacts and increases the uncertainty about water, its availability, quality, as well as the resilience of urban water infrastructure. Thus, the water sector is being transformed to react to the rising demand from water as well as climate change and water quality issues and is transitioning into its so-called „fourth revolution" towards a more sustainable and resilient management of water, whilst simultaneously encountering the Megatrend of digitalisation (Poch et al. 2020:2). This digital transformation of the water sector allows for example to monitor the water quality and quantity in real time as well as directly engage with the consumers. Through adopting digital technologies, the water sector has the opportunity to move forward and address the 21st century water risks early on as the new technologies will increase the knowledge of water supply, water demand and other water data

which can be used to inform public policy or new investments and also increase the resilience of the sector (Sarni 2020). I critically examine the discourse on digital water and how it is characterised, through the lens of Political Ecology especially trough the concept of hydrosociality, which focuses on the role water plays in the co-production of nature–society relations and the study of its embedded power relations (Benjaminsen, Svarstad 2018:391). This is enriched through insights of Science and Technology Studies. The discourse on digital water is characterised through two distinct argumentative pathways, on the one hand the technological solutionism presenting digital technologies as the only solution to the challenges within the water sector, and on the other hand socio-technical imaginaries of the future which constitute digital water as a new pathway within the water sector. In this context, my contribution aims to briefly present how the discourse on digital water affects the future of water resilience.

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Food for Thought A Survey on the Acceptance of Crops Grown with Treated Wastewater

Biliana Gaume, Pascal Verhoest, Joke Bauwens, Petrus te Braak, Marijke Huysmans - Vrije Universiteit Brussel, Belgium

The looming threat posed by climate change-fuelled droughts has triggered a slew of projects concerned with the reuse of wastewater for agricultural purposes. Across the globe, there is also a growing interest in the direct consumption of treated wastewater. Whilst the requisite technology is well established and the safety can be guaranteed, the instigators of these projects still anticipate consumer resistance. However, there are currently few studies that provide insight into the public acceptance of treated wastewater and the results of these studies are mitigated. Using representative survey data gathered among 300 respondents living in Flanders, Belgium, we show that feelings of disgust and fear of contamination lead to consumer resistance of treated wastewater usage, whilst water conservation behaviour and sense of environmental group-efficacy affect the public acceptance positively. The relation between the acceptance of wastewater and environmental concern, however, is mitigated. In the discussion, we propose an alternative approach to better understand consumer's environmental attitudes and resistance against the use of treated wastewater.

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Water management for hygiene and sanitation in the climate crisis: Programming lessons from South Asia and the Pacific

Ruhil Iyer – IDS; Jeremy Kohlitz, University of Technology Sydney; Nicole Klaesener-Metzner, Sue Cavill - UNICEF

Globally, in 2020, an estimated 2.3 billion people did not have the facilities to wash their hands with soap and water at home and 494 million people were practising open defecation. Around the world, one-third of health care facilities lacked hand hygiene resources at the point of care, one in 10 have no sanitation services. Nearly half of schools worldwide do not have basic hygiene services and globally less than two thirds of schools have a basic sanitation service. The 2030 Agenda for Sustainable Development called for 'ensuring availability and sustainable management of water and sanitation for all' under Sustainable Development Goal 6.

As water makes sanitation and hygiene practices possible, climate impacts will reduce the ability of people to maintain these practices and increase the spread of infectious diseases. As well as constraining physical access to latrines and hygiene facilities, climate change can also undermine the success of health and hygiene behaviour change programming by reducing the ability or motivation of individuals to perform such practices. People may then revert to unhygienic practices such as open defecation.

This paper describes practice-based knowledge on how climate change affects sanitation and hygiene practices (including hand and menstrual hygiene) in household and institutional settings (including schools, health facilities). This paper will also illustrate how water, sanitation and hygiene (WASH) programmes in South Asia and the Pacific are adapting their behaviour change interventions in the context of water scarcity and flooding, deteriorating water quality, disrupted supply chains (for sanitary products, soap/sanitiser and latrine construction and maintenance materials) and weather-related damage to WASH infrastructure.

Achieving the human rights to water and sanitation as well as the Sustainable Development Goal by 2030 will require integrating climate thinking within WASH programmes and movement towards intersectoral approaches (including WASH, education and health sectors as well as adolescent development, disability, and gender). This will enable sanitation and hygiene behaviour change interventions to adapt to ensure that people still practice safe hygiene during dry and wet extremes, for example, by prioritising scarce water for hygiene in dry periods and ensuring clean water is available during flooding for washing reusable sanitary products and bodily hygiene. Good sanitation and hygiene practices during dry and wet extremes will also support water supply resilience by limiting the spread of pathogens to drinking water sources.