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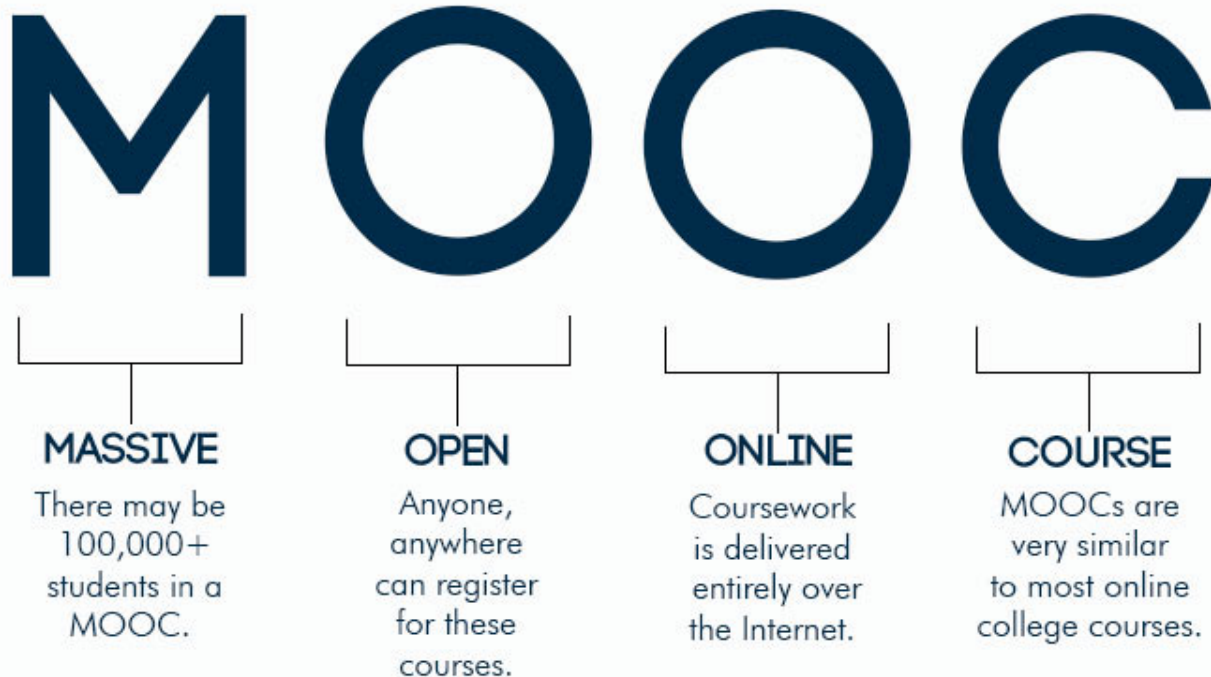
HEIDELBERG
INSTITUTE OF
GLOBAL HEALTH

E-learning formats on climate change and health for higher education, health staff and policy makers

Sandra Barteit, Heidelberg Institute of Global Health

60th Jubilee Symposium: Climate Change and Pandemics

What is a MOOC?



What does this have to do with climate change and health?

Global capacity building

Empowerment

Awareness



MOOCs are a great tool for global education

Example: Introduction to Artificial Intelligence - Sebastian Thrun and Peter Norvig

❑ **23,000 students passed**

(253 got perfect scores)

❑ 410 online students outperformed the top Stanford student!

❑ **Students were teaching students** (Q&A voting system).

❑ Students themselves translated the class for free from English into **44 languages**.



MOOC Platform Coursera: Climate Change and Health Courses

The screenshot displays the Coursera search results page for 'climate change'. At the top, the Coursera logo and navigation menu are visible. The search bar contains 'climate change'. Below the search bar, there are two course cards from O.P. Jindal Global University: 'M.A. in International Relations, Security, and Strategy' and 'M.A. Public Policy'. The main content area shows '82 results for "climate change"'. On the left, there is a 'Filter by' sidebar with sections for Subject, Skills, Level, and Duration. The subject filters include Arts and Humanities, Business, Computer Science, and Data Science. The skills filters include Account Management, Accounting, Adaptability, and Advancing. The level filters include Beginner, Intermediate, and Mixed. The duration filter is currently set to 'All'. The main content area displays six course cards in a grid. Each card includes a thumbnail image, a 'Free' badge, the course title, the provider's name, the skills gained, a star rating with the number of reviews, and the course level and duration. The courses shown are: 1. 'From Climate Science to Action' by The World Bank Group (4.7 rating, 313 reviews, Beginner, 1-4 Weeks). 2. 'Climate and Climate Change in New Jersey' by American Museum of Natural History (Intermediate, 1-4 Weeks). 3. 'Global Warming I: The Science and Modeling of Climate Change' by The University of Chicago (4.6 rating, 383 reviews, Mixed, 1-3 Months). 4. 'The Sustainable Development Goals – A global, transdisciplinary vision for the future' by University of Copenhagen. 5. 'Exploring Our Responses to Climate Change' by University of Colorado Boulder. 6. 'Climate Change and Sustainable Investing' by EDHEC Business School.

www.coursera.org

MOOC Platform Coursera: Full Master degrees from top universities completely online

The screenshot shows the Coursera website interface. At the top left is the Coursera logo and an 'Explore' button. A search bar contains the text 'What do you want to learn?'. On the right, there are navigation links for 'Online Degrees', 'Find your New Career', 'For Enterprise', 'For Universities', 'Log In', and a 'Join for Free' button. Below the search bar, the breadcrumb 'Degrees > Public Health Degrees' is visible. The main heading is 'Online Master of Public Health (MPH) Degree Programs'. A dropdown menu is open, showing 'I HAVE AN' with a selected option 'Associate Degree (e.g., AA, AS)'. Below the dropdown are two buttons: 'See programs' and 'Email me info'.

Browse Degrees

Browse by [Applications open now](#) [University](#)



Imperial College London

Global Master of Public Health

#7 ranked university in the world (QS World University Rankings 2022)

Application due July 4, 2022

Master's Degree - 2 or 3 years



Pontificia Universidad Católica de Chile

Magíster en Salud Pública Global

#1 en el ranking QS latinoamericano.

Application due July 15, 2022

Master's Degree - 24 meses.



University of Michigan


Master of Public Health

#4 School of Public Health (U.S. News & World Report, 2021)

Master's Degree - 2 years

MOOC Platform edX: Full Master degrees from top universities completely online

Analytics



Georgia Tech

Master's Degree in Analytics
GTx

Master's Degree

11 courses • 1-3 years • \$9,900 tuition



Syracuse University

Master of Science in Business Analytics
Syracuse University

Master's Degree

[View degree on school page](#)




PEPPERDINE UNIVERSITY

Master of Science in Business Analytics
Pepperdine University

Master's Degree

[View degree on school page](#)



HARVARD BUSINESS SCHOOL

Certificate in Business Analytics
Harvard University

Certificate Program

[View program on school page](#)

[Show 3 more in Analytics](#)

edX is [part of 2U](#): the next era of online learning begins today! Visit our Help Center to [read more](#) about changes at edX

Search our catalog



Subject ▾

Partner ▾

Program ▾

Level ▾

Language ▾

Availability ▾

Learning type ▾

Courses X

Clear all

[← Back to search](#)

"climate change" courses

180 results on edx

[←](#) [1](#) [2](#) [3](#) [...](#) [8](#) [→](#)

The Health Effects of Climate Change
HarvardX
Course

Climate Change: The Science and Global Impact
SDGAcademyX
Course

Climate Change: Financial Risks and Opportunities
ImperialBusinessX, ImperialX
Course

Climate Solutions
EdinburghX
Course

Climate Change: Carbon Capture and Storage
EdinburghX

Nature-based Solutions for Disaster and Climate Resilience

Modeling Climate Change
UChicagoX

Inclusive Growth: Climate Change
IMFX

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climate change



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"climate change" courses

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The Health Effects of Climate Change

HarvardX

Course

SDGacademy

Climate Change: The Science and Global Impact

SDGAcademyX

Course



Climate Change: Financial Risks and Opportunities

ImperialBusinessX, ImperialX

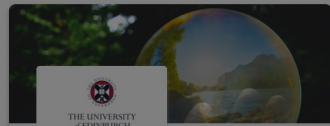
Course



Climate Solutions

EdinburghX

Course

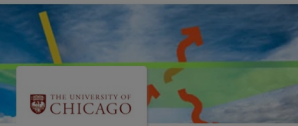


Climate Change: Carbon Capture and Storage

EdinburghX

SDGacademy

Nature-based Solutions for Disaster and Climate Resilience



Modeling Climate Change

UChicagoX



Inclusive Growth: Climate Change

IMFX



MOOC (edX): The Health Effects of Climate Change



The Health Effects of Climate Change

Learn how global warming impacts human health, and the ways we can diminish those impacts.



Professor Rainer Sauerborn
Chair, Institute of Public Health
Heidelberg University



Research Methods

Why is climate-and-health research different?

[Introduction to Research Methods](#)

[Means and Variances](#)

[Connecting the Past and the Future](#)

What are the analytical challenges?

[Spatial and Temporal Scales](#)

[Measures of Confidence](#)

[Statistical Methods](#)

[Generating Health Projections](#)

What are the data challenges?

[Accessing Long-term Data Sets](#)

[Weather and Climate Data](#)

Wrap-up

- ▶ Health: The Human Face of Climate Change
- ▶ Climate Science Mini-course
- ▶ Heat & Air Quality
- ▶ Infection
- ▶ Nutrition
- ▶ Migration
- ▶ Research Methods
- ▶ Responses to Climate Change

www.edx.org



Leveraging MOOCs for Climate Change and Health Education



MOOC: Climate Change and Health – Implications for Patient Care

Climate Change and Health
– implications for patient care

- CPD-accredited
- Commissioned through medical association Nordrhein

Heat-related mortality and morbidity

From risks to prevention

Dr. med. Alina Herrmann
Heidelberg Institute of Global Health,
University Hospital Heidelberg



<https://high-edu.courses>

MOOC: Research Methods for the Study of Climate Change and Health



HIGH: CCH-RM
Research Methods for the Study of Climate Change and Health

Discover New

[Course](#) [Progress](#) [Dates](#) [Discussion](#) [Wiki](#) [Instructor](#)

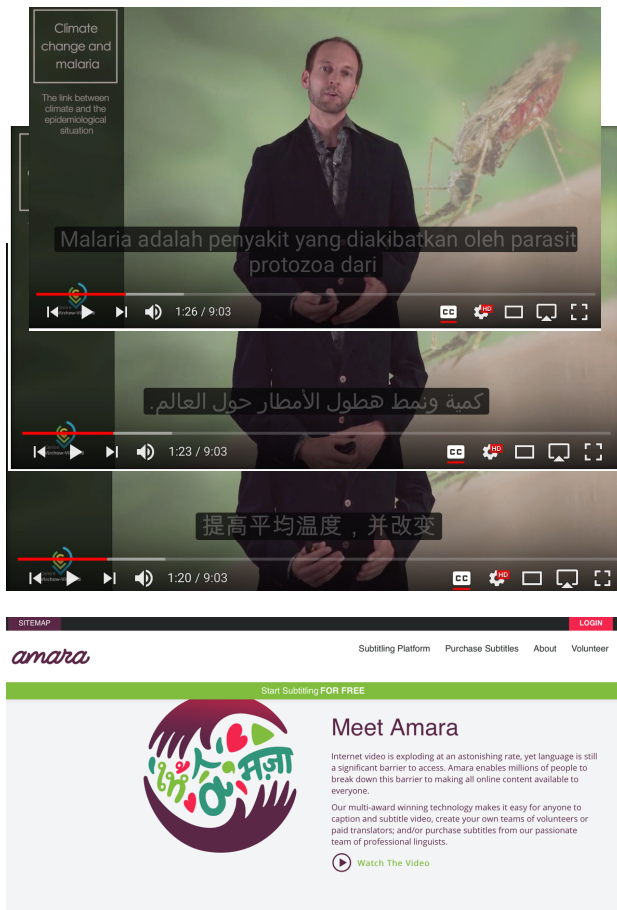
Research Methods for the Study of Climate Change and Health

- › Learning objectives and syllabus
- › Module 1: Data resources and data collection
- › Module 2: Data analysis
- › Module 3: Modelling
- › Feedback
- › Final Assessment



<https://high-edu.courses>

MOOC for CCH Education: Accessibility



The image shows a video player interface with three video thumbnails. The top thumbnail has a subtitle in Indonesian: "Malaria adalah penyakit yang diakibatkan oleh parasit protozoa dari". The middle thumbnail has a subtitle in Arabic: "كمية ونمط هطول الأمطار حول العالم.". The bottom thumbnail has a subtitle in Chinese: "提高平均温度，并改变". Below the video player is the Amara website interface, featuring a navigation bar with "SITEMAP" and "LOGIN", a "Start Subtitling FOR FREE" banner, and a "Meet Amara" section. The "Meet Amara" section includes a circular logo with hands and the word "मज्जा" (Majja) in Hindi, and text describing the platform's mission to make online content accessible through subtitles.

- MOOCs translated and subtitled: Indonesian, modern Chinese, Portuguese, Spanish, French, Hindi, Indonesian
- subtitled from CC&H students
- via Amara (web-based non-profit project)

Create Free Subtitles

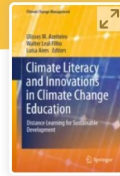
The Amara Editor is an award-winning caption and subtitle editor that's free to use, fun, and easy to learn, and encourages open <https://www.youtube.com/watch?v=388587> independent video review



Field Operations & Data Processing

- Quality Control
 - Sub-sample of households selected for repeat interviews
 - "Red herrings"
- Data Entry & Management





Climate Literacy and Innovations in Climate Change Education pp 169–191 | [Cite as](#)

Massive Open Online Courses (MOOCs) on Climate Change and Health: Teaching a Global Audience

[Sandra Barteit](#) [✉](#), [Anneliese Depoux](#), [Ali Sié](#), [Maurice Yé](#) & [Rainer Sauerborn](#)

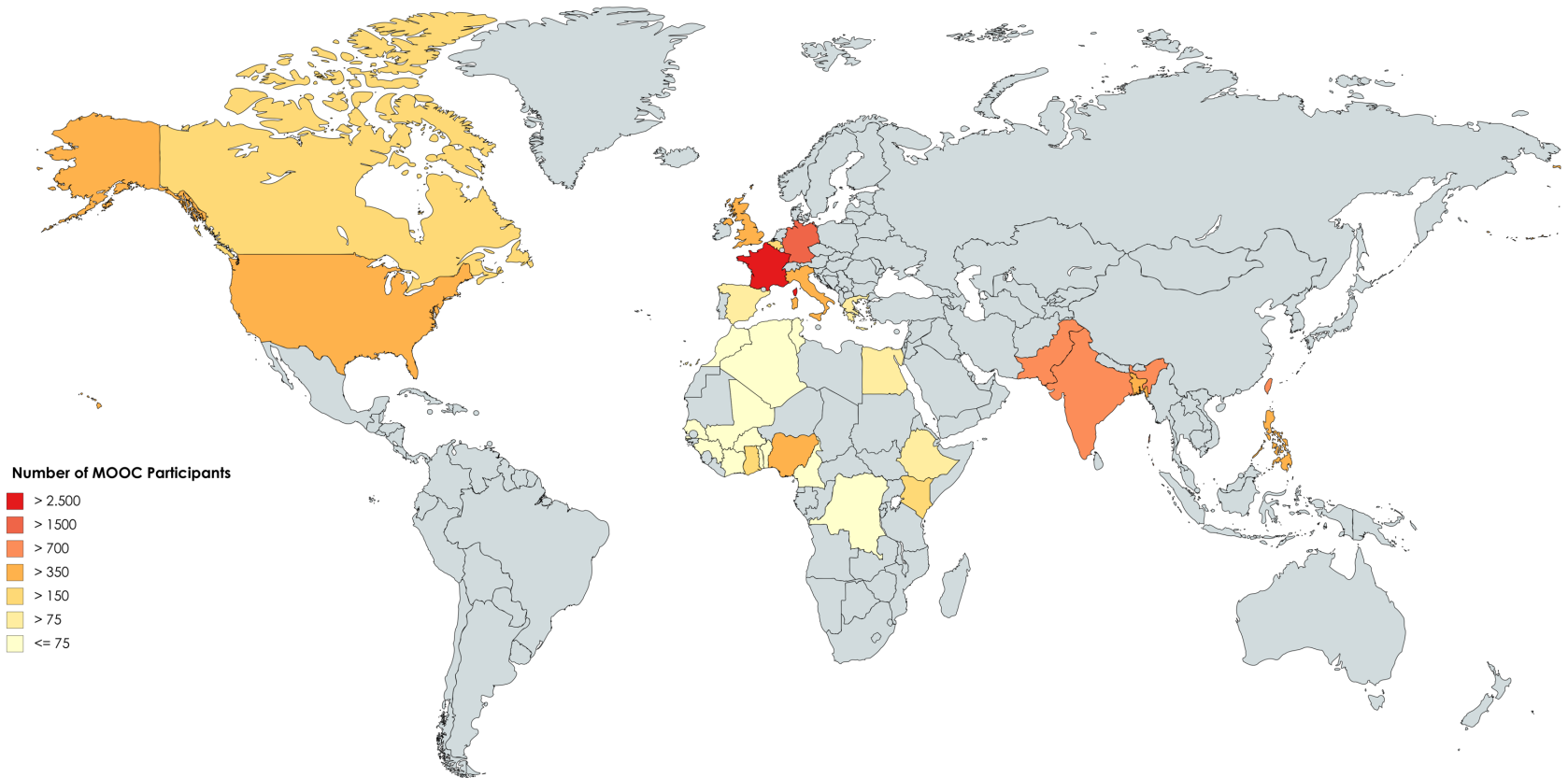
Chapter | [First Online: 14 January 2018](#)

Lessons learned on teaching a global audience with massive open online courses (MOOCs) on health impacts of climate change: a commentary

[Sandra Barteit](#) [✉](#), [Ali Sié](#), [Maurice Yé](#), [Anneliese Depoux](#), [Valérie R. Louis](#) & [Rainer Sauerborn](#)

[Globalization and Health](#) **15**, Article number: 52 (2019) | [Cite this article](#)

Francophone MOOC Climate Change and Health Evaluation: Many participants from West Africa



Barteit et al. (2018)

MOOC Interviews: How is the effect of MOOCs?

teaching students

“I will be able to retransfer certain topics to my students.”

building awareness

“I am African and climate change and its effects are realities that we live every day. I can better explain the incidence of respiratory and cardiovascular diseases related to it. So I can work on development projects building awareness for the population.”

capacity building and knowledge sharing

“sharing knowledge and building capacity with health workers and other community stakeholders”

Systematic Review looking at MOOCs for health education in LMICs





SYSTEMATIC REVIEW article

Massive Open Online Courses (MOOCs) for health worker education in low-and middle-income countries: A scoping review

Provisionally accepted

The final version of the article will be published here soon pending final quality checks

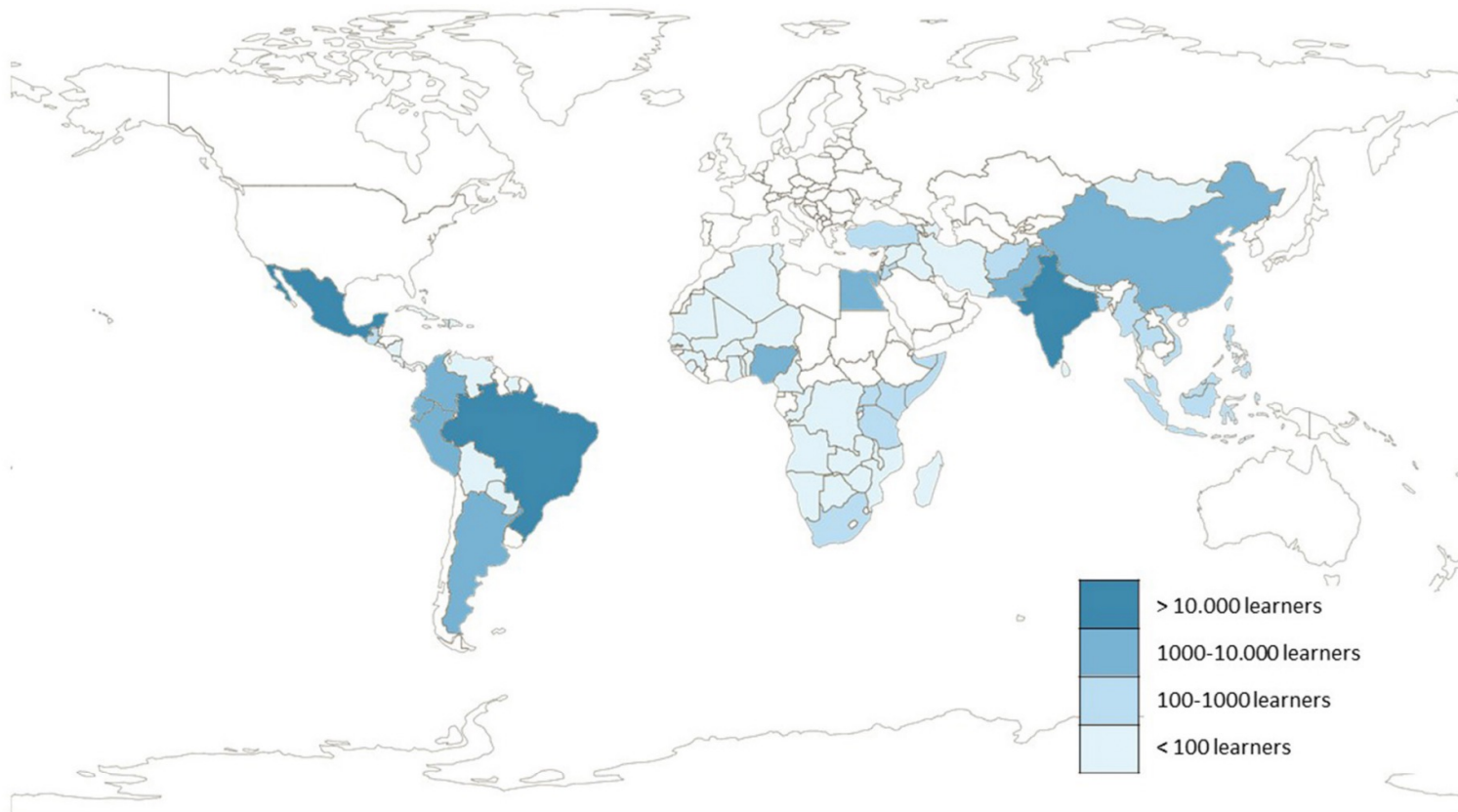
 Notify me

 [Jessica Nieder](#)¹, [Patricia Schwerdtle](#)¹, [Rainer Sauerborn](#)¹ and  [Sandra Barteit](#)¹

¹Heidelberg Institute of Global Health, Heidelberg University Hospital, Germany

We found higher MOOC utilization in South America and Asia

over 90 MOOCs evaluated



Nieder et al. (2022)

The effect of electronic learning is likely to be revolutionary, although how precisely it will revamp professional education remains unknown.

Frenk et al. (2010), Lancet Commission on Education of Health Professionals



THE LANCET

Health professionals for a new century: transforming education to strengthen health systems in an interdependent world

Julio Frenk, Lincoln Chen*, Zulfiqar A Bhutta, Jordan Cohen, Nigel Crisp, Timothy Evans, Harvey Fineberg, Patricia Garcia, Yang Ke, Patrick Kelley, Barry Kistnasamy, Afaf Meleis, David Naylor, Ariel Pablos-Mendez, Srinath Reddy, Susan Scrimshaw, Jaime Sepulveda, David Servatka, Huda Zurayk*

Open for
registration now
(evaluation phase)

Enroll

Massive Open Online Course Research Methods for the Study of Climate Change and Health

This is an advanced research methods course
that aims to introduce:

- Sources and methods to collect data relevant to Climate Change & Health
- Analysis methods used within Climate Change & Health research
- Data modelling techniques to predict changes in variables relevant to Climate Change & Health

The course is **free**, taught by a multidisciplinary expert team
and includes real-life scenarios and practice examples

Join now by scanning the code!

or visit and register for free at

<https://high-edu.courses>



DFG Deutsche
Forschungsgemeinschaft

