

CLIMATE CHANGE MOBILITY RESOURCE TOOLKIT

Links to Resources on Climate Change and Human Mobility



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© The Climate Change Mobility Resource ToolKit was developed by Prof. Jane Singer of the Environmental Education Laboratory, Graduate School of Global Environmental Studies, Kyoto University, as part of a 2020-2021 project sponsored by ProSPER.Net. The project includes researchers from the partner universities of Hosei University and the University of the South Pacific.

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Background

ProSPER.Net is an alliance of leading universities in the Asia-Pacific region that are committed to integrating sustainable development into postgraduate courses and curricula. It is administered by the United Nations University in Tokyo. The network, dubbed ProSPER.Net: Promotion of Sustainability in Postgraduate Education and Research Network, is developing a new generation of leaders who can best tackle global sustainability challenges in the face of rapid environmental degradation. ProSPER.Net was founded in June 2008 within the framework of a broader international agenda that recognizes the importance of education and research to help build a more sustainable future. There are currently 47 members, spread throughout Asia-Pacific, that have strong education and research programmes dedicated to sustainable development and related fields. Together, they work towards a common cause: creating multi-disciplinary solutions – including education and research programmes – to respond to a wide range of sustainable development challenges.

A crucial challenge in sustainable development in the coming years is the rise of migration flows and displacement events around the world. One of the engines of this mobility rise is climate change, which contributes to rapid-onset natural disasters as well as slow-onset impacts such as chronic drought and desertification. Researchers have predicted that the number of climate change migrants worldwide may reach up to 200 million by 2050, while climate change-linked prolonged drought has already been implicated as a factor in recent migration crises in Africa, Western Europe and the US. Nowhere is climate change impacting households and communities more than in small island developing states (SIDS), where a rise in the frequency and magnitude of ocean storms, as well as slow-onset climate change impacts like rising sea levels, soil salinity, and erosion are increasingly jeopardising the physical and economic security of coastal communities.

This ToolKit was developed under the auspices of the ProSPER.Net project ‘Safe Havens: Relocating SIDS Communities Threatened by Climate Change’ (2020-2021), investigating relocation of vulnerable communities in Fiji, a leader in climate change adaptation in the South Pacific. The research component will seek to identify challenges and considerations for successful relocation by both government and NGO programs. The educational component of the project consists of this online resource kit, aimed at creating educational content for university courses on the emerging issue of climate change-induced mobility. This helps fill a gap in online resource provision, as many climate change education websites are geared to K-12 education.

What is the Resource ToolKit?

Designed mainly for use by university lecturers, the Resource ToolKit includes a variety of materials to help you organise courses, workshops or discussions around the topics of climate change and human mobility. The materials include:

- Video clips
- NGOs and Tools
- Conferences and Reports
- Academic Articles
- Books
- Slides
- Activity ideas

How to use the Resource ToolKit?

The Resource ToolKit has been developed so that each resource can be adaptable to different needs.

NGOs and Media Tools can be:

- Provided to students as research tools for assignments
- Used to find case-studies to learn about climate change-induced mobility
- Used to find and compare interesting development programs from all over the world

Conference and Reports can be:

- Provided to students before the class as a reading assignment
- Used during presentations by the lecturer

Academic articles can be:

- Used as reference for assignments
- Provided to students before the class as a reading assignment

Books can be:

- Used to learn about climate change and mobility outside of the classroom
- Provided to students for book review assignments
- Used by the lecturers to spark class discussion

Slides and Videos can be:

- Used in workshops, class, meetings, and many other sessions to spark discussion
- Provided to students before class to inspire group discussion and critical thinking
- Shown during the class to learn about climate change and migration
- Used as they are and provided as handouts or uploaded online for students
- Used as templates and revised, depending on the situation, by adding more research and materials

Activity ideas can be:

- Presented by the lecturers at the end of class to introduce an interactive learning component
- Given to students as handouts and used for group discussions
- Adapted to reflect students' interests and needs
- Used as a starting point to draw out comparisons with the students' home country situation.

To better navigate the resource kit and plan your lecture, workshop or discussion, each resource includes a “**Tabs**” function at the end featuring key words to assist in aggregating the content. The main tabs are:

- | | |
|---------------------------------|-----------------------------|
| ❖ Carbon footprint | ❖ Global warming |
| ❖ Climate change | ❖ International law |
| ❖ Climate change adaptation | ❖ Migration |
| ❖ Climate refugees | ❖ Natural disasters |
| ❖ Climigration | ❖ Policies and institutions |
| ❖ Coastal erosion | ❖ Risk awareness |
| ❖ Displacement and resettlement | ❖ Sea-level rise |
| ❖ Deforestation | ❖ Sustainability |
| ❖ Desertification | ❖ Urbanisation |
| ❖ Environment | |
| ❖ Environmental education | |

N.B. Please note that there are additional tabs for the geographical location of the case-studies.

The online Resource ToolKit represents a continuing commitment to expand the resources available and improve the cataloguing system for Climate change mobility education. The aim is to provide easily accessible tools for learning about climate change impacts not only for teachers and students, but for the broader public. The Resource Kit was developed at the Environmental Education Laboratory at the Graduate School of Global Environmental Studies, Kyoto University, under the direction of Associate Professor Jane Singer. The contents were compiled and the ToolKit was created by Ph.D. student Ms. Irene Petraroli.



NGOs and Media Tools

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1. [Academic Earth](#) is a search engine for climate change that includes a range of mixed media learning resources.

On the website, it is possible to find various online courses related to climate change. Each course consists of a YouTube video around 1hr long. The available courses are:

- a. Isotope Evidence for Climate Change
http://www.youtube.com/watch?v=GMmE4d_aCXE
- b. Ice and climate change <http://www.youtube.com/watch?v=F8IK-Ja7qtl>
- c. Carnegie Mellon Lecture: Global climate Change
<http://www.youtube.com/watch?v=VI9W2xPffUA>
- d. Heinz Talks: Climate Change and Energy Policy
<http://www.youtube.com/watch?v=O6Udc3S2kdU>
- e. Managing Coastal Resources in an Era of Climate Change
<http://www.youtube.com/watch?v=VQJPzq8aLvU>
- f. Adaptation to Climate Change <http://www.youtube.com/watch?v=nepmBzT-wJQ>
- g. Nuclear Sustainability and Climate Change
<http://www.youtube.com/watch?v=z3zDF5aRekM>

❖ Tabs: Climate change, sustainability

2. **Adelphi** is a leading independent think tank and public policy consultancy on climate, environment and development: <https://www.adelphi.de/en/profile/about-us>.

The work covers the following key areas: Climate, Energy, Resources, Green Economy, Sustainable Business, Green Finance, Peace and Security, International Cooperation and Urban Transformation. An example of a project dealing with environment and human mobility is: <https://www.adelphi.de/en/project/environmental-degradation-climate-change-and-migration-global-challenge>

❖ Tabs: Climate change, migration, policies and institutions

3. Toolkit by **the United Nations Environment Programme (UNEP)** and the European Union (EU), “*Addressing Climate-Fragility Risks*”, November 2019.

The toolkit “Addressing climate-fragility risks – Linking peacebuilding, climate change adaptation and sustainable livelihoods” consists of three documents: [Guidance Note](#), [Monitoring and Evaluation](#), [Toolbox](#). The project’s description is available at: <https://www.unenvironment.org/resources/toolkits-manuals-and-guides/addressing-climate-fragility-risks>

❖ Tabs: Climate change adaptation

4. [The Carbon Literacy Project](#) is a project organised by the Carbon Literate Organisation (CLO), which concerns itself to increase Carbon Literacy through learning and training for organisations, educational institutions, workplaces and communities to better understand climate change and how they can reduce their impact. An introduction to the standard Climate Literate course is

available <https://carbonliteracy.com/wp-content/uploads/2020/03/Introduction-to-Carbon-Literacy-Pack-v2.pdf>.

❖ Tabs: Carbon Footprint, sustainability

5. [Centre for Alternative Technology](#) Resources for exploring sustainability at home, sustainability information, and online courses.

❖ Tabs: Sustainability

6. The **Climate and Migration Coalition** is a UK based organisation that concerns itself with “the rights and welfare of anyone who moves due to the impacts of climate change” [<http://climatemigration.org.uk/>].

It has a variety of resources: videos, podcasts and articles about the various aspects of migration. The resources are further divided by typology: testimonies, audio and video, law and policies, and workshops. The video about “Climate, Migration, and Covid-19” is suggested: <https://www.youtube.com/watch?v=2XI0CvEHsfQ&feature=youtu.be>

❖ Tabs: Climate change, migration, policies and institutions

7. [Geographical Association: Investigating Climate Change](#) – this page is full of resources exploring climate change, its causes, effects, and solutions. Lots of links to further reading, articles, videos, talks, learning resources, education resources for different key stages.

❖ Tabs: Climate change, environmental education

8. [Khan Academy](#) is a search engine for climate change or sustainability/environment, composed of a range of mixed media learning resources.

❖ Tabs: Climate change, migration, sustainability

9. The **IOM Environmental Migration Portal: Knowledge Platform on People on the Move in a Changing Climate**

This portal seeks to provide a one-stop service website to promote new research, information exchange and dialogue, intended to fill the existing data, research and knowledge gaps on the migration-environment nexus [<https://environmentalmigration.iom.int/>]. The portal includes various resources: news, videos, podcasts, policy interventions and ongoing projects among the others. It is also possible Some resources will be linked in the resource kit.

❖ Tabs: Climate Change, migration

10. The **IOM Migration, Environment and Climate Change: Training Manual (Facilitators’ Guide)**

It provides an in-depth overview on the concepts of the migration-environment nexus, mobility and disasters and slow-onset events, data, legal issues, regional perspectives, and a step-by-step roadmap on how to integrate human mobility into policies including climate change adaptation policies. The modules are designed specifically for policymakers from across the spectrum of ministries and agencies having a ‘stake’ in environmental migration, including but not limited to: environment, climate change, development, disaster management, home affairs/migration, foreign affairs, agriculture, land management and planning. The guide is designed for the facilitators who will rely on this tool to deliver training workshops, with optimal group size between 20-25 participants. Facilitators will be able to use the guide’s background information pieces and suggested exercises to prepare themselves and deliver participatory training sessions. This tool

can be requested in English, French, Spanish, Russian and Azerbaijani. More information on how to request the training manual can be found at: <https://environmentalmigration.iom.int/training-manual>

❖ Tabs: Climate change adaptation

11. The [NASA: Global Climate Change](#) is a site full of information about climate change and global warming you can learn from, mixed media. The website also provides resources for educators.

❖ Tabs: Climate change, global warming

12. [Our World in Data](#) provides interactive graphs, information, and research on CO2 and Greenhouse Gas Emissions.

❖ Tabs: Climate change, carbon footprint

13. The “**About Our Climate Migration Model**” Project series on global climate migration, is a partnership between *ProPublica* and The *New York Times Magazine*, with support from the *Pulitzer Center* <https://www.propublica.org/article/2020-climate-migration-part-1-methodology>. The series is composed of many sources, including: the “Modeling Climate Change-Induced Migration in Central America & Mexico Methodological Report” (<https://assets-c3.propublica.org/Climate-Migration-Modeling-Methodology.pdf>), and articles like “The Great Climate Migration” (<https://pulitzercenter.org/reporting/great-climate-migration>).

ProPublica, with The New York Times Magazine and funded by the Pulitzer Center, hired geographer Bryan Jones at Baruch College to build an extended version of a climate migration model that Jones had done with the World Bank for its 2018 report, “Groundswell.” The model aims to understand how climate change might lead to population shifts in Central America and Mexico, including how people may move across borders between these countries and to the United States. Jones’ work considers five specific plausible socioeconomic and climate scenarios for the future, which makes it possible to examine the relative importance of different climate and societal futures in terms of their influence in driving migration. The scenarios take into account standard versions of global socioeconomic development — including border management, GDP growth and trade — used by the United Nations scientists, combined with levels of future atmospheric global carbon concentrations also standardized by global climate scientists.

❖ Tabs: Climate Change, migration, climate change adaptation

14. The *Pulitzer Center’s Environment and Climate Change* issue brings together reporting from Pulitzer Center grantees on the abilities of communities in diverse regions to bounce back and adapt to the impacts of climate change. It includes compelling descriptions and photo documentary of various projects all around the world <https://pulitzercenter.org/environment-and-climate-change>

❖ Tabs: Climate Change, migration, climate change adaptation

15. [What’s really Warming the World?](#) is a series of dynamic graphs that show the difference between natural factors and man-made impacts on global warming and man-made actions. The project was put together from NASA research.

❖ Tabs: Global warming

16. [World 101](#) offers a range of ways to learn; videos, talks, infographics, interactive, charts, articles and more, on climate change and linked sustainable development issues.
 - ❖ Tabs: Climate change, sustainability
17. The [World Atlas of Desertification](#) explores desertification across the world, linked to the SDG's.
 - ❖ Tabs: Desertification, climate change
18. [Zooniverse](#) gives people from all ages and backgrounds the chance to take part in real research with over 50 active citizen science projects, many of which are nature and environment based.
 - ❖ Tabs: Climate change, sustainability, policies and institutions
19. **Carbon Footprint Calculators** can be very useful in a discussion about climate change and human impact at every level. These are some valuable online calculators:
 - [The Guardian](#)
 - [WWF Footprint Calculator](#)
 - [United Nations Footprint Calculator](#)
 - [CarbonFootprint.com](#)
 - ❖ Tabs: Carbon footprint, sustainability
20. [Why It Matters](#) is a podcast from Council on Foreign Relations, hosted by Gabrielle Sierra, each episode breaks down an issue that is shaping our world's future, some are more climate based than others e.g. recent enquiry into the fashion industry.
 - ❖ Tabs: Climate change
21. **PodBean** is a podcast database. If you search "climate change" or "environmental sustainability" there are lots of results to choose from. Available at: <https://www.podbean.com/>.
 - ❖ Tabs: Climate change, sustainability, environment
22. [What is Climate Change? A really simple guide](#) – the BBC's guide explaining climate change, greenhouse gasses, the causes and the effects.
 - ❖ Tabs: Climate change
23. **Climate Literacy** – A guide for communities and individuals on "Climate Literacy and the essential principles of climate science". Available at: https://scied.ucar.edu/sites/default/files/images/long-content-page/climate_literacy_brochure.pdf.
 - ❖ Tabs: Climate change, environmental education
24. [Envisioning a Green New Deal: A Global Comparison](#) Backgrounder by Andrew Chatzky explaining the features of the Green Deal from an international perspective.
 - ❖ Tabs: Climate change, policies and institutions, carbon footprint

25. [EU Science Hub](#) Has lots of information and articles to read about environment and climate change and specifically what the EU is doing to tackle environmental issues.
 - ❖ Tabs: Climate change, policies and institutions
 26. [Global Change](#) Has a lot of information about climate change, its impact on society, and response options.
 - ❖ Tabs: Climate change, policies and institutions
 27. [Pebble Magazine](#) Is a monthly e-magazine featuring articles about environment awareness, its emphasis isn't so much on learning, but it does bring regular news and information on environmental and climate change matters to your inbox, as well as a lot of interesting and helpful tips for living more sustainably.
 - ❖ Tabs: Climate change, sustainability
 28. [The Royal Society](#) Lots of links to information and articles surrounding climate change, and to the IPCC report.
 - ❖ Tabs: Climate change
 29. [Kings College](#) have been conducting research into understanding environmental education in Secondary Schools: where it is, what it is, and what the future should be.
 - ❖ Tabs: Climate Change
 30. [Carbon Brief](#) Articles and information on worldwide emissions.
 - ❖ Tabs: Climate change, Carbon footprint
 31. [Met Office](#) Research on the causes and effects of climate change, and climate science information.
 - ❖ Tabs: Climate change
 32. [UN Environment Programme](#) The UN Environment Programme offers more than 15,000 items, from real-time data tools and platforms to key reports, publications, fact sheets, interactives and more information from around the world.
 - ❖ Tabs: Climate change
 33. [We are possible](#) offers resources, information, articles, and links for learning about climate change.
 - ❖ Tabs: Climate change, environmental education, sustainability
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Conferences and Reports

© The descriptions presented in this section of the ToolKit are the written property of each linked source.

1. Adamo, S. B. (2009) 'In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement'. CARE, CIESIN Columbia University, United Nations University, UNHCR, The World Bank. To access this report, visit: http://www.ciesin.columbia.edu/documents/clim-migr-report-june09_media.pdf.

This report explores how environmental shocks and stresses, especially those related to climate change, can push people to leave their homes in search of "greener pastures" or just to survive. The report contains various data: empirical evidence from a multi-continent survey of environmental change and migration; original maps of climate change impacts and population distributions; policy recommendations reflecting the collective thinking of key multi-lateral and research institutions, as well as nongovernment organizations working directly with many of the world's most vulnerable populations. Presenting recent country case studies, the paper looks at current patterns of climate change and migration for glacier melt and the major river systems in Asia, drought and disasters in Central America and Western Africa, flooding and sea level rise in major deltas of the world, and sea level rise in low-lying Small Island developing states.

❖ Tabs: Climate change, migration, displacement and resettlement

2. Asian Development Bank (ed.) (2013) 'The economics of climate change in the Pacific'. Mandaluyong City, Metro Manila, Philippines: Asian Development Bank. Available at: <https://www.adb.org/publications/economics-climate-change-pacific>

This study identifies the effects and quantifies the costs of adverse outcomes to the Pacific island economies, with details provided for selected key sectors including agriculture, fisheries, tourism, coral reefs, and human health. It then presents policy recommendations and action steps for the countries to minimize or mitigate these impacts, particularly by mainstreaming climate change in their development plans, adopting forward-looking and risk-based approaches to climate change, and climate-proofing both their programs and infrastructure so that poverty eradication and sustainable development efforts can continue regardless of the vagaries of climate.

❖ Tabs: Climate change, policies and institutions, Pacific Islands

3. Advisory group of UNHCR, IOM, UNU-EHS, UNDP, ILO, NRC/IDMC, Sciences Po–CERI and Refugees International (2014). 'Human Mobility In The Context Of Climate Change: Recommendations From The Advisory Group On Climate Change And Human Mobility Cop 20 Lima, Peru'. Available at <https://www.iom.int/files/live/sites/iom/files/pbn/docs/Human-Mobility-in-the-context-of-Climate-Change.pdf>.

This introduction note is a good starting point to the topic of Climate Change and Human Mobility.

❖ Tabs: Climate change, migration, policies and institutions

4. Ferris, E. (2011) 'Climate Change and Internal Displacement: A Contribution to the Discussion'. Prepared for the UNHCR Roundtable Bellagio, 22-26 February 2011. Brookings Institutions. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/0228_cc_displacement_ferris.pdf.

This report reflects the growing interest in the issue of climate change and displacement. Jane McAdam and others have observed that climate change is likely to produce different displacement scenarios requiring different policy solutions, and this report focuses on one type of displacement which is likely to occur as a result of climate change: the relocation or resettlement of communities from areas which are no longer habitable because of environmental consequences of climate change. In particular, the report highlights the relevance of experiences with development-forced displacement and resettlement (DFDR) in providing guidance for national policy-makers and international organizations likely to be involved in designing and implementing such relocations.

This report is divided into four sections: 1. Brief review of definitions of key terms and legal issues 2. Brief overview of some of the lessons learned from experiences with development-induced displacement (DFDR) 3. Analysis of similarities and differences between DFDR, displacement from conflicts and sudden-onset natural disasters, and climate change-induced displacement (CID) 4. Suggestions on how the lessons learned from DFDR can be applied to those displaced by CID.

❖ Tabs: Displacement and resettlement, international law

5. International Organisation for Migration (IOM) Analysis Report "Mapping Human Mobility and Climate Change in Relevant National Policies and Institutional Frameworks", April 2018.

Available at

<https://unfccc.int/sites/default/files/resource/20180917%20WIM%20TFD%20I.1%20Output%20final.pdf>.

This report offers the findings of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM Excom). The Executive Committee was entrusted to operationalize the Task Force on Displacement, mandated by the Climate Change Conference of the Parties (COP21) under the United Nations Framework Convention on Climate Change (UNFCCC) (Paris, November 2015). The report does a critical international overview of national human mobility and national climate change policies. The report also highlights good practices, gaps, and areas of recommendations for governments and other stakeholders: international agencies, civil society, academia, private sector.

❖ Tabs: Climate change, migration, policies and institutions

6. IOM (2018). 'After the Storm'. Available at: <http://features.iom.int/stories/after-the-storm/>

This page offers an interesting overview on the effects of Typhoon Maysak (2015) in Micronesia and the efforts by IOM to create resilience among the affected communities.

❖ Tabs: Micronesia, Climate Change, Climate Change Adaptation

7. IOM Country Report Series 'Assessing the evidence: Migration Environment and Climate Change'.

Available for: Namibia, Madagascar (French), Morocco, Dominican Republic (Spanish), Kenya, Republic of Mauritius, Papua New Guinea, Vietnam, Bangladesh at <https://environmentalmigration.iom.int/country-profiles>

❖ Tabs: Climate Change, Migration, Namibia, Madagascar, Morocco, Dominican Republic, Kenya, Republic of Mauritius, Papua New Guinea, Vietnam, Bangladesh

8. Intergovernmental Panel on Climate Change (IPCC) (2014). 'AR5 Climate Change 2014: Impacts, Adaptation, and Vulnerability'. Available at: <https://www.ipcc.ch/report/ar5/wg2/>

The report is divided in two parts: Part A deals with the Global and Sectoral Aspects of Climate Change, while Part B deals with the Regional Aspects thereof. The report, though a bit old, is a comprehensive work that still offers many relevant resources. Particularly relevant are the final chapter titled "Climate-Resilient Pathways: Adaptation, Mitigation, and Sustainable Development"; and the "Summary for Policy Makers".

❖ Tabs: Climate change adaptation

9. Oakes, R., Milan, A., and Schindler, M. (2017). 'Research Methods for the Pacific Climate Change and Migration' (PCCM) project. Bonn: United Nations University Institute for Environment and Human Security (UNU-EHS). Available at https://collections.unu.edu/eserv/UNU:5856/Research_Methods_for_PCCM_Project.pdf.

This paper documents the research methods used for the Pacific Climate Change and Migration (PCCM) Project. This is a crucial resource to understand how a project on Climate Change adaptation is conducted by an international institution like the UN. It contains detailed explanations of the role of the participants, the researchers, as well as the frameworks implemented.

❖ Tabs: Climate change adaptation

10. United Nations University (UNU) Conference on 'Climate Change and Human Mobility: New Perspectives on Climate and Migration, Displacement and Relocation', December 2017.

The integral video (1:08:56) is available at: <https://migration.unu.edu/publications/reports/climate-change-and-human-mobility-new-perspectives-on-climate-and-migration-displacement-and-relocation.html> A full report is also available at: <https://i.unu.edu/media/migration.unu.edu/publication/4685/UNU-Nov2017SummaryReport-v3.pdf>.

❖ Tabs: Climate Change, migration, displacement and resettlement



Academic articles

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1. Barnett, J. and McMichael, C. (2018) 'The effects of climate change on the geography and timing of human mobility', *Population and Environment*, 39(4), pp. 339–356. To access this article, visit: https://www.deepdyve.com/lp/springer-journals/the-effects-of-climate-change-on-the-geography-and-timing-of-human-iLC4tW7EZx?impressionId=5b5f5f7cdb9ec&i_medium=docview&i_campaign=recommendations&i_source=recommendations

Human mobility over different distances and time scales has long been associated with environmental change, and the idea of climate change is now affecting movement in new ways. In this paper, three cases from the South Pacific are examined to explain the ways anticipated climate futures are changing mobility in the present. First the authors examine village relocation in response to coastal erosion and inundation in Fiji, drawing on their study of the unfolding experience of Narikoso village in Kadavu Province. In contrast to this spatially constrained process of permanent relocation, they then examine the spatially extended yet temporally constrained seasonal migrant worker programme that aims to support economic development in the Pacific Islands by providing temporary work visas in Australia and New Zealand. Finally, they examine the likely effects of proposed open labour markets as a means to promote climate change adaptation, through a study of the analogous example of Niuean migration to New Zealand which has resulted in both permanent migration and a slow circulation of people between both countries. Across these examples, emerging and potentially constructive ways are highlighted in which climate change is altering the spatio-temporal patterns and rhythms of mobility.

❖ Tabs: Migration, climate change adaptation, coastal erosion, South Pacific

2. Black, R. *et al.* (2011) 'The effect of environmental change on human migration', *Global Environmental Change*, 21, pp. S3–S11. To access this article, visit: <https://environmentalmigration.iom.int/effect-environmental-change-human-migration>

Standard theories of migration underrepresent the influence of the environment and environmental change, while recent debates on climate change and migration focus almost entirely on displacement and perceive migration to be a problem. This paper presents a new framework for understanding the effect of environmental change on migration. The framework identifies five families of drivers which affect migration decisions: economic, political, social, demographic and environmental drivers. The environment drives migration through the availability and reliability of ecosystem services and exposure to hazard. Individual migration decisions and flows are affected by these drivers, and the effect of the environment is therefore highly dependent on economic, political, social and demographic context. The proposed framework, applicable to both international and internal migration, emphasises the role of human agency in migration decisions, in particular the linked role of family and household characteristics on the one hand, and barriers and facilitators to movement on the other in translating drivers into actions. The framework can be used to guide new research, assist with the evaluation of policy options, and provide a context for the development of scenarios representing a range of plausible migration futures.

❖ Tabs: Climate change, migration, displacement and resettlement

3. Black, R. *et al.* (2011) 'Migration as adaptation', *Nature*, 478(7370), pp. 447–449. [To access this article, visit: https://www.nature.com/articles/478477a](https://www.nature.com/articles/478477a).

Mobility can bring opportunities for coping with environmental change, say Richard Black, Stephen R. G. Bennett, Sandy M. Thomas and John R. Beddington. The effects of global environmental change, including coastal flooding, reduced rainfall in drylands and water scarcity, will almost certainly alter patterns of human migration. Conventional narratives usually cast these displacements in a negative light, with many millions of people forced to move, and tension and conflict the result. This study suggests that the picture is not so one-sided. The study, the UK government's Foresight report on migration and global environmental change, examines the likely movement of people within and between countries over the next 50 years. It contends that, although environmental change will alter an already complex pattern of human mobility, migration will offer opportunities as well as challenges. The greatest risks will be borne by those who are unable or unwilling to relocate, and may be exacerbated by maladaptive policies designed to prevent migration. It is time for a fresh discourse — and fresh research — on migration in relation to global environmental change.

❖ Tabs: Migration, climate change adaptation, displacement and resettlement

4. Boege, V. (2011) *Challenges and Pitfalls of Resettlement Measures: Experiences in the Pacific Region*. University of Bielefeld: Center on Migration, Citizenship and Development (COMCAD).

To access this article, visit: https://uni-bielefeld.com/en/soz/ab6/ag_faist/downloads/workingpaper_102_boege.pdf

Today the South Pacific is the theatre of environmental and related social developments induced by climate change that are destined to affect other regions of the world sooner or later. For this reason Pacific Island Countries (PIC) are of particular interest within the discourse on climate change and its social effects. This paper gives an overview of climate change-induced migration in the Pacific, starting with a brief sketch of the environmental impact of climate change on PIC. It then presents a prominent example of resettlement, namely the case of the Carterets Islands in the Autonomous Region of Bougainville (Papua New Guinea), focussing on the islanders' capabilities and agency. The paper then goes on to address some transnational dimensions of climate change-induced migration in the Pacific, drawing on the cases of Kiribati and Tuvalu in particular. The domestic-transnational interface, the role of labour migration, remittances and diasporas are discussed. Based on empirical findings, the main challenges of resettlement are identified: the land-people connection, attitudes of recipient communities, conflict, governance, and funding. The paper closes with some more general considerations that flow from the South Pacific experiences, highlighting inter alia the need for long-term international planning. It becomes clear that communities in the South Pacific are not just helpless victims of an overwhelming fate, but are bestowed with admirable resilience, ingenuity and capabilities which they draw upon when coping with the challenges of climate change-induced migration.

❖ Tabs: Climate change, migration, resettlement, policy and institutions, challenges, South Pacific

5. Bronen, R. (2011) 'Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine', *N.Y.U Review of Law & Social Change*, 35(2), pp. 357–407. To access this article, visit:

https://unfccc.int/files/adaptation/groups_committees/loss_and_damage_executive_committee/application/pdf/bronен_climate_induced_community_relocations_creating_an_adaptive_governance_framework_based_in_human_rights_doctrine_2011.pdf

The specter of millions of people fleeing their homes because of climate change has sparked an international debate about creating human rights protections for climate refugees. Though scholars and journalists have focused on the southern hemisphere, this crisis is occurring with unprecedented rapidity in the Arctic. In Alaska, temperatures have increased at twice the rate of the global average. Arctic sea ice is decreasing and permafrost is thawing. These ecological phenomena are creating a humanitarian crisis for the 200 indigenous communities that have inhabited the Arctic for millennia. Dozens of these communities are threatened because of climate-accelerated erosion, flooding, and extreme weather events. The traditional responses of hazard prevention and disaster relief are no longer protecting communities despite millions of dollars spent on erosion control and flood relief. Community relocation is the only feasible solution to permanently protect the inhabitants of these communities. This article describes the steps that federal, state, and tribal governments have taken to relocate Newtok, one of at least twelve indigenous communities in Alaska that need to relocate due to climate change. The policy and practical challenges to relocate the community are enormous and clearly demonstrate that new governance institutions need to be designed to specifically respond to climate-induced relocation. This Article ultimately proposes the creation of Guiding Principles of Climigration outlining key human rights principles that can guide an adaptive governance framework. This framework, in turn, will allow government agencies to transition their humanitarian response from protection in place to community relocation.

❖ Tabs: Climate refugees, displacement and resettlement, climigration, Alaska

6. Charan, D., Kaur, M. and Singh, P. (2017) 'Customary Land and Climate Change Induced Relocation—A Case Study of Vunidogoloa Village, Vanua Levu, Fiji', in Leal Filho, W. (ed.) *Climate Change Adaptation in Pacific Countries*. Cham: Springer International Publishing, pp.

19–33. To access this article, visit:

https://www.researchgate.net/publication/313409575_Customary_Land_and_Climate_Change_Induced_Relocation-A_Case_Study_of_Vunidogoloa_Village_Vanua_Levu_Fiji.

Increasingly unremitting weather patterns and rising sea levels have obligated Fiji to become one of the first countries in the South Pacific to relocate communities due to climate change. The customary lands reflect the traditional and communal structure of the indigenous Fijians and parting from it as a consequence of forced relocation is a delicate and vulnerable issue that establishes some of the negative effects of population displacement. Relocation to a new land signifies separation from uniquely adapted traditions that took thousands of years to form. The purpose of this paper is to explore the cultural, social, environmental and economic impacts of climate change induced displacement on the people of Vunidogoloa village and generate suggestions for consideration of socioeconomic and customary aspects in the much anticipated institutional relocation strategies. The paper achieves its purpose through experiences of the people of Vunidogoloa village, in light of the interviews and discussions carried out at the village and interviews conducted with the relevant government officials. In addressing this objective the paper analyses the main constraints of resettlement, the land-people bond, governance, and funding. The paper concludes by providing recommendations essential for national policy guidelines and communities in the South Pacific and in the other parts of the world that face or will face similar challenges.

❖ Tabs: Climate change, displacement and resettlement, climate change adaptation, Fiji

7. de Sherbinin, A. *et al.* (2011) 'Preparing for Resettlement Associated with Climate Change', *Science*, 334(6055), pp. 456–457. To access this article, visit:

<https://science.sciencemag.org/content/334/6055/456?keytype=ref&siteid=sci&ijkey=3IZXPsmvrcm3k>

Although there is agreement that climate change will result in population displacements and migration, there are differing views on the potential volume of flows, the likely source and destination areas, the relative role of climatic versus other factors in precipitating movements, and whether migration represents a failure of adaptation (1, 2). We argue that climate change mitigation and adaptation (M&A) actions, which will also result in significant population displacements, have not received sufficient attention. Given the emergence of resettlement as an adaptation response, it is critical to learn from research on development-forced displacement and resettlement (DFDR). We discuss two broad categories of potential displacement in response to (i) climate impacts themselves and (ii) large-scale M&A projects. We discuss policy approaches for facilitating migration and, where communities lack resources to migrate, suggest guidelines for organized resettlement.

❖ Tabs: Climate change adaptation, climate change, displacement and resettlement

8. Edwards, J. B. (2014) 'Phosphate mining and the relocation of the Banabans to northern Fiji in 1945: Lessons for climate change-forced displacement', *Journal de la société des océanistes*, (138–139), pp. 121–136. To access this article, visit: <https://journals.openedition.org/jso/7100>.

At the end of the 19th Century, Banaba was an unknown, and then 'unclaimed', island in the central Pacific; however, all was soon to change for its 450 residents. In 1900, a rock propping open a Sydney-office door of the Pacific Islands Phosphate Company was found to consist almost entirely of high-grade phosphate. It was soon traced back to the island; mining activity commenced shortly after and the operation quickly grew. The tiny island was transformed into a major phosphate-mining settlement. With continued mineral extraction it became apparent that Banaba would, in time, become uninhabitable and plans were devised by colonial authorities to relocate the island community to an alternative home. This article examines the decisions, events and processes that led to the relocation of the Banabans to Rabi Island, Fiji in 1945. Original colonial documents and correspondence are examined and key members of the elderly Banaban community, based in Suva and Rabi, consulted. Parallels with contemporary relocations, associated with climate change, are given and learnings presented that will aid future climate-induced community relocations.

Lessons to take forward are the need for long-term, post-relocation planning, including the creation of livelihoods, and on-going support by external agencies for those displaced.

❖ Tabs: Migration, displacement and resettlement, Fiji

9. Farbotko, C. *et al.* (2018) 'Transformative mobilities in the Pacific: Promoting adaptation and development in a changing climate', *Asia & the Pacific Policy Studies*, 5(3), pp. 393–407. To access this article, visit: <https://onlinelibrary.wiley.com/doi/full/10.1002/app5.254>.

Climate change is affecting Pacific life in significant and complex ways. Human mobility is shaped by climate change and is increasingly positioned by international agencies, policymakers, and governments as having an important role in both climate change adaptation and human development. The authors consider the potential for human mobility to promote adaptation and development among Pacific people in a changing climate. They argue that where Pacific people choose mobility, this should be supported and create opportunities should be created that are responsive to the histories and existing patterns of mobility and place attachment among Pacific Islanders; commence from a position of climate and development justice; and advance human rights and socio-political equity. Transformative mobilities are where mobility, adaptation, and development intersect to achieve the best possible outcomes for cultural identity, human rights, adaptation, and human development goals across scales and in origin and destination sites.

❖ Tabs: Climate change adaptation, migration, Pacific

10. Fornale', E. and Kagan, S. (2017) *Climate Change and Human Mobility in the Pacific Region: Plans, Policies and Lessons Learned*. Knomad Working Paper 31. Global Knowledge Partnership on Migration and Development (KNOMAD). To access this article, visit:

https://www.knomad.org/sites/default/files/2017-12/KNOMAD_WP31_Climate%20Change%20and%20Human%20Mobility%20in%20the%20Pacific%20Region.pdf.

Although a clearer picture is emerging of the diverse factors that link environmental drivers and human mobility, few studies so far have looked at the potential to harness existing migratory instruments within the settings affected by climate change. This paper explores how labour mobility mechanisms can either increase or compromise the adaptive capacity of environmentally vulnerable populations. To this end the analysis explores the emerging links between labour migration strategies and environmental changes in the Pacific. Diverse tools adopted at the bilateral level (for example, New Zealand's Recognized Seasonal Employer scheme), or regional level (for example, temporary movement of natural persons [TMNP]) are evaluated as vehicles of the "migration-as-adaptation" narrative. This paper considers how the persisting challenges in using existing or emerging forms of labour mobility to address the effects of environmental crises can result in tools with only a limited ability to absorb the human rights implications for those who are marginalized. Acknowledging the limits of the current labour mobility framework for securing climate justice, the analysis invites readers to reconsider who has the task of framing normative responses to global environmental change.

❖ Tabs: Climate change adaptation, migration, South Pacific

11. Gemenne, F. (2011) 'Climate-induced population displacements in a 4 ° C+ world', *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 369(1934), pp. 182–195. To access this article, visit:

<https://royalsocietypublishing.org/doi/10.1098/rsta.2010.0287>.

Massive population displacements are now regularly presented as one of the most dramatic possible consequences of climate change. Current forecasts and projections show that regions that would be affected by such population movements are low-lying islands, coastal and deltaic regions, as well as sub-Saharan Africa. Such estimates, however, are usually based on a 2°C

temperature rise. In the event of a 4°C+ warming, not only is it likely that climate-induced population movements will be more considerable, but also their patterns could be significantly different, as people might react differently to temperature changes that would represent a threat to their very survival. This paper puts forward the hypothesis that a greater temperature change would affect not only the magnitude of the associated population movements, but also—and above all—the characteristics of these movements, and therefore the policy responses that can address them. The paper outlines the policy evolutions that climate-induced displacements in a 4°C+ world would require.

❖ Tabs: Migration, climate change, displacement and relocation, global warming

12. Gemenne, F. and Blocher, J. (2017) 'How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal', *The Geographical Journal*, 183(4), pp. 336–347. To access this article, visit: https://collections.unu.edu/eserv/UNU:5960/Geoj_Journal.pdf.

Migration continues to be pictured in public debates as a failure to adapt to changes, while policymakers explore adaptation measures as a means to reduce migration pressures, and scholars have contended that migration processes exist within a larger framework of strategies for adapting to damaging climate change impacts. So what are the impacts of migration on the adaptive capacities and vulnerabilities of the origin and host communities, as well as of the migrants themselves? The objective of this conceptual and methodological paper is to identify possible different options for research into the consequences of migration for adaptation. The first section reviews how the migration–adaptation nexus has been addressed in the literature, confirming the potential of human mobility to build resilience and to increase adaptive capacities within complex and potentially maladaptive processes. The next section explores the potential impacts of migration that need to be studied, from three main vantage points: the migrants themselves, the community of origin, and the community of destination. A final section weighs the possible approaches and suggests solutions that may exist to advance empirical study of the migration–adaptation area nexus, so that it can address not just the causes, but also the consequences of migration in the context of environmental changes.

❖ Tabs: Climate change adaptation, migration

13. Kaniasty, K. and Norris, F. H. (2000) 'Help-Seeking Comfort and Receiving Social Support: The Role of Ethnicity and Context of Need', *American Journal of Community Psychology*, 28(4), pp. 545–581. To access this article, visit: <https://link.springer.com/article/10.1023/A:1005192616058>

Examined help-seeking comfort and receiving social support among Latinos, African Americans, and European Americans across two contexts: in a communitywide emergency (Hurricane Andrew) and 2 years later in a nonemergency situation. In general, help-seeking comfort was a strong predictor of received support. Notwithstanding many similarities between the groups, the effects of ethnicity differed according to the context. In emergency, all groups reported similarly high levels of help-seeking comfort and received support. In nonemergency, help-seeking comfort declined for blacks and whites but not for Latinos. Although all ethnic groups reported receiving less social support in nonemergency, the decline in received support across contexts was most dramatic for Latinos. Situational, cultural, and differential resource loss explanations are offered to account for the findings.

❖ Tabs: Natural disasters, social support, ethnic groups.

14. Kolmannskog, V. (2010) 'Climate Change, Human Mobility, and Protection: Initial Evidence from Africa', *Refugee Survey Quarterly*, 29(3), pp. 103–119. To access this article, visit: <http://www.nanseninitiative.org/wp-content/uploads/2015/04/Refugee-Survey-Quarterly-2010-Kolmannskog-103-19.pdf>.

Nowadays it is increasingly recognized that climate change constitutes a factor of displacement that cannot be disregarded anymore. In its First Assessment Report in 1990, the intergovernmental Panel on Climate Change stated that the gravest effects of climate change may be those on human mobility. Further, in 2007, its Fourth Assessment Report authoritatively established that human-induced climate change is accelerating and already has severe impacts on the environment and

human lives. Although there is not a mono-causal relation between climate change, disasters, displacement, and migration, this article supports the existence of a clear link between the phenomena which is increasingly recognized, and aims at exploring the protection challenges and responses in this context. Some initial empirical findings in relation to this link are presented, focusing on two African countries: Somalia and Burundi.

❖ Tabs: Displacement and resettlement, Somalia, Burundi

15. Maddox, G. H., Chatty, D. and Colchester, M. (2003) 'Conservation and Mobile Indigenous Peoples: Displacement, Forced Settlement, and Sustainable Development', *The International Journal of African Historical Studies*, 36(3), p. 690. To access this article, visit: <https://www.rsc.ox.ac.uk/publications/conservation-and-mobile-indigenous-peoples-displacement-forced-settlement-and-sustainable-development>.

Wildlife conservation and other environmental protection projects can have tremendous impact on the lives and livelihoods of the often mobile, difficult-to-reach, and marginal peoples who inhabit the same territory. The contributors to this collection of case studies, social scientists as well as natural scientists, are concerned with this human element in biodiversity. They examine the interface between conservation and indigenous communities forced to move or to settle elsewhere in order to accommodate environmental policies and biodiversity concerns. The case studies investigate successful and not so successful community-managed, as well as local participatory, conservation projects in Africa, the Middle East, South and Southeast Asia, Australia and Latin America. There are lessons to be learned from recent efforts in community managed conservation and this volume contributes to that discussion.

❖ Tabs: Displacement and resettlement

16. Matthews, T. and Potts, R. (2018) 'Planning for climigration: a framework for effective action', *Climatic Change*, 148(4), pp. 607–621. To access this article, visit: <https://link.springer.com/article/10.1007%2Fs10584-018-2205-3>.

The phenomenon of 'climigration' is an emerging and increasing challenge to human settlements. Climigration refers to community relocation undertaken in response to climate change impacts. This paper adds to early but critical scholarly discussions by providing a land-use planning framework for organising and responding to the governance, policy, institutional and cultural implications of climigration. This paper argues that land-use planning will be increasingly required to manage climigration events over the coming decades and will rely on input and guidance from other disciplines to do so effectively. Climigration is conceptualised as an end-point of climate change adaptation in this paper. Empirical content derives from a multidisciplinary systematic quantitative literature review of international case studies of community relocations. Planning factors with critical, moderate or negligible influences on relocation success are synthesised. These are linked to the roles and functions of land-use planning systems to provide a framework for approaching climigration. The paper provides three interlinked conclusions. The first is that spatial planning systems have potential and capacity to respond to climigration as an extreme form of climate change adaptation. The second is that anticipatory policy frameworks offer the greatest advantages for successful climigration planning. The third conclusion is that maladaptation is a potential but avoidable threat connected to climigration planning.

❖ Tabs: Climate change adaptation, climigration

17. Shen, S. and Gemenne, F. (2011) 'Contrasted Views on Environmental Change and Migration: the Case of Tuvaluan Migration to New Zealand: Views on Environmental Change and Migration', *International Migration*, 49, pp. e224–e242. To access this article, visit: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2435.2010.00635.x>

As one of the smallest and most remote low-lying atoll countries on earth, Tuvalu seems to exemplify a typical case of forced migration induced by environmental change. Tuvalu has been

essentially perceived through the lens of environmental displacement and vulnerability to climate change – a perception that has been consistently reinforced and sustained by the discourse of its government and media interests. For Pacific Islanders, migration is often seen as a significant pattern of lifestyle, and even a social routine at times. This study employed a qualitative research approach, involving questionnaires and interviews with Tuvaluans, in both the migration origin of Tuvalu and migration destination of New Zealand. We show that the majority of Tuvaluans who migrated to New Zealand did not necessarily do so for climate change reasons. However, the issue of climate change remains a common theme in the minds of Tuvaluan migrants interviewed. This research shows the importance of climate change as a migration driver, in a context of increasing number of Tuvaluan migrants relocating to New Zealand through various immigration schemes, such as the Pacific Access Category scheme. We review and assess the motives underpinning the migration decision of those who have resettled in New Zealand. Contemporary Tuvaluan migration to New Zealand is uniquely related to and defined by complex relationships between people and environment. The migration drivers include environmental change, employment, education and for the betterment of future generations. Whether by design or not, these socio-economic and environmental developments are all responsible for the creation of environmental change in which some Tuvaluans have sought to respond through emigration to New Zealand.

❖ Tabs: Climate change, migration, New Zealand

18. Warren, P. D. (2016) 'Evaluating Migration after Paris COP21: Evaluating the "Climate Change displacement coordination facility"', *Columbia Law Review*, 116(8), pp. 2103–2144. To access this article, visit: <https://columbialawreview.org/content/forced-migration-after-paris-cop21-evaluating-the-climate-change-displacement-coordination-facility/>

Climate change represents, perhaps, the greatest challenge of the twenty-first century. As temperatures and sea levels rise, governments around the world will face massive and unprecedented human displacement that international law currently has no mechanism to address. While estimates vary, the scope of the migration crisis that the world will face in the coming decades is startling. In addition to losing their homes, climate change migrants, under current law, will encounter a refugee system governed by a decades-old Refugee Convention that offers neither protection nor the right to resettle in a more habitable place. Armed with the most recent developments in international climate change law following the December 2015 Paris climate conference (COP21), this Note considers which of the existing bodies in the United Nations is best equipped to address forced migration caused by climate change. Inspired by the negotiations leading up to the Paris Conference, this Note advocates for a Climate Change Displacement Coordination Facility, housed within the United Nations Framework Convention on Climate Change (UNFCCC), to protect the rights of displaced persons. Finally, this Note maps out an institutional architecture and a long-term vision for a Displacement Coordination Facility. As opposed to an amendment of the 1951 Refugee Convention or a new rights-based treaty for climate migration, a Facility housed within the UNFCCC provides the greatest possible flexibility, autonomy, and cultural retention for climate change migrants while still protecting their essential human rights.

❖ Tabs: International law



Books

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34. Emanuel, K. A. (2018) 'What we know about climate change'. Updated edition [2018 edition]. Cambridge, MA: The MIT Press.

An M.I.T. climatologist and a conservative, Emanuel sounds the alarm in a measured and scientifically sound way, making clear what we know and what we don't know. There is little panic in this slender book, but there is a lot of troubling information. Emanuel specifically thought of his book as a way of offering ammunition to those trying to convince family members or friends who are skeptical or don't understand the science. "Young adults who are disputing this problem with their own parents or an uncle or something — they can hand the book to them and say, 'Will you at least read this?'" Emanuel said in a 2013 interview with The Times. "One at a time, you might change minds."

❖ Tabs: Climate change

35. Funk, M. (2015) 'Windfall - The Booming Business of Global Warming'. Penguin Books: New York.

In this solidly reported 2014 book, Funk covers the globe to find the stories of those companies and countries that are responding to global warming in the most craven way imaginable. Rather than search for solutions, they are imagining the best means for making money off the changing contours of the planet. Shell and Chevron are investing billions in oil fields in the Arctic, where retreating ice has created more exploitable land. China and speculators from Wall Street are setting up huge farms in African countries to take advantage of coming food shortages. Then there is the private security industry, which is gearing up to help prevent the movement of climate refugees with improved walls and surveillance equipment. It is a sad tale, which Funk tries to mitigate by also profiling those companies pouring their energies into creative responses to these situations.

❖ Tabs: Climate refugees, global warming

36. Goodell, J. (2017) 'The Water Will Come: Rising Seas, Sinking Cities, And The Remaking Of The Civilized World'. First edition. New York: Little, Brown and Company.

"Sea-level rise is one of the central facts of our time, as real as gravity," Goodell writes at the start of his book, published in 2017. "It will reshape our world in ways most of us can only dimly imagine." This book takes us there, to a place where we can picture Miami completely underwater. Goodell, who has written other books about climate change, here travels the world to cities like Lagos, Rotterdam and Venice that are at risk of vanishing if the rise in water levels follows current projections. Maybe the most interesting element he explores is people's inability to see the rising tide. Talking to an influential developer in Miami, Goodell asks if he's worried about the future when the ocean takes over. He isn't, he says. "Besides," the developer adds, "by that time, I'll be dead, so what does it matter?"

❖ Tabs: Climate change, sea-level rise

37. Kolbert, E. (2014) 'The Sixth Extinction: An Unnatural History'. First edition. New York: Henry Holt and Company.

Reporting from the Andes, the Amazon rainforest, the Great Barrier Reef and her own backyard, Kolbert registers the impact of climate change on the life of our planet. What emerges is a picture of the sixth mass extinction, which threatens to eliminate 20 to 50 percent of all species on Earth within this century. All the warnings are here, in Kolbert's elegant, accessible prose: sea levels rising, deforestation, the dispersion of disease-carrying species. But she also digs deep, offering an intellectual history of "extinction" and placing in context the catastrophes ahead by grappling with how life on Earth ended and was regenerated in the distant past. "By disrupting these systems," Kolbert writes, "we're putting our own survival in danger."

❖ Tabs: Climate change, sea-level rising, deforestation, Andes, Amazon forest, Great Barrier reef

38. Jolly, S. and Ahmad, N. (2019) 'Climate Refugees in South Asia: Protection Under International Legal Standards and State Practices in South Asia'. Singapore: Springer Singapore (International Law and the Global South).

This book addresses the forms of legal protection extended to people displaced due to the consequences of climate change, and who have either become refugees by crossing international borders or are climatically displaced persons (CDPs) in their own homelands. It explores the legal response of the South Asian Jurisdictions to these refugee-like situations, and also to what extent these people are protected under current international law. It discusses the issue of climate migration in South Asia, analyzes the legal and judicial response initiated by South Asian nations, and also investigates the role of SAARC in relation to climate change and climate refugees.

❖ Tabs: International law, Climate refugees

39. McKibben, B. (2006) 'The End Of Nature'. Random House trade pbk. ed. New York: Random House Trade Paperbacks.

McKibben wrote this book in 1989 when global warming was still referred to with the more innocuous sounding phrase "the greenhouse effect." It was an abstract worry in the future even for environmentalists, who were still reeling from the fight to save the ozone layer. For McKibben the crises were connected and spoke to a bigger problem: a disregard for nature and how humans were capable of harming it. His book is a lament that nature has lost its independence. Even if everything could be done to stave off warming, McKibben writes, it would have to come from human ingenuity and depend on our intervention into natural processes. This is another sign that we have encroached too far — that nature itself is over, as McKibben puts it. His only solution, one we certainly have not heeded in the decades since, is to take a step back, "to go no farther down the path we've been following."

❖ Tabs: Global warming

40. McLeman, R. A. (2014) 'Climate And Human Migration: Past Experiences, Future Challenges'. New York: Cambridge University Press.

Studies warn that global warming and sea level rise will create hundreds of millions of environmental refugees. While climate change will undoubtedly affect future migration patterns and behavior, the potential outcomes are more complex than the environmental refugee scenario suggests. This book provides a comprehensive review of how physical and human processes interact to shape migration, using simple diagrams and models to guide the researcher, policy maker and advanced student through the climate-migration process. The book applies standard concepts and theories used in climate and migration scholarship to explain how events such as Hurricane Katrina, the Dust Bowl, African droughts, and floods in Bangladesh and China have triggered migrations that haven't always fit the environmental refugee storyline. Lessons from past migrations are used to predict how future migration patterns will unfold in the face of sea level rise, food insecurity, and political instability, and to review options for policy makers.

❖ Tabs: Global warming, migration, Africa, Bangladesh, China, policies and institutions

41. McLeman, R. A. and Gemenne, F. (eds) (2018) 'Routledge Handbook of Environmental Displacement and Migration'. London; New York, NY: Routledge.

The last twenty years have seen a rapid increase in scholarly activity and publications dedicated to environmental migration and displacement, and the field has now reached a point in terms of profile, complexity, and sheer volume of reporting that a general review and assessment of existing knowledge and future research priorities is warranted. This book provides a state-of-the-science review of research on how environmental variability and change influence current and future global migration patterns and, in some instances, trigger large-scale population displacements. Drawing together contributions from leading researchers in the field, this compendium will become a go-to guide for established and newly interested scholars, for government and policymaking entities, and for students and their instructors. It explains theoretical, conceptual, and empirical developments that have been made in recent years; describes their origins and connections to broader topics including migration research, development studies, and international public policy and law; and highlights emerging areas where new and/or additional research and reflection are warranted.

❖ Tabs: Climate change, migration, displacement and resettlement

42. Heslin, A. et al. (2019) 'Displacement and Resettlement: Understanding the Role of Climate Change in Contemporary Migration', in Mechler, R. et al. (eds) *Loss and Damage from Climate Change*. Cham: Springer International Publishing, pp. 237–258. Available <https://core.ac.uk/download/pdf/162153123.pdf>.

How do we understand displacement and resettlement in the context of climate change? This chapter outlines challenges and debates in the literature connecting climate change to the growing global flow of people. It begins with an outline of the literature on environmental migration, specifically the definitions, measurements, and forms of environmental migration. The discussion then moves to challenges in the reception of migrants, reviewing the current scholarship on migrant resettlement. It details a selection of cases in which the environment plays a role in the displacement of a population, including sea level rise in Pacific Island States, cyclonic storms in Bangladesh, and desertification in West Africa, as well as the role of deforestation in South America's Southern Cone as a driver of both climate change and migration.

- ❖ Tabs: Climate change, migration, displacement and resettlement, deforestation, sea-level rise, desertification

43. McAdam, J. (ed.) (2010) *Climate Change And Displacement: Multidisciplinary Perspectives*. Oxford: Hart.

Environmental migration is not new. Nevertheless, the events and processes accompanying global climate change threaten to increase human movement both within states and across international borders. The Inter-governmental Panel on Climate Change has predicted an increased frequency and severity of climate events such as storms, cyclones and hurricanes, as well as longer-term sea level rise and desertification, which will impact upon people's ability to survive in certain parts of the world. With chapters by leading scholars in their field, this book collects in one place a rigorous, holistic analysis of the phenomenon, which can better inform academic understanding and policy development alike. Governments have not been prepared to take a leading role in developing responses to the issue, in large part due to the absence of strong theoretical frameworks from which sound policy can be constructed. The specialist expertise of the authors in this book means that each chapter identifies key issues that need to be considered in shaping domestic, regional and international responses, including the complex causes of movement, the conceptualisation of migration responses to climate change, the terminology that should be used to describe those who move, and attitudes to migration that may affect decisions to stay or leave.

Tags: Climate change, migration, sea-level rise, deforestation, desertification

44. McAdam, J. (2012) *Climate Change, Forced Migration, and International Law*. Oxford University Press.

This book critically examines whether States have obligations to protect people displaced by climate change under international refugee law, international human rights law, and the international law on statelessness. Drawing on field work undertaken in Bangladesh, India, and the Pacific island States of Kiribati and Tuvalu, the book evaluates whether the phenomenon of 'climate change-induced displacement' is an empirically sound category for academic inquiry. It does so by examining the reasons why people move (or choose not to move); the extent to which climate change, as opposed to underlying socio-economic factors, provides a trigger for such movement; and whether traditional international responses, such as the conclusion of new treaties and the creation of new institutions, are appropriate solutions in this context. In this way, the book queries whether flight from habitat destruction should be viewed as another facet of traditional international protection or as a new challenge requiring more creative legal and policy responses.

- ❖ Tabs: Climate change, migration, international law

45. Nash, S. and Baldwin, A. (2019) 'Negotiating Migration in the Context of Climate Change: International Policy and Discourse'. Bristol University Press.

Assessing migration in the context of climate change, Nash draws on empirical research to offer a unique analysis of policy-making in the field. This detailed account is a vital step in understanding the links between global discourses on human mobilities, climate change and specific policy responses. An important contribution to several ongoing debates in academia and beyond.

❖ Tabs: Policies and institutions, Climate Change, migration

46. Price, S. and Singer, J. (2017) 'Global Implications Of Development, Disasters And Climate Change'. Oxford, UK: Routledge.

Displacements in the Asia Pacific region are escalating. The region has for decades experienced more than half of the world's natural disasters and, in recent years, a disproportionately high share of extreme weather-related disasters, which displaced 19 million people in 2013 alone. This volume offers an innovative and thought-provoking Asia-Pacific perspective on an intensifying global problem: the forced displacement of people from their land, homes, and livelihoods due to development, disasters and environmental change. This book draws together theoretical and multidisciplinary perspectives with diverse case studies from around the region – including China's Three Gorges Reservoir, Japan's Fukushima disaster, and the Pacific's Banaba resettlement. This book shows how displaced peoples respond to interlinked impacts that unravel their social fabric and productive bases, whether through sporadic protest, organised campaigns, empowered mobility or; even community-based negotiation of resettlement solutions.

❖ Tabs: Climate change, international law, displacement and resettlement, Asia-Pacific, China, Japan

47. Rich, N. (2019) 'Losing Earth: A Recent History'. First edition. New York: MCD/Farrar, Straus and Giroux.

How did we get here, and more importantly, how long have we known it was going to get this bad? Rich's book comes to the shocking conclusion that, as he puts it, "nearly every conversation we have in 2019 about climate change was being held in 1979." This is a history of what could have been. Rich frames his narrative through a central character, Rafe Pomerance, a Friends of the Earth lobbyist who first came across the issue of global warming in a 1979 E.P.A. report. The problem was met with immediate concern, even by conservatives. But then? The initial clarity and momentum was lost. Rich sees politicians and energy companies as bearing most of the blame. The sad fact we're left with is that even though the Intergovernmental Panel on Climate Change was established in 1988, more carbon has been emitted into the atmosphere since then than in all the preceding years' of history of civilization.

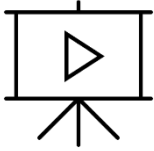
❖ Tabs: Global warming

48. Zorzi Giustiniani, F. (ed.) (2018) 'Routledge Handbook Of Human Rights And Disasters'. Abingdon, Oxon ; New York, NY: Routledge.

The Routledge Handbook of Human Rights and Disasters provides the first comprehensive review of the role played by international human rights law in the prevention and management of natural and technological disasters. Each chapter is written by a leading expert and offers a state-of-the-art overview of a significant topic within the field. In addition to focussing on the role of human rights obligations in disaster preparedness and response, the volume offers a broader perspective by examining how human rights law interacts with other legal regimes and by addressing the challenges facing humanitarian organizations. Preceded by a foreword by the International Law Commission's Special Rapporteur on the Protection of Persons in the Event of Disasters, the volume is divided into four parts:

- Part I: Human rights law and disasters in the framework of public international law
- Part II: Role and application of human rights law in disaster settings

- Part III: (Categories of) rights of particular significance in a disaster context
 - Part IV: Protection of vulnerable groups in disaster settings
- ❖ Tabs: Natural disasters, International law



Climate change mobility slides and videos

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Videos

1. UNESCO (2012). “Learning to Address Climate Change”. Available at: http://www.unesco.org/archives/multimedia/?s=films_details&pg=33&id=2569

A video showing why climate change education is important to shape sustainable development and how it works in practice. It shows how education can help us understand the causes of climate change. It also gives examples of how teachers and students can get active and address the challenges of climate change. The video is available in English, French, Spanish, and Japanese.

- ❖ Tabs: Climate change adaptation, policies and institutions

2. **Climate and Migration Coalition** (2017) *Video: understanding disasters, displacement and climate*. Available at: <http://climatemigration.org.uk/video-understanding-disasters-displacement-and-climate/>

This video explores the complex links between climate, disasters and the movement of people.

- ❖ Tabs: Natural disasters, climate change, migration, displacement and resettlement

3. **International Organisation of Migration** (2018) *Pacific Human Mobility in the Context of Disasters and Climate Change*. Available at: <https://www.youtube.com/watch?v=oHFfpzpGVio>

Video introduction of the relationship between migration and human mobility

- ❖ Tabs: Pacific region, Natural disasters, Climate Change, migration

4. **IOM** (2019) *5 Facts about Migration and the Environment* Available at: <https://youtu.be/Urp1Jw1DZn0>

- ❖ Tabs: Climate Change, migration

5. **IOM** (2019) *5 Facts about Water and Migration* Available at: <https://youtu.be/OxolQVPzKU4>

- ❖ Tabs: Climate change, migration, sea-water level

6. **IOM** Briefing (2014) *Migration, Environment and Climate Change: Evidence for Policy (MECLEP)* Available at <https://youtu.be/h2wrcpd1GU4>.

This 20-minute power-point briefing is about MECLEP, a research and capacity-building project that aims to strengthen knowledge with new evidence on how migration can contribute to adaptation strategies in diverse environmental settings, to enhance government capacity to take

action on environmental migration, and to facilitate policy coherence and cooperation at national and regional levels. This IOM 3-year project was conducted in six countries: Dominican Republic, Haiti, Kenya, Mauritius, Papua New Guinea, and Viet Nam. The results of the MECLEP project are published in the series “Assessing the Evidence”, linked in the *Conference and Reports* Section of this Resource Kit.

❖ Tabs: Environment, migration, climate change adaptation, policies and institutions

7. **OECS Commission** (2019) *Climate Change and Human Mobility in the Caribbean* Available at: <https://www.youtube.com/watch?v=00ahbPCYuVQ>

The Gesellschaft für Internationale Zusammenarbeit (GIZ), in collaboration with the OECS Commission, is implementing a Global Programme on the Sustainable Management of Human Mobility within the context of Climate Change. The programme was commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and seeks to enhance local and international knowledge on climate induced migration, resettlement and displacement in small island states. This video showcases the displacement of citizens from the Commonwealth of Dominica after Hurricane Maria; sea level rise in the Anse-la-Raye Community in Saint Lucia; and the ways in which OECS Free Movement facilitates the resettlement of displaced citizens within the Economic Union.

❖ Tabs: Caribbean, climate change, migration, displacement and resettlement

Courses and Slides

8. **OpenLearn** has a range of free courses about ‘Nature & Environment’ that cover climate change, energy resources, animals, and other global natural systems. The “Climate Change” Free Online Course (2013 – updated 2018) is available at:

<https://www.open.edu/openlearn/nature-environment/climate-change/content-section-0?active-tab=description-tab>

This free course explores the basic science that underpins climate change and global warming. After studying this course, you should be able to: 1) understand the physical basis of the natural greenhouse effect, including the meaning of the term radiative forcing 2) know something of the way various human activities are increasing emissions of the natural greenhouse gases, and are also contributing to sulphate aerosols in the troposphere 3) demonstrate an awareness of the difficulties involved in the detection of any unusual global warming ‘signal’ above the ‘background noise’ of natural variability in the Earth’s climate and of attributing (in whole or in part) any such signal to human activity 4) understand that although a growing scientific consensus has become established through the IPCC, the complexities and uncertainties of the science provide opportunity for climate sceptics to challenge the Panel’s findings. At completion, the participant will receive a free statement of participation.

❖ Tabs: climate change, environmental education, carbon footprint, global warming

9. **Sandwatch** Training Videos: An Educational Tool for Sustainable Development (2013).

Available at: <https://www.youtube.com/user/sandwatchvideosENG/videos>

The Sandwich Training is composed of 17 videos, divided in 14 chapters and 2 annexes. It is aimed at both professional educators and the public. It focuses on the coastal and marine challenges and resources. The project originated during the first Regional Environmental Education Workshop in the Caribbean organised by UNESCO. The videos are usually under 10 minutes and provide a useful tool to identify the problems that affect beaches and propose some improvements. The factors and methodologies used in the videos are crucial when studying and learning about coastal and marine environment and degradation and provide useful background information for those who wish to do field research.

❖ Tabs: Climate Change, coastal erosion, sea-level rise, Caribbean

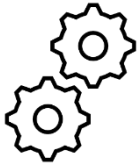
10. [EDX](#) has a range of free courses from top American Universities on sustainability and sustainable development. **The courses are free but there is an option to buy an accredited certificate.**
 - ❖ Tabs: climate change, sustainability
11. [SDG Academy](#) has lots of free courses of varying length all focused on sustainability and different aspects of sustainability and the SDG's.
 - ❖ Tabs: climate change, sustainability
12. [Udemy](#) offers a range of video courses, search for sustainability, sustainable development, environmental ethics, climate change and more. **Some are free, others vary in price, they often offer discounts.**
 - ❖ Tabs: climate change, sustainability, environment
13. [FutureLearn](#) offers a range of short courses on understanding climate change.
 - ❖ Tabs: climate change
14. [UNCC:E-Learn](#) is a UN site offering a range of courses covering climate change and sustainability aspects.
 - ❖ Tabs: climate change; sustainability
15. The [Centre for Alternative Technology](#) is offering a series of free online webinars exploring sustainability topics. **While these webinars are free there are limited places and booking is essential.**
 - ❖ Tabs: climate change, sustainability

Other sources

16. [Our Planet](#). Now available on Youtube as well as Netflix, Our Planet is a nature documentary exploring the wonder of the natural world and the impacts of climate change.
 - ❖ Tabs: climate change, migration
17. [Project Wild Thing](#) is David Bond's journey in rebranding nature.
 - ❖ Tabs: climate change, migration
18. [Talks for the Future](#) Available each Friday through Fridays for Future YouTube channel.
 - ❖ Tabs: climate change; sustainability
19. [Ted Talks](#) has a lot of different talks on climate change and on sustainability and related topics.
 - ❖ Tabs: climate change, migration
20. On [YouTube](#) you can learn anything, just search for what you're interested in. For example, search "Environmental Sustainability" and you will get a lot of interesting documentary results.
 - ❖ Tabs: climate change, migration

21. [Eventbrite](#) has a host of online webinar events that you can get involved in, search for climate related talks, virtual meet-ups, and film showings. **Many events are free, some require you to buy a ticket.**

❖ Tabs: climate change, migration



Activity ideas

Activity 1: Hazard Maps

Climate change has a direct connection to natural disasters around the world. In this activity you can start by using the pictorial maps provided for thinking about what is dangerous and where you can evacuate in the event of a natural disaster. Now that the risk of heavy rain disasters is increasing due to climate variability, it is necessary to envision a disaster-resistant city. If multiple disasters occur, urban conditions can be catastrophic, so make them think about other natural disasters as well. The resource provided has patterns of cities near mountains, cities near the sea, fishing villages, and cities near mountains. If possible, ask the students to draw areas they are familiar with (their school; their homes etc.) or use Google Maps to identify the disaster hazards in the area.

Resources' name: [Hazard Map](#)

❖ Tabs: Climate change, natural disasters, climate change adaptation

Activity 2: The Sinking Island

The objective of this exercise is to try to come up with a solution for the people of Tuvalu, an island country in the South Pacific, who may be forced in a few years' time to evacuate their nation due to salinization, storm surges and rising sea levels. After watching the video divide the classroom in groups and ask them the question: *In the case of Tuvalu, what should the government of Tuvalu do to protect its people? Which of the following three strategies is the best one? Why?*

1. Stay and adapt: Abandon uninhabitable islands, appeal for international aid, strengthen flooding defenses and rebuild reefs. Implications: Nation continues, but lower quality of life, may not be sustainable
2. Mitigate climate change: Appear at climate change conferences and seek international action, publicize plight (e.g. Maldives). Implications: If successful will help entire world, but little success so far as countries like Tuvalu have little political clout.
3. Seek acceptance of relocation in NZ or Australia: Appeal to governments to grant land or accept entire population. Implications: Offers economic prospects but loss of nationhood,

culture and traditions. Legal status of relocated residents is unclear – may become stateless, may lack rights of residents, such as voting or land ownership

Give 10-15 minutes to each group to discuss and ask one representative from each group to explain their ideas.

Resource: Video <http://vimeo.com/4997847>

- ❖ Tabs: Climate change, sea-level rise, displacement and resettlement, policies and institutions

Activity 3: Grandma's postcards

This activity is based on the postcards sent by grandma who is traveling all over the world. There are some stories about climate hidden in the postcards. Participants are required to divided into several groups and read the postcards to decide which country grandma is visiting and to identify the climate zone by using the world map. Participants can work both individually and in a group. What this activity needs are postcards, a world map with climate zone and worksheet.

Resource name: [Grandma's Postcards](#); [Grandma Travel World Map](#)

- ❖ Tabs: Climate change, environmental education

Activity 4: Tea Party Role Play

Play a role-playing game using 6 real-life characters. While learning about the complexity of climate change initiatives, think about how to solve them in the world. The cards can be used for a discussion between individuals as well as creating lobbying groups with similar interests.

Resource name: [Tea Party Activity](#)

- ❖ Tabs: Climate change, policies and institutions, environmental education

Activity 5: Climate change for whom?

Climate Change is said to affect the environment and there are many things that are changing. Look at an example of your surroundings, there are many animals, plants, and people living in the area. However, there are some people who say that climate change is not serious.

Some people still think that climate change is not real. Now think about what each of these characters will think about their environment getting hotter. Do they think climate change is terrible or not terrible? Don't forget to explain why.

- Grandma/ Grandpa
- Cherry Tree
- Ducks
- Fish
- Eneos Business man

- Politician
- Me
- Teacher
- Summer season

Start your part with the sentence: “I am aI think climate change is terrible / not terrible because”. When it’s finished, ask the students to present in their groups with each taking turns.

Resource name: [Role Play Game Cards](#)

- ❖ Tabs: climate change, climate change adaptation, environmental education

Activity 6: The Mayor

Due to climate change, coastal cities are becoming more and more exposed to flooding and coastal erosion. As a result, more and more people are forced to leave towards bigger cities. This process of urbanisation creates challenges for the big cities’ governments, who try to prevent issues arising from overpopulation, as well as the local governments, who are struggling to make coastal areas safer through sustainable development.

This exercise highlights the complex and multidisciplinary nature of addressing urbanisation and climate change from the economic, political, social perspective. No material is required for this activity. The activity starts with dividing the classroom in groups and ask them the question: *You are the mayor of a fast-growing megalopolis in a developing nation. Your financial resources are limited, but everyday hundreds of new migrants enter the city from nearby coastal cities to live in crowded slums, and they need services – sanitation, health, transportation, employment, education, housing, security. What can you do to cope with or minimize this growth?* Come up with at least 3 steps you will take.

Give 10-15 minutes to each group to finalize their thoughts and then ask one representative from each group to explain their ideas.

- ❖ Tabs: Coastal erosion, urbanisation, policies and institutions



Beyond tertiary education

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For Kids and Young People

1. [Fridays for Future](#) – All the updates about the student strikes and upcoming strikes, plus explainers about the crisis, and resources and materials to help young people gain understanding and act.
 2. [Six Senses](#) – Junior Marine Biology program.
 3. [Our Climate Our Future](#) – a video program to educate young people on climate change.
 4. [Climate Kids](#) – NASA's Climate Kids site is full of resources to help kids learn about climate change.
 5. [BBC Bitesize](#) – Has learning and revision on climate change for kids.
 6. [Earth Rangers](#) – An interactive App for kids that teaches them about the natural world and the changing climate, links to teacher and parent resources to support learning, and to communal learning.
 7. [Dream Big at Home](#) – Woodcraft Folk have put together a range of online resources for kids to stay connected and explore the environment. There's weekly activities and challenges, online storytelling and sessions, and the opportunity to share their experiences and activities with the online community.
 8. [ATAAC Handbook](#) – All Together Against Climate Change have created a handbook to help young people understand and act on environmental concern and climate change.
 9. [Pictures of the Changing World](#) – BBC have collated a series of pictures, shown through the CBBC website – that show the earth's changing climate.
 10. [Young People's Trust for the Environment](#) – are releasing home learning packs for the environment every week.
 11. [The Wildlife Trusts](#) – activities for kids and families to do at home, articles, activities, quizzes, and more.
 12. [TEDEd](#) – Earth School; 30 quests for children and young people around the world to celebrate, explore, and connect with nature.
 13. [Surfers Against Sewage](#) – Digital Ocean School, new sessions added every week, a variety of ways to take part and explore the ocean and plastic pollution solutions online.
 14. [RSPB](#) – wild challenges and activities for the family to explore nature at home.
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For Teachers:

Primary School

1. [Oxfam](#) – Climate challenge for 7 – 11 years to investigate the human causes of climate change and what can be done about it.
2. [The Environmental Curriculum](#) – NAEE's enquiry into opportunities for environmental education in the curriculum for primary and foundation pupils.
3. [The Harmony Project](#) – The Harmony in Education Teachers Guide is a new educational framework that suggests a new way of looking at and learning about our world. Developed

by Ashley Primary School over 10 years, this site contains lots of information for Primary teachers.

4. [Cambridge University Press](#) – have put together a range of worksheets to aid primary learning at home.
5. [WWF](#) – nature themed activities, educational resources, things to watch and do, quizzes.
6. [Transform Our World](#) – an online resource hub helping teachers bring environmental education into the forefront of education with a range of activities and resources.

Secondary School +

1. [Climate4Classrooms](#) – curriculum linked teaching resources about climate change for key stage 4 and above.
2. [Geographical Association and IBG](#) – Climate Change resources for key stage 3.
3. [Cambridge International Education](#) – are currently offering their educational Resource Plus resources for GCSE and A-Level students for **free, (usually accessed via a subscription)**.
4. [Teach the Earth: Teaching Geoscience Online](#) – A range of online teaching resources, plus a community so you can share thoughts, ideas, and resources with other teachers.
5. [InTeGrate Activity: Introduction to Global Climate Change through Classroom Discussion](#) – An activity plan for a classroom-based discussion helping students develop critical thinking skills.

Mixed Resources

1. [Thoughtbox Education](#) – 500+ inquiry based lessons for primary and secondary education, developing key life skills for the wellbeing of people and planet.
2. [Inquiry Mindset](#) – Exploring global awareness through thought provoking photographs.
3. [SDG's in Action](#) – An app by Common Sense which can be used to teach students about the challenges that societies and the planet face.
4. [MetLink](#) – The Royal Meteorological Society's climate change teaching resources.
5. [Fairtrade Schools](#) – films, stories and home-learning challenges.
6. [STEM Learning](#) – Resources and links to energy and climate change resources, actions, animations, games and more to aid in learning, for mixed ages.
7. [National Geographic](#) – Teaching Global Climate Change and other courses for educators.
8. [BBC Teach](#) – Offers a range of teacher support articles.
9. [Ellen Macarthur Foundation](#) – Climate Change resources for teachers looking at resources and the circular economy.
10. [WWF](#) – Have a range of primary and secondary school resources for teachers to access and use.
11. [Campaign against Climate Change](#) – Have a huge list of resources for teachers offered by a variety of other organisations.
12. [Practical Action](#) – Have a lot of resources for teachers to engage students with learning about the natural world and climate change.

13. [ThoughtBox](#) – Are offering a Climate Curriculum made up of lesson plans and resources for children aged 5 – 18.
 14. [Action Aid](#) – Offer a range of climate change teaching resources.
 15. [Climate Change Connection](#) – Have a range of resources for schools, including infographics, handouts, lesson plans and more.
 16. [Common Sense Education](#) – Have put together a list of organisations and sites offering climate change education and resources for kids.
 17. [Urban Science Learning Modules](#) – Focus on climate change, biodiversity, and UV light. They are linked to the curriculum and include instructions for practical actions.
 18. [Tide Learning: Local and Global approach to Climate Change](#) – collated challenges and learning about climate change for teachers and learners, suitable for key stages 2 and 3.
 19. [Tide Learning](#) – links images and frameworks surrounding Climate Change.
 20. [Climate Change in Urban Areas: Bangladesh Case Study](#) – Built on research carried out by the University of Manchester into climate change resilience, vulnerability, and adaptation, this key stage 3 resource includes key terms, lesson plans, homework plans, suggested activities, background information, and further reading.
 21. [Size of Wales](#) – Education resources and classroom activities for secondary education +.
 22. [Practical Action](#) – Engaging STEM challenges and resources for climate and environmental education, resources available for mixed key stages.
 23. [PEEP](#) – Resources on climate change and what can be done to stop it for mixed age groups, also with a strong focus on science and ethics.
 24. [Ashden](#) – are putting together a range of quizzes, writing, and art activities to aid young people’s learning at home, primary and secondary resources available.
 25. [Sixty Second Guide to Sustainable Development Goal 13: Climate Action.](#)
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