



CWEH REPORT 2020-2021

Report of the Centre for World
Environmental History,
University of Sussex
Vinita Damodaran



CWEH Report 2020-21

The Centre for World Environmental History (CWEH) was launched in May 2002 under the aegis of the School of African and Asian Studies at the University of Sussex. It was funded for an initial three-year period by the Research and Development Fund of the University. CWEH has now raised funds from the Leverhulme Trust, the AHRC, the British Academy, The Canadian Social Science Research Council and the Norwegian Research Council, for independent projects.

The creation of CWEH initiative was a response to specialist courses and research conducted by Sussex faculty for over nine years in tropical and 'Southern' environmental history at, what was then, AFRAS and elsewhere in the University and within the Institute of Development Studies. Sussex University has a long research tradition focussed on environment and development problems in the tropics as well as a close relationship with the Institute of Development Studies (IDS), located on the Sussex campus, which is Britain's leading organisation carrying out research on social and economic processes and problems. Sussex University also has a solid tradition in radical history and the history of material culture and peasant society in the Global South, exemplified in the work of Professor Ranajit Guha and the Subaltern Studies School. Currently the Centre is located across History and Geography.

The Centre has a Director, Research Director, Faculty Associates, Visiting Research Fellows and Associates and Doctoral Associates. It has a close collaborative relationship involving frequent staff exchanges with the Jawaharlal Nehru University in New Delhi, India and the CNRS French Institute in the Union Territory of Pondicherry, India. The Centre is currently collaborating with Kew Gardens, The Botanical Survey of India, and JNU on a project on Joseph Hooker and India and with the British Library and the U.K. Met office on a project on historical records and climate change. It is also collaborating on other projects including *Human Environment Interactions in the Indian Ocean World, 1500-1900* with the University of McGill, Canada, with IDS on uncertainty and livelihoods in India funded by the Norwegian Research council and with JNU on *Adivasi* colonial and post-colonial worlds. It has recently launched a new partnership grant with McGill, entitled *Appraising risk, past and present: interrogating historical data to enhance understanding of environmental crises in the Indian Ocean World, 2019-25* and with IDS on *Tapestry (Transformation as Praxis; exploring social just and multi-disciplinary pathways to sustainability in marginal environments)* with Kyoto University and funded by the Belmont Forum, 2019-2021.

www.sussex.ac.uk/cweh

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CWEH and Its Networks

Directorship

Director: Prof Vinita Damodaran (MAH)

Founding Research Director: Richard Grove

Advisory Board

Dr Antonia Moon Curator India Office records, British Library
 Professor Deepak Kumar, Professor Emeritus and Historian of Science, JNU
 Professor Mark Elvin, Professor Emeritus, ANU
 Professor Rob Allan, Met office U.K.
 Prof Alan Lester (Global Studies)
 Dr Mick Frogley (Global Studies)
 Dr Rohan Dsouza (Kyoto University)

Artist in Residence and Convenor of the Academia and Activist Network: Zuky Serper

CWEH Networks

CWEH runs 5 networks with a total of 450 members:

1. Botanical and meteorological history of the Indian Ocean 1600-1900
2. Mines, water and energy network
3. Academia and Activism network
4. Historical climatology
5. Climate change and the humanities

All of the networks have been active particularly the Botanical and Meteorological History of the Indian Ocean and the Academia and Activist networks. It also has a Facebook page (<https://www.facebook.com/CWEHSussex/>) and Twitter account (@cwehsussex), with 2277 and 1567 followers respectively.

MOUs

CWEH has an MOU signed in 2012 with the U.K. met office and the British Library on south Asian records and historical climate change.

<http://www.sussex.ac.uk/cweh/newsandevents/othercwehnews>

As part of this the centre helped coordinate an implementation plan in 2014 with the World Meteorological Organisation (WMO), the ACRE project of the UK met Office and several Indian Ocean rim countries on preserving their historic archives related to climate change.

https://gfcs.wmo.int/sites/default/files/events/International%20Workshop%20on%20the%20Recovery%20of%20Climate%20Heritage%20in%20the%20Indian%20Ocean%20rim%20Countries%20and%20Islands/indare_implementation_plan-draft_final_14-04-2014.pdf

Senior Research Associates

Prof Rob Allan (Met Office)
Prof Greg Bankoff (University of Hull)
Dr Paul Basu (UCL)
Dr James Beattie (University of Waikato)
Prof Peter Campbell
Dr Minoti Chakravarty-Kaul (Delhi University)
Prof Quentin Cronk (University of British Columbia)
Samarendra Das (Independent researcher)
Dr Sangeeta Dasgupta (JNU, New Delhi)
Dr Rohan D'Souza (Kyoto University, Japan)
Dr Richard Drayton (King's College London)
Gladson Dungdung (Independent researcher)
Prof Mark Elvin (Australian National University)
A.T. Grove (Cambridge)
Prof Mark Harrison (Oxford)
Andrea Janku (SOAS)
Kofi Mawuli Klu (Independent researcher)
Professor Deepak Kumar (JNU, Delhi)
Dr Vimbai Kwashirai (Universität Duisburg-Essen)
Prof Roy Macleod (Department of History, University of Sydney)
Dr Bao Maohong (Department of History, Peking University)
Dr Wendy Maples (Academic consultant)
Prof John McNeill (Georgetown University)
Dr Peter Merrington (University of the Western Cape)
Roger Moody (Founder, Mines and Communities Network)
Prof Brian Morris (Goldsmith's)
Dr Mark Nesbitt (Kew)
Dr Henry Noltie (Royal Botanic Garden Edinburgh)
Dr Felix Padel (Independent researcher)
Dr Stuart Peters (Queen Mary College)
Dr Simon Pooley (Birkbeck University of London)
Prof Ravi Rajan (University of California)
Dr Mahesh Rangarajan (Delhi)
Dr Daniel Rycroft (UEA)
Dr Kate Showers
Julian Stargardt (Independent researcher)
Dr Pauline von Hellermann (Goldsmiths, University of London)
Dr Theresa Wong (Independent researcher)
Dr Carol Yong (Independent researcher)

Research Associates

George Adamson (Kings College)
 Alex Aisher (University of Sussex)
 David Blake (Independent researcher)
 Chris Courtney (University of Durham)
 Debojyoti Das
 Subir Dey (University of Delhi)
 James Fraser (University of Sussex)
 Maxmillan Martin (University of Sussex)
 Mike Rayner (University of Sussex)
 Arnab Roy (Independent researcher)
 Raymond Ruhaak (University of Liverpool)
 Adrian Thomas (University of London)
 Anna Winterbottom (University of Sussex / McGill University)

Doctoral Associates

CWEH's interdisciplinary perspective on complex issues is exemplified by its doctoral associates. It provides an intellectual home for both Sussex graduates and visiting graduates who are integral to contributing to CWEH's ever expanding areas of research. The multidisciplinary nature of CWEH research faculty means that doctoral students have access to a range of expertise as well as to contribute to it. They also form an active social community, organising workshops and networks. Visiting doctoral associates are also welcomed.

The centre's PhD Students currently include:

Saumya Ranjan Nath: *The Kondhs and resistance against mining in Orissa*
 Preeti x: *Histories of Indian agriculture*
 Nandima Angom: *Indigenous women's movement in India's borderland*
 Mike Rayner: *History of Indian genetics*

International recognition for Centre and its activities

The Centre's work on climate and the environment is internationally recognised and it figures on several websites and articles in the US, Australia, India and Singapore (see below). It is the leading international centre for climate and environmental history research in the global south.

<https://www.latrobe.edu.au/archaeology-and-history/research/centre-for-the-study-of-the-inland/resources-links>

<https://oro.open.ac.uk/69638/1/document.pdf>

<http://www.metacre.org/links?tmpl=0%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=>

<http://eseh.org/wp-content/uploads/Notepad29.pdf>

<https://www.webarchive.org.uk/en/ukwa/collection/369?page=4>

<https://web.colby.edu/senseofplace/files/2013/07/MISTRA-FINALREPORT-15May2013-copy1.pdf>

<https://www.livemint.com/mint-lounge/features/the-indian-artists-of-roxburgh-s-herbarium-11585911714610.html>

<https://www.humanas.unal.edu.co/historiambiental/enlaces-recomendados/>

<https://core.ac.uk/download/pdf/200253876.pdf>

https://gala.gre.ac.uk/id/eprint/32851/1/32851_COLES_Sustainability_technology_and_innovation.pdf

<http://cscs.res.in/dataarchive/textfiles/south-asian-historical-records-and-climate.an-interdisciplinary-workshop-march-4-52011.pdf>

Collaborative Research Projects

Since its inception, CWEH has successfully applied for 17 funding proposals, totalling approximately £750,000. It has the following ongoing research projects:

1. Botanical and metrological history of India and the Indian Ocean (150,000 GBP)

The heart of the Centre's current projects are two related projects, one project focuses on "Kew and India". This project entitled botanical and metrological history of India and the Indian Ocean has been funded by the AHRC. The project addresses a series of questions on the specific contribution of Kew in shaping the categories of natural knowledge and the capacity of communities to know and engage with the environment from the eighteenth to the twentieth centuries.

The second major project aims at mapping the historic climate archive for the Indian Ocean World and to model particular climate events over the last 500 years and even longer over a 2000-year period. Part of the larger project will compile a database of the paleoclimatic proxy archives (preferably continuous) that offer quantitative reconstructions of key climatic parameters for the Indian Ocean basin. Datasets will be filtered according to an agreed set of criteria that will likely include chronological control and errors, resolution of the time series, and geographical location of the archive. This is in collaboration with the Indian Ocean World Centre in McGill University in Canada.

The research agenda is inspired by the work of Richard Grove. Grove's hypothesis was that the information-gathering institutions of modern forms of empire captured and made visible global patterns of environmental and climate change. He also argued that the politics of empire had significant environmental consequences. Empires not only recorded the data of natural history; the institutions of empire shaped the natural world. The goal of our research has been to sponsor research that analyses and explains this interaction of human societies with their environments.

2. Appraising Risk Partnership (500,000 CAD)

In collaboration with University of McGill

CWEH has been collaborating with the Indian Ocean World Centre at McGill University since 2019 on a project on Human environment interactions in the Indian Ocean World, 1500-1900. As part of this, the centre organised The Appraising Risk Partnership's 1st Summer School Workshop on the 26th and 27th May via Zoom, with collaboration from McGill University, the British Library, the University of Hull and the Met Office. 44 participants, mainly early career researchers, registered for the sessions from India, the Philippines, Indonesia, Germany, U.K, Australia and Canada. The themes of each day respectively were: "Environmental Archives" and "Climate of the Indian Ocean World: practical application", and presentations included: "Some sources for meteorology in the India Office Records and related collections", "ACRE's experiences with Indian Ocean World archives and their uses" and "Climate and the Environmental Historian". For report of the workshop please see: <http://www.sussex.ac.uk/cweh/>

Recordings are available here:

<http://www.sussex.ac.uk/cweh/newsandevents/conferences/appraisingriskworkshop>

3. Tapestry Mangrove School Project

(30,000 GBP)

In collaboration with IDS

CWEH is also collaborating with IDS on a research project on climate change, uncertainty and social transformation. As part of this, the centre is running the “Environmental Education Awareness Programmes” with the Botanical Survey of India. This programme has been providing opportunities for students in vernacular schools across Kolkata to gain first-hand knowledge on economic and useful plants of India and other rare plants in habitat, and to also learn conservation and sustainability methods. The school programme which has covered 260 children in two schools in Kolkata has been expanded as the Mangrove School project in the delta region of the Sundarbans. Details to be found here.

<http://www.sussex.ac.uk/cweh/newsandevents/mangrove>

4. Gwilliam Letters Project

(958 GBP)

In collaboration with McGill University

5. TRANSFORM-iN EDUCATION: ‘Hope in the present’

CWEH is collaborating with academics in India (Dr. Anindita Saha) and Ecuador (Dr. Citlalli Morelos-Juarez) in a project that explores the role of arts-based deliberative pedagogies for supporting youth to express relationships with sustainability uncertainties, in dialogue with stakeholders, with a view to fostering community resilience expressed through narratives of hope and action.

This study explores how a process of collective engagement might re-orientate as community resilience, expressed as ‘hope in the present’. Youth narrate experiences of sustainability ontological uncertainty (including Covid-recovery and livelihood-adaptation) and, in dialogue with community stakeholders, identify possibilities for change. The study explores the efficacy of pedagogies that are themselves uncertain (‘uncertain pedagogies’), integrating arts-based deliberation: an emerging paradigm with considerable promise, as- yet uninvestigated in global contexts.

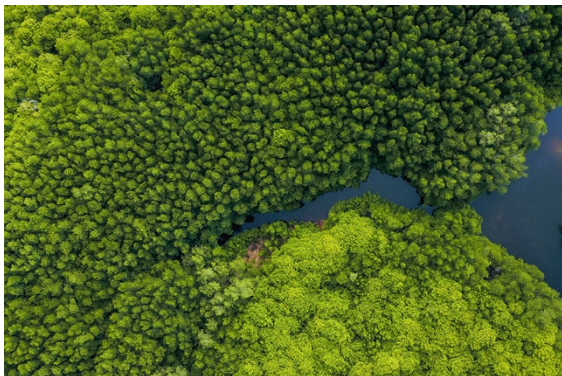
The progress of the project is detailed in a blog:

<https://www.transformeducation.org/blog/archives/03-2021>

Reserva Tesoro Escondido

Mika Peck and Citlalli Morelos-Juarez, close associates of CWEH are at the heart of a project that has established a reserve in Ecuador to save the brown-headed spider monkey from the brink of extinction. Using an approach that engages local communities in science, the paraecologist model, the Tesoro Escondido Reserve together with Jocotoco Foundation protect over 2000 hectares of primary forest in the Chocó lowlands, a global biodiversity hotspot. This area in the province Esmeraldas is highly threatened by anthropogenic activities such as timber extraction, monocrops and mining concessions.

The reserve protects one of the last healthy populations of Ecuadorian brown-headed spider monkeys as well as other endangered species such as the Great Green Macaw, the Banded-Ground Cuckoo, the Harpy Eagle, the magnificent jaguar, pumas and an incredible diversity of herpetofauna. The reserve collaborates with farmer families who offer their houses to host visitors, offering a unique experience in rural Ecuador.



Regeneration of the Acharya Jagdish Chandra Bose Indian Botanic Garden, Kolkata

The AJC Bose Indian Botanic Garden, Kolkata, is one of the earliest Botanic Gardens in the world. It was founded by Robert Kyd, and from the later 18th century his fellow Scot William Roxburgh, considered the father of Indian Botany, worked there for thirty years. Situated along the banks of the Hoogly river the 273 acres have a diversity of majestic trees and exotic plants including the renowned Great Banyan Tree, and 24 lakes. Over the past decades this once great garden has fallen into neglect and has become increasingly inaccessible as a result of urban congestion.

Through collaboration with the Asia Scotland Trust, the Botanical Survey of India, the Royal Botanic Garden, Edinburgh, and the University of Edinburgh, CWEH will assist in envisioning the regeneration, planning the facilities required, and advise on implementation pending a MOU.

The aim is to regenerate the garden as a major resource for the people of Kolkata and to reinstate it as an international centre for the Botanical Sciences in Asia and the study of the environment.

The key elements of the restored gardens will enable visitors to:

- discover the story of Indian horticulture through a walking tour of the 273-acre Botanic Garden
- admire the thousands of different trees, fruits and plants, including 1,300 exotic species
- witness how this experiential space has been nurtured over more than two centuries
- enjoy the cultural space offered by the permanent exhibitions and presentations and the interactive educational opportunities
- benefit from easy transport connections, in particular the new ferry service
- on-the-spot facilities include a bookshop, cafés and restrooms throughout the gardens
- and for those with more academic interests, explore the cultural, educational and scientific links between botanical institutions in Kolkata and the UK

It is hoped that through siting a hub of the Centre for World Environmental History (CWEH) University of Sussex at the AJC Bose Indian Botanic Garden it will also become the centre for the History of the Botany and Meteorology of the Indian Ocean.



Seminar Series

The centre has a regular seminar series. In March 2021, through its Academia and Activism network, it hosted the following as part of the University of Sussex Climate Action Week:

1. Rainforest Restoration in the Tesoro Reserve, Tuesday 23rd March, 2021.
2. The potential of grassroots international solidarity: Foil Vedanta's experience of successful struggles against a multinational mining company. Thursday 25th March, 2021.
3. Book Launch: Development Aggression by Jiten Yumnam, Friday 26th March 2021.
4. Deforestation – Mining – Climate Change: The cases of Saranda Forest in Jharkhand and Niyamgiri Hills in Odisha.

It has also recently hosted Joan Martinez Alier in a seminar on Circularity, Entropy, Ecological Conflicts and "Unburnable Fuel" and Jairam Ramesh on The Light of Asia. All seminars are free to attend, and the recordings can be viewed here: <http://www.sussex.ac.uk/cweh/newsandevents/videos>

In July 2021 Damodaran was also Panel discussant for SSR meeting on final plenary, aligning climate and SDG agendas for the Evidence for Action symposium

In June 2020 Damodaran participated in the first sustainability assembly in Sussex.
<http://www.sussex.ac.uk/cweh/newsandevents?page=2&id=51363>

Publications

The Centre is currently working on an edited volume on Extractivism in South Asia, drawing on Joan Martinez Alier's work in South America. The volume is edited by Vinita Damodaran and Felix Padel, and includes an afterword by Joan Martinez Alier. Some other recent publications of the centre include:

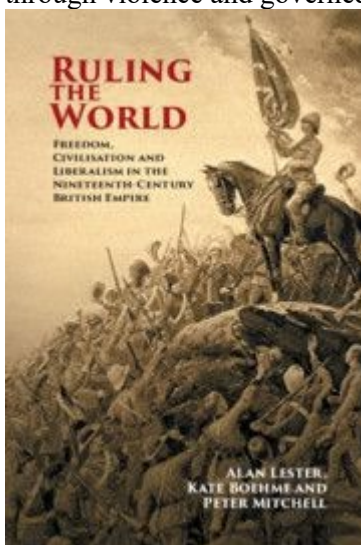
1. Joan Martinez-Alier, 2021, *Circularity, entropy, ecological conflicts and "unburnable fuels"*.

The economy is not circular, it is increasingly entropic. Energy from the photosynthesis of the distant past, fossil fuels, is burnt and dissipated. Even without further economic growth the industrial economy would need new supplies of energy and materials extracted from the "commodity frontiers", producing also more waste (including excessive amounts of greenhouse gases). Therefore, new ecological distribution conflicts (EDC) arise all the time. Such EDCs are often "valuation contests" displaying incommensurable plural values. Examples from the Atlas of Environmental Justice are given of coal, oil and gas-related conflicts in several countries combining local and global complaints. Claims for climate justice and recognition of an ecological debt have been put forward by environmentalists from the South since 1991, together with a strategy of leaving fossil fuels in the ground through bottom-up movements. This could make a substantial contribution to the decrease in carbon dioxide emissions.

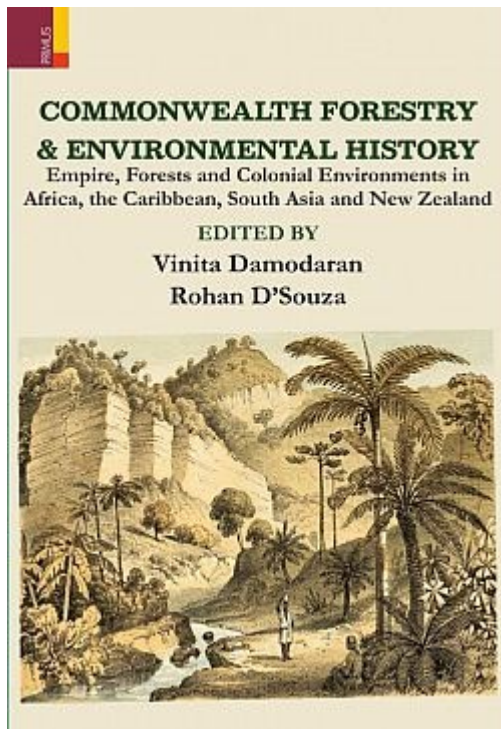
2. Fiona Williamson, 2021, "Disaster, state and science: historical narratives of extreme weather in East Asia and the Pacific", *Disaster Prevention Management* 30:1, 1-4.

3. Alan Lester, Kate Boehme and Peter Mitchell, 2020, *Ruling the World: Freedom, Civilisation and Liberalism in the Nineteenth-Century British Empire*, Cambridge University Press.

Ruling the World tells the story of how the largest and most diverse empire in history was governed, everywhere and all at once. Focusing on some of the most tumultuous years of Queen Victoria's reign, Alan Lester, Kate Boehme and Peter Mitchell adopt an entirely new perspective to explain how the men in charge of the British Empire sought to manage simultaneous events across the globe. Using case studies including Canada, South Africa, the Caribbean, Australia, India and Afghanistan, they reveal how the empire represented a complex series of trade-offs between Parliament's, colonial governors', colonists' and colonised peoples' agendas. They also highlight the compromises that these men made as they adapted their ideals of freedom, civilization and liberalism to the realities of an empire imposed through violence and governed in the interests of Britons.



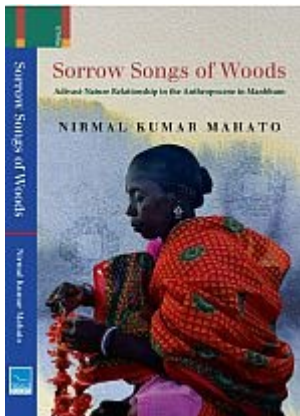
4. Vinita Damodaran and Rohan D'Souza, 2020, *Commonwealth Forestry & Environmental History: Empire, Forests and Colonial Environments in Africa, The Caribbean, South Asia and New Zealand*, Primus.



Contemporary anxieties about global warming and climate change impacts have unsettled the ways in which we think about environmental politics and human history. Intense discussions have already begun over whether we need to reconsider what we understand by the term ‘environmental change’ and if humans have truly become a ‘geo-physical’ force. Put differently, how should we recast our understanding of the planet’s varied environmental pasts in order to make sense of the Anthropocene present? This collection of 19 essays on forestry and environmental change in the erstwhile colonies of the British Empire—today comprising the ‘Commonwealth of Nations’—builds on Richard Grove’s quest for achieving a ‘global synthesis’ as efforts towards writing environmental histories on a planetary scale. The Commonwealth of Nations as a single environmental bloc for study, enquiry and historical scrutiny, explores connected environmental histories, compares dissimilar ecological regions and debates ideologies for environmental management. *Commonwealth Forestry and Environmental History* is intended to enable conversations between environmental historians, foresters, sustainable development practitioners, policy makers and those keen on understanding contemporary politics brought on by concerns about climate change.

5. Nirmal Kumar Mahato, 2020, *Songs of Woods: Adivasi-Nature Relationship in the Anthropocene in Manbhum*, Primus.

Sorrow Songs of Woods focuses the fine and complex relationship between the Adivasis and nature in Manbhum. This book analyses the nature of colonial intervention in the ‘indigenous’ society and the politics of the identity formation of the Adivasis in relationship with the transformation of their community system and the state. It provides an empirically detailed and regional specific study on ethnic version of ‘ecological nationalism’ and seeks to locate the concept of indigeneity in terms of values, identities and knowledge systems, within a unified ‘indigenous worldview’.



6. Rohan D'Souza, 2020, "Event, Process and Pulse: Resituating Floods in Environmental Histories of South Asia", *Environment and History* 26:31-50

The notion of the flood in South Asia is no longer solely characterised as the archetypal natural disaster. This perceptual shift, as this article will point out, draws from a conceptual shift within the field of environmental histories of South Asia. In the course of exploring and debating ideas about environmental change, environmental historians have drastically reconsidered the role and impacts of flooding in South Asia through three distinct narrative frameworks: (i) extreme hydraulic events; (ii) geomorphological process; and (iii) biological pulses. Environmental history as a field has thus helped to flesh out and radically revise our understanding of flooding, which has changed from previously being seen as an ahistorical calamitous event to instead providing contexts for revealing complex relationships between geomorphological processes, biological pulses and livelihood strategies. The notion of the flood in South Asia, consequently, is now acknowledged as an ecological force that is mediated by social, cultural and political interventions rather than exclusively borne out as an effect of nature.

7. Rohan D'Souza, 2020, Citizen, Consumer, User. Covid-19 and the Higher Education Churn in India, *JMC Review* 4.

As the infectious spread of the Covid-19 virus began to overwhelm people and governments across the world, higher education, unsurprisingly, has also been profoundly disrupted.

8. Gladson Dungdung, 2020, "India's Coronavirus Refugees Are Also Development Refugees", *Scientific American*, June 20 2020

The pandemic has increased the desperation of a population already facing economic exploitation and environmental destruction.

9. Iain Orr, 2020, "Covid-19 and islands (states, territories and sub-national island jurisdictions- SNIJs)" *BioDiplomacy*, June 2020,

An update in a revised format of a note started on 25 March – then updated every 5 days - with data from the Worldometer website on Covid-19 and islands.

10. Rohan D'Souza, 2020, "Zooming towards a University Platform", *RAIOT*, June 2020

George Packer, journalist, novelist and a frequent contributor to *The Atlantic*, acridly concluded in a recent polemic that the "coronavirus didn't break America". Rather, the virus simply "revealed what was already broken".¹ For Packer, the global pandemic in all its relentless fury actually laid bare

Trump's dysfunctional government within an already corroding and ailing society. The Covid-19 rampage, hence, was more messenger than the message.

11. Alan Ziegler, Hanshe Lim, Robert Wasson, Fiona Williamson, 2020, "Flood Mortality on SE Asia: Can Paleo-Historical Information Help Save Lives?", *Hydrological Processes*, December 2020.

12. F. Williamson, 2020, "Responding to Extremes: Managing Urban Water Scarcity in the Late Nineteenth-Century Straits Settlements", *Water History*, October 2020.

13. F. Williamson and V. Janković, 2020, "A Question of Scale: Making Meteorological Knowledge and Nation in Imperial Asia", *History of Meteorology* 9.

14. Gladson Dungdung, 2020, Coal Auction and Its Impact, *Adivasi Hunkar*, 25 July 2020.

15. Max Martin, Vinita Damodaran and Rohan D'Souza (Eds.), 2019, *Geography in Britain after World War 2: Nature, Climate, and the Etchings of Time*, Palgrave.

Contemporary anxieties about climate change have fuelled a growing interest in how landscapes are formed and transformed across spans of time, from decades to millennia. While the discipline of geography has had much to say about how such environmental transformations occur, few studies have focused on the lives of geographers themselves, their ideologies, and how they understand their field. This edited collection illuminates the social and biographical contexts of geographers in post-war Britain who were influenced by and studied under the pioneering geomorphologist, A. T. Grove. These contributors uncover the relationships and networks that shaped their research on diverse terrains from Africa to the Mediterranean, highlighting their shared concerns which have profound implications not only for the study of geography and geomorphology, but also for questions of environmental history, ecological conservation, and human security.

CWEH also run a series in world environmental history with Palgrave which has published 14 volumes to date. <https://www.palgrave.com/gp/series/14570>

Recent Media

1. July, 2021: BBC History programme interview with Damodaran on programme on Chipko.
<https://podcasts.podinstall.com/bbc-world-service-history-hour/202108071306-chipko-indias-tree-hugging-women.html>
2. February, 2021: Guardian interview with Prof. Vinita Damodaran on historical perspective on COVID-19.
<http://www.sussex.ac.uk/cweh/newsandevents?id=54715>
3. May 2020: Práticas da História interview with Prof. Vinita Damodaran on the history of environment and activism.
<https://praticasdahistoria.pt/article/view/21842>
4. Feb 2020: Smithsonian Magazine interview with Prof. Vinita Damodaran on E.K. Janaki Ammal, early 20th century female Indian botanist.
<https://www.smithsonianmag.com/science-nature/pioneering-female-botanist-who-sweetened-nation-and-saved-valley-180972765/>

Current Partners

See www.sussex.ac.uk/cweh for more details.

Our partners

US
University of Sussex

Met Office
Hadley Centre

BRITISH
LIBRARY

JNU

Kew
ROYAL BOTANIC GARDENS

McGill
UNIVERSITY

NATIONAL ARCHIVES OF INDIA
Ministry Of Culture
Government Of India

बोतनी सर्वेक्षण विभाग
BOTANICAL SURVEY OF INDIA

NATURAL
HISTORY
MUSEUM

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Appendix: School Project Report

CWEH is working in collaboration with IDS as part of the IDS TAPESTRY project to run a school project that documents the narratives of children in a marginal environment. The Sundarbans, the world's largest contiguous mangrove forest, bordering the Bay of Bengal is situated in the Ganges delta and is an environment subject to frequent cyclones and rising sea levels. The home of the saltwater tiger, the region has 54 islands with an enormous biodiversity that were gradually intensively settled in the nineteenth century under the British. For the island-hopping communities, mainly lower caste, tribal and Muslim living here, the struggle for existence not only in terms of recovery and resilience in the face of natural disasters, but also their daily difficulties have had an effect particularly on children and youth magnifying their anxieties about their future. This unique School Project documents the voices of school children of this region with the objective of understanding and learning from their 'uncertain' worlds. The project has collected uncrafted narratives-oral, visual, photographic and written from 50 school children aged between 12-15 years in an initial pilot project from the Raidighi Shriphaltala Chandra Kanta High School in the Diamond Harbour subdivision of South 24 Parganas. The aims of the project are:

1. To listen to the voices of youth and children experiencing uncertainty and climate change in the Sundarbans towards reimagining their future.
2. To bring children's voices in conversation with expert voices to co-produce and re-shape knowledge and to reframe debates on marginality, uncertainty and climate change. The target group for the project were Middle school children whose age ranges between 12 to 16 years and the methodologies adopted for accumulating these were to facilitate uncrafted narratives

Environmental literacy is essential to empower the children particularly in a climatic hotspot like the Sundarbans. This is the basis of our innovative school project the Mangrove school project in the region inspired by an interdisciplinary team of educationists, historians, anthropologists and visual artists. The delta region is affected by changing weather and climate conditions including floods and cyclones. The children of this region have frequently experienced climatic vulnerabilities every year. They are quite acquainted with such kind of uncertainties.

Since 2020 year the children of the Sundarbans have experienced a completely different kind of uncertainty due to COVID pandemic which has severe effects not only on their lives but also on the livelihoods of their parents. Most of the people of Sundarbans who are tenant cultivator, fish folk, wage and migrant labourers have lost their job due to prolonged lockdown. It has become challenging for them to arrange their own bread & butter. The super cyclone, Amphan added to their grief and has made it difficult to maintain their livelihoods.

Mangrove school project

As the voice of the community is reflected in the voice of the children, we have selected children as our target group from two vernacular co-education schools – one from Raidighi island and the other from Gosaba island of the Sundarbans for our research work. The ages of these children range between 12 to 18 years.

We have selected 50 children randomly from each school maintaining gender equality. Fortunately, we were able to assemble (coincidentally) a mixed group of participants who are members of different communities & economic strata.

This initiative has helped us (i) to document the voices of the children experiencing uncertainty and climate change in the Sundarbans for the purpose of reimagining their future, (ii) to bring children's voices in conversation with expert voices to co-produce and re-shape knowledge, and also to reframe debate and marginality about uncertainty and climate change.

To capture the perceptions of the school children regarding uncertainty & climate change we planned to organise two introductory engagement sessions. We also plan to organise a combined workshop for bringing the voices of the children into conversation with expert voices to co-create knowledge that will help build community resilience and reduce poverty by exploring alternative livelihoods.

The bottom-up methodologies that we have adopted to document the uncrafted stories of the school children are the collection of oral narratives, visual narratives & written narratives. We emphasized the visual and written narratives as the children were unfamiliar with the virtual platform. They have produced some stunning creative artefacts that reflect their own views/thoughts/feelings/ responses to uncertainty & climate change.

We have had to interact with the children remotely because of the present pandemic situation. It is clear from such interaction that most of the children are reluctant to follow the occupations of their parents. They want to avail better opportunities for more secure livelihoods in the future.

Since the interaction with the children took place after the super cyclone Amphan and during COVID we have seen that most of the reflections were around these two events. What follows is a children's view of their watery world and its challenges.



Red

Alert

- A 15 years old, 10th standard student has painted this image. Her father is an Insurance Company agent. Her family belongs to a Hindu upper caste.
- She depicts this image as a rise in sea levels because of the gradually increasing temperature of the earth's surface. The image of sand glass timer signifies the global climatic distortion and the beginning of the countdown to the end of the earth and its change in colour from green to yellow.
- Effect of climate change is very pronounced on plant & animal kingdoms.



Desperate attempt for survival

- A 16 years old 10th standard girl belonging to a Hindu upper caste has painted this image. Her father is a farmer by profession.
- As she notes, since flooding often occurs in the Sundarbans the local people are always under fear of losing their livelihoods. Here, the people are desperate to survive and escape from the severe water-logging situation by building rafts from banyan trees and carrying people and animals in search of a safe shelter.



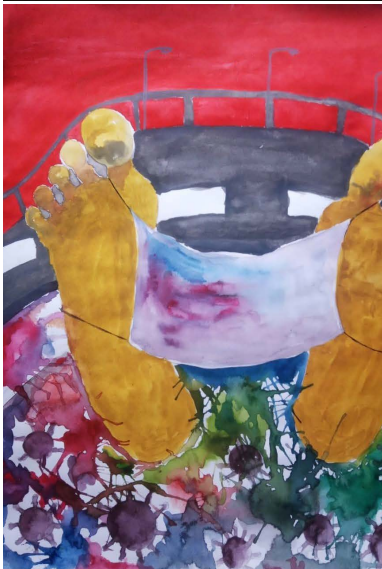
Life & uncertainty

- A 10th standard student of 16 years age has drawn this image. Her father is a doctor who belongs to a Hindu upper caste.
- Many migrant labourers died on the road while returning home due to exhaustion and fatigue and did not receive any support of any kind or get medical assistance. This image depicts bleeding feet which reflects the death of labourers while travelling. Their jobs have become uncertain as well and they had to travel while also facing a scarcity of food and water.



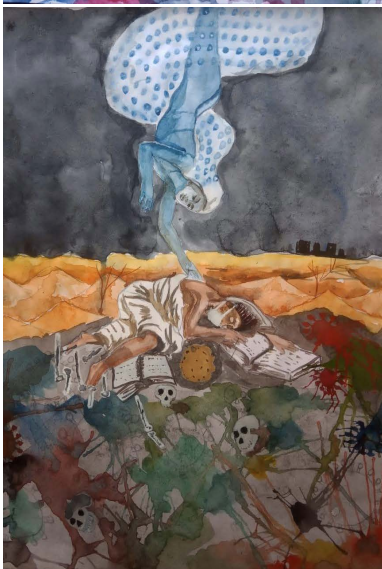
Global Warming

- A 16 years old student belonging to a Hindu upper caste has drawn this image.
- The image depicts that our mother earth is exhausted. Image of the thermometer signifies increasing temperature of the earth's surface rapidly. So ice bag is kept on her head to reduce the temperature of the earth's crust.



COVID 19 – A Disastrous Scenario

- A 7th standard, 14 years old girl has drawn this image. Her family belongs to a Hindu upper caste. Her father works in the forest department.
- This image depicts that people are dying due to the deadly effects of the Corona virus. Image of mask on the feet signifies that people are unable to avoid their present uncertainty & sacrifice their lives.



Dying hope of the youth

- A 17 years old student of 12th standard has drawn this image. His father is a serviceman, belongs to a Hindu tribal group.
- This image depicts that the youth study hard in order to secure jobs to earn a better livelihood. But due to COVID, they can't find jobs which is forcing them to lose hope despite being highly qualified. The image of the fairy & human skulls signify that everyday their hopes are dying.

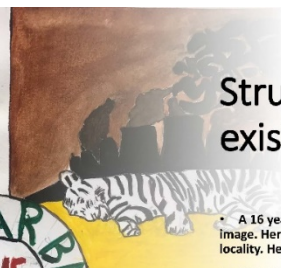
Naked truth of COVID 19

- A 12th standard, 17 years old student has painted this image. His family belongs to a Hindu upper caste. His father is a tenant cultivator.
- Here a homeless man who has no cloth to wear but uses a mask to cover his face to protect himself from infection of Corona virus.
- His feet are tied with a chain which signifies his inability to move anywhere for food & shelter.



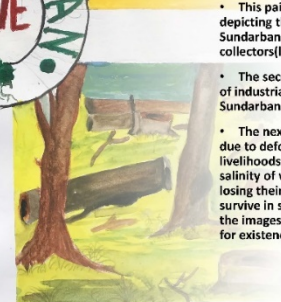
Protect us from evil

- A 16 years old, 9th standard boy who belongs to a Hindu tribal group has painted this image. His parents are wage labourers.
- In Indian Mythology, Goddess Durga is the symbol of power and she protects us from all harm and agents of evil. This picture depicts Goddess Durga and her children protecting the earth from the present day evil in the form of Corona Virus.



Struggle for existence

- A 16 years old 10th standard girl has drawn this image. Her father has a small grocery shop in their locality. Her family belongs to a Hindu upper caste.
- This painting displays 4 different images depicting the various aspects of livelihood in the Sundarbans. The first image shows honey-collectors(local name – 'Mouls') gathering honey.
- The second image shows that due to the effects of industrialization the biodiversity of the Sundarbans is vastly affected.
- The next image shows the cutting down of trees due to deforestation which is affecting the livelihoods and biodiversity; and, due to increasing salinity of water the fish collectors are in peril of losing their existence as the fish are unable to survive in saline water(clockwise from above). All the images are linked to one cause i.e. the struggle for existence of all living beings in the Sundarbans.





Shattered lives

- This image has been painted by a 16 years old 11th standard girl. Her father is a labourer. Her family belongs to a Hindu upper caste.
- The person in the image who is lying on the ground is fighting for survival due to scarcity of food and water. The empty broken plate depicts that the poor people of entire country is suffering due to paucity of food and is trying to survive.

Unemployed due to pandemic

- A 12 years old 7th standard child has painted this image. His father has a small stationary shop at their locality. They belong to a Hindu upper caste.
- Due to the pandemic, some factories are shut down and many workers lost their jobs. There is a dual uncertainty as there are no jobs in the market and the people who have lost work are struggling to feed their families and because of the pandemic their lives are at risk as well.



Cultural diversity of the Sundarbans

This image is painted by a 17 years old 12th standard student whose father has a small shop. His family belongs to a Hindu upper caste.

This image reflects the social, economic, religious and cultural aspects of the Sundarbans. One of the images highlights the cultural dimension of the people performing their local dance art and in another image we find their social practices.

In one particular image it is shown that the local people worship their Goddess 'Banbibi' before they enter the forest in expectation of being protected by her.

It is illustrated by a couple of images in the painting depicting the geographical location of this rich heritage sight and their beautiful biodiversity.

The economic life of the fish folk of the Sundarbans is depicted here, who risk their lives each day to catch fish wherein lies the danger of the tiger on land and crocodiles in the water; also there is fear of tigers amongst the honey collectors.

Now all aspects of the Sundarbans are under threat because of various factors such as climate change, deforestation, industrialization etc. Mother Earth as well as the people of the Sundarbans are pleading to the creator to protect the Sundarbans from this state of sorrow.

Our future plan is to bring the captured voices of these school children to the public domain by organising an exhibition virtually for the world audience and physically in Kolkata to draw the attention of our policy makers so that they can understand the daily struggles of the affected people. This may help them in planning an initiative to act according to the children's needs and future goals.

It is clear from the outcome of the engagement session that children of the Sundarbans are quite anxious about their future. At present time they are suffering from dual uncertainty - climatic vulnerability & pandemic. They are now hoping for alternative livelihoods which would help them to arrange their own bread and butter instead of getting used to these uncertainties. The children are looking for change and are seeking to transform themselves and their conditions by adopting new methods and implementing new learnings. They are trying really hard to lead better lives and make their land into a better place by turning the tide in their favour. They are asking to be taught new things and techniques in order to be able to break from the tradition of inheriting their parents' profession and build better lives for themselves and their families.

Some key questions for us co-creating transformation:

- The paintings invite audiences (whoever they might be e.g. policy makers, scientists, planners) to respond in two overarching ways to the images/text, that demand them to situate themselves in relation to the art and the artists, and what is being conveyed.
- What is this to me? What does it mean to me? How do I read this beyond climate change as a scientific fact? What am I learning from this 'artist' that I didn't know before, and that it wouldn't be possible to know if not presented visually?
- What am I to this? Where am I in this story? What does this demand of me as human being? Consumer? Professional? Citizen? Academic?
- It is only in this way that transformation can be achieved?

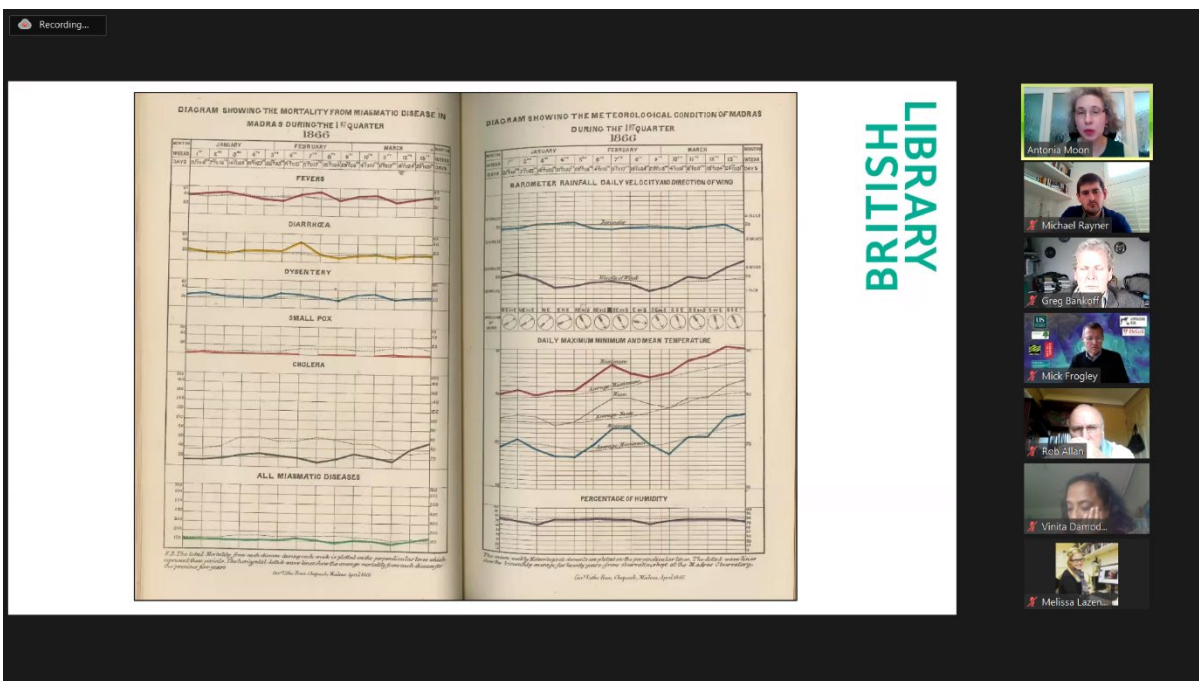
Appendix: Report on Appraising Risk Partnership: 1st Summer School Workshop
Title: Climate of the Indian Ocean World: Past and Present

The Appraising Risk Partnership's 1st Summer School Workshop was conducted on the 26th and 27th May via Zoom. It was organised by the Centre for World Environmental History (CWEH) at the University of Sussex, as part of the Appraising Risk Partnership funded by the Canadian Social Science Research Council and with collaboration from the McGill University, the British Library, the University of Hull and the Met Office. 44 participants, mainly early career researchers, registered for the sessions from India, the Philippines, Indonesia, Germany, U.K, Australia and Canada. Attendance for each day was good, with approximately 45 attendees on each day (including the 7 speakers/organisers).

The theme of day 1, chaired by Vinita Damodaran was "Environmental Archives". The first half comprised 3x 20-minute presentations from Antonia Moon (British Library), Rob Allan (Met Office) and Greg Bankoff (University of Hull/University of Sussex), entitled respectively, "Some sources for meteorology in the India Office Records and related collections", "ACRE's experiences with Indian Ocean World archives and their uses" and "Climate and the Environmental Historian". The second half comprised a 40-minute workshop that drew on some of the themes from the presentations, run by Vinita Damodaran and Mike Rayner. The participants had been given 9 primary source extracts, relating to 3 case studies, in advance of the session, as well as secondary source material for optional further reading. The case studies related to (1) the 1864 Calcutta Cyclone, (2) the 1877-1878 El Niño and Madras famine, and (3) the 1944-1945 Pacific Typhoon. In break-out rooms of 4-5 participants they were instructed to discuss one of the case studies and answer questions about the sources. A padlet was provided as a platform to exchange ideas/ask questions, and each group was asked to share their conclusions with the larger group at the end.

The theme of day 2, chaired by Mick Frogley, was "Climate of the Indian Ocean World: practical application". The first half comprised a demonstration by Melissa Lazenby of the KNMI Climate Explorer software (<https://climexp.knmi.nl/start.cgi>), exploring data from the Calcutta Cyclone case study. In the second half, participants were divided into breakout rooms of 5-6 participants, and were given exercises to complete using KNMI based on either case study 2 or case study 3. Following this, each group was asked to talk about their experiences with the exercises and their ease in using KNMI. After the session on day 2, participants were debriefed and given a chance to share feedback on the Summer School and suggestions for future improvements. Feedback was largely positive, with participants saying that they appreciated the structure of the sessions and the interdisciplinary nature of the content. Historians in the group were particularly enthusiastic about the KNMI software introduced in day 2. A number of participants indicated that future summer schools on GIS would be beneficial, as well as more of a focus on ethnographic knowledge and mapping of indigenous ecological knowledge. One participant said that she would like more sessions on how to interpret the climate data, and another said that he would like to see something on citizen science. There was also a discussion on the importance involving other stakeholders in the workshops, like community leaders, practitioners, NGO staff, community-based organizations, rather than only academics.

All of the presentations from day 1 were recorded and will be made available to the participants and on the CWEH website, as well as the slides from both days. This was a very successful international summer school that effectively piloted online workshops across continents. We have had very good feedback on the meetings and hope that we have set the standard for future summer schools under this partnership.



Pictures

Figure 1. Day 1: Antonia Moon presenting "Some sources for meteorology in the India Office Records and related collections".

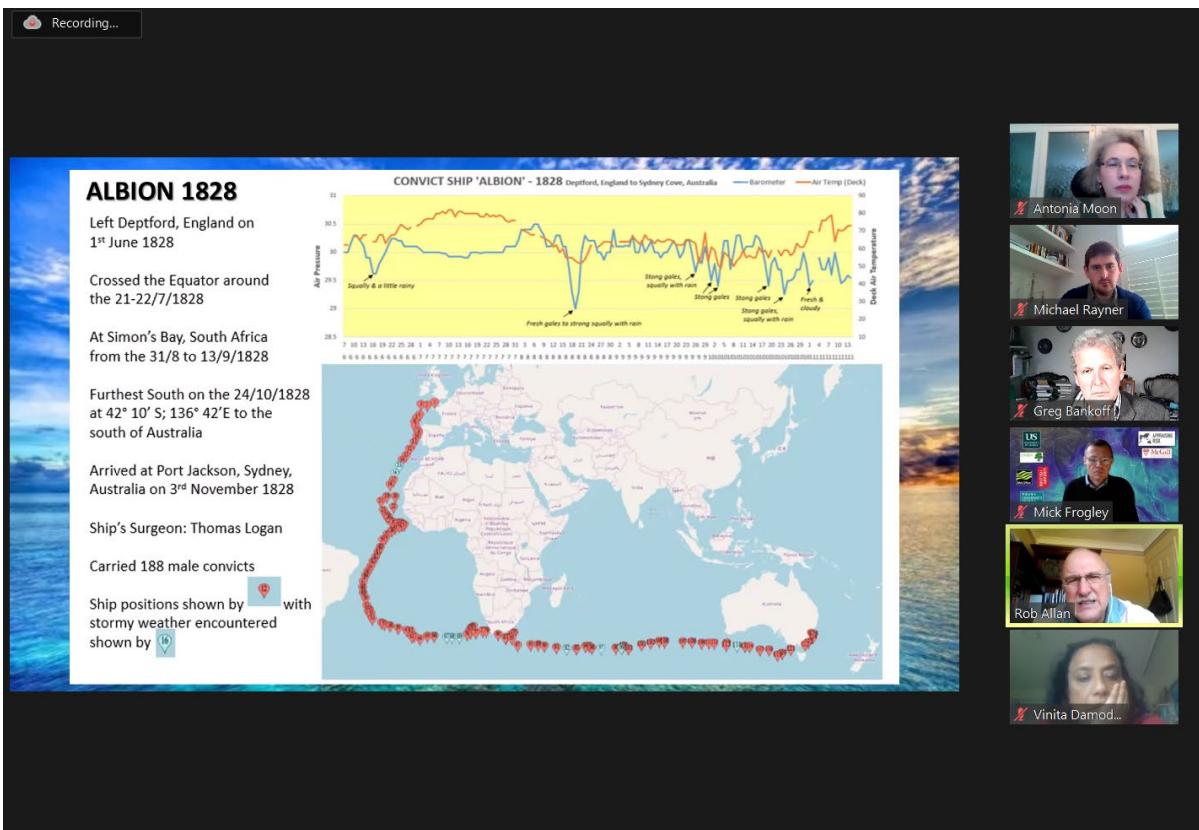


Figure 2. Day 1: Rob Allan presenting "ACRE's experiences with Indian Ocean World archives and their uses".

Climate over the last 500 years...

Little Ice Age (1550-1850)

The Frozen Thames, Looking Eastwards towards Old London Bridge by Abraham Hondius (c.1625–1691)

Climate Change 1950-

No Slow Down in Global Warming

Global temperature graph

Global Temperature departure (°F) from long term average

Trend

Adapted from: "The recent global surface warming hiatus: Fact or artifact of data biases?" Science, 2015

Participants: Antonia Moon, Michael Rayner, Greg Bankoff, Mick Frogley, Rob Allan, Vinita Damod...

Figure 3. Day 1: Greg Bankoff presenting "Presentation: Climate and the Environmental Historian".

padlet

Michael Rayner • 13d

IOW Summer School Workshop Day 1

Instructions

In your groups, pick two case studies. Discuss the sources and answer the questions.

You have 40 minutes to complete the questions for both case studies. Try to make sure you have covered at least one of the case studies thoroughly.

Each groups should write thoughts and findings in the comment boxes below each question on the padlet. You may nominate a scribe, or comment individually.

After 40 minutes we will reconvene, to share each group's conclusions.

Case Study 1: 1864 Kolkata Cyclone

Question 2

How complete is the picture that these sources paint? What other sources would you need/want to tell the full story of the Calcutta cyclone?

6 comments

- Anonymous 13d: Botanical garden report: Apocalyptic destruction of 150 feet casuarina trees
- Anonymous 13d: Beaufort Scale describes storm strength: Whole Gale
- Anonymous 13d: Storm surged as gone inland
- Anonymous 13d: Partial data in 2nd report

Case Study 2: 1877-1878 El Niño

Question 2

What biases exist within these sources? Which sources are more trustworthy?

7 comments

- Anonymous 13d: Limited discussion of local knowledge of climatic anomalies
- Anonymous 13d: Colonial allegiances. All 3 sources funded by Empire, positive account of government led relief. Blindspot: local forms of knowledge and organizing.
- Anonymous 13d: The Strachey source is clearly a colonial document. Yet since it is mainly a report that states facts in a matter of fact manner that does not really criticize the local population

Case Study 3: 1944-1945 Typhoon

Question 1

What are the relevance of these sources to environmental historians and how can they be used in a creative way to say something about the history of human-environment relations?

1 comment

- Anonymous 13d: Military sources can also reveal how nature affects how wars are fought.

Question 2

How can these sources be used to...

Sources

Case Study 3

- Nimitz, C.W. (1945, February 13). PACIFIC FLEET CONFIDENTIAL LETTER 14CL-45
- Bureau of Naval Personnel. (1945, March). Information Bulletin. (pp. 5-9)
- NARA (Court of Inquiry) Box 1443 USS Spencer 21 Dec 1944

Visual Sources

Case Study 1

Figure 4. Day 1: Padlet used for workshop on "Environmental Archives"

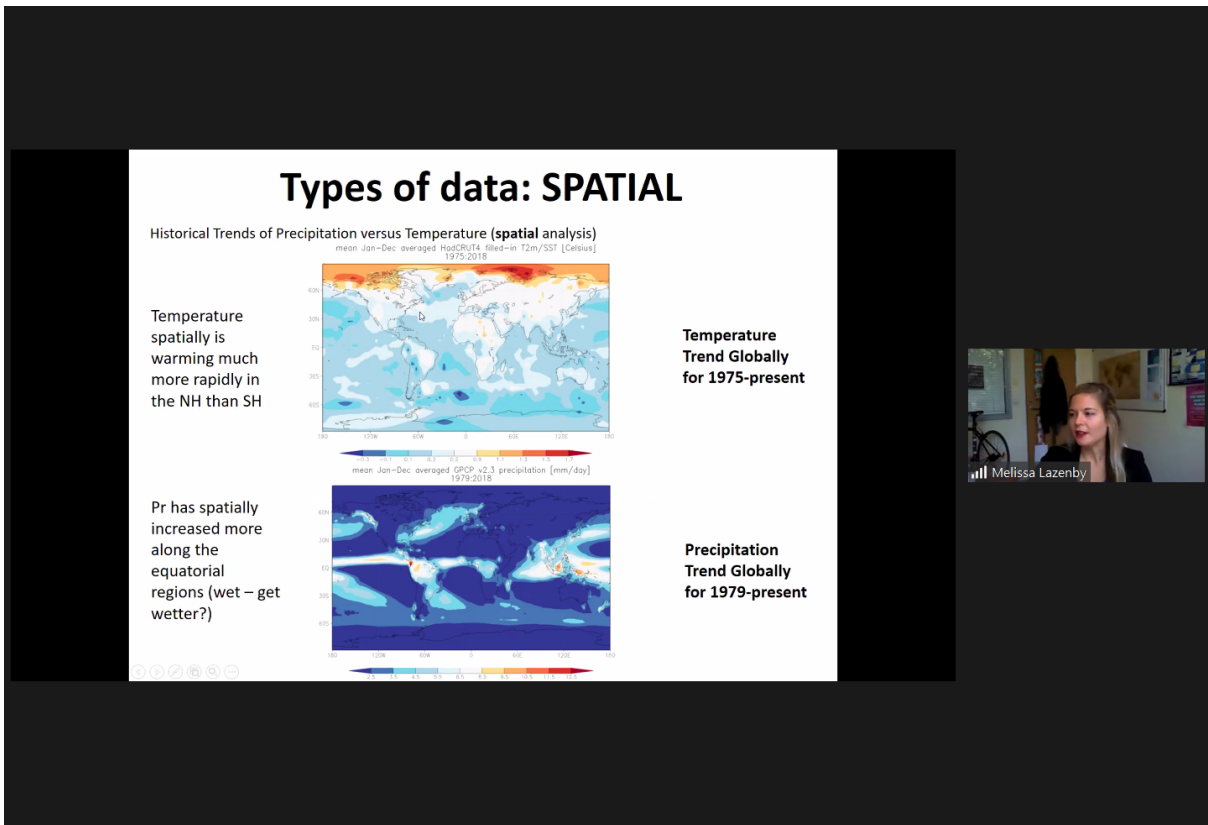


Figure 5. Day 2: Melissa Lazenby demonstrates the use of KNMI software.

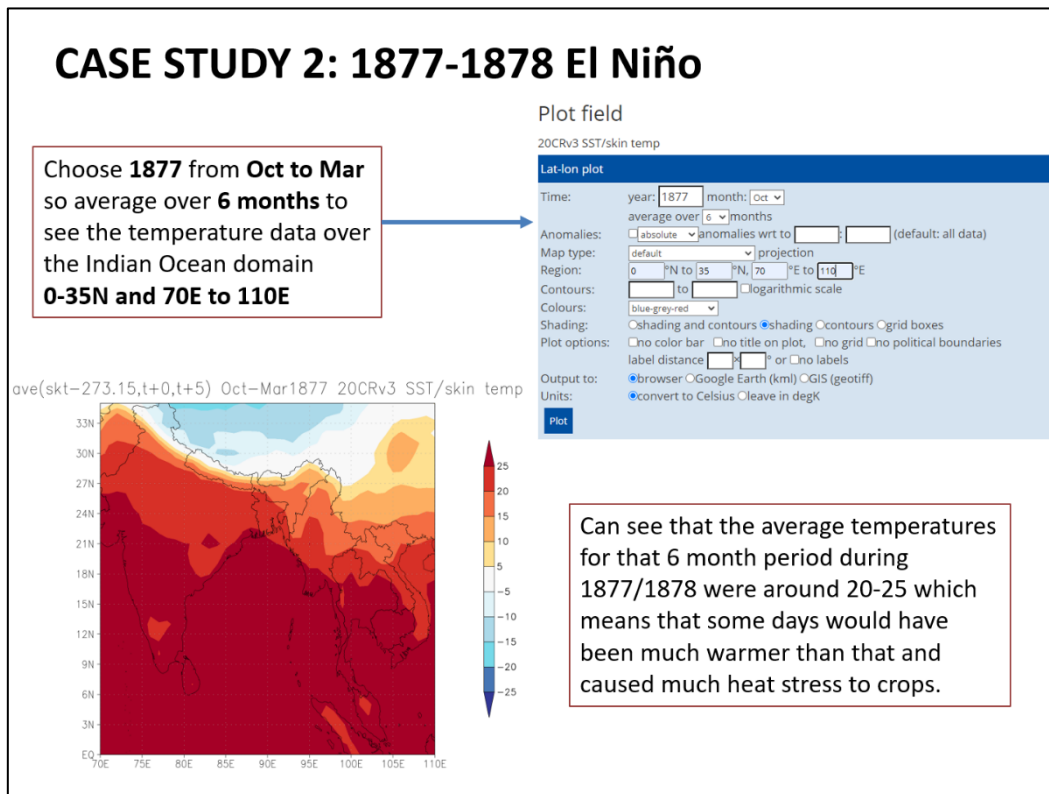


Figure 6. Day 2: exercise for case study 2, demonstrating average temperatures in the Bay of Bengal for a 6-month period during the El Niño.