ENV H 418 A Wi 23: Understanding And Managing The Health Risks Of Climate Chang e

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Managing the health risks of climate change

GH/ENV H 418/518 (3 credits)

Lectures Mondays / Wednesdays 1:00 – 2:20 pm

HCK (Hitchcock Hall) Room 320

Instructor:

Kristie L. Ebi, PhD, MPH

Professor, Departments of Global Health, and of Environmental and Occupational Health Sciences

krisebi@uw.edu (mailto:krisebi@uw.edu)

Teaching assistant:

Fikir Kibret

MPH student, Department of Global Health

fikir60@uw.edu (mailto:fikir60@uw.edu)

Office hours will be held by appointment.

Requirements*:* None. This is a broad course open to students without specific training in the areas of climate change, environmental sciences, and/or public health.

Course description

Climate change is causing preventable injuries, illnesses, and deaths, with increases in global temperature projected to further increase morbidity and mortality from most climate-sensitive health outcomes without additional actions to rapidly increase adaptation and reduce greenhouse gas emissions. Vulnerable populations and regions will be differentially affected, with the potential to increase poverty and inequities.

Of particular concern are heat-related morbidity and mortality; and ozone-related mortality if emissions needed for ozone formation remain high. Urban heat islands often amplify the impacts of heatwaves in cities. Risks for some vector-borne diseases, such as malaria and dengue fever, are projected to increase with warming from 1.5°C to 2°C, including potential shifts in their geographic range and changes in their seasonal distribution. Undernutrition is projected to increase with additional warming. Separately, increasing concentrations of carbon dioxide are expected to reduce the nutritional quality of significant cereal crops. Other potentially large risks are insufficiently quantified, such as the impacts of climate variability and change on a range of climate-sensitive health outcomes, such as diarrheal diseases, occupational heat stress, mental health, and migration and displacement.

Adaptation (adjustments in response to actual or expected climatic shifts) and mitigation (efforts to reduce to the likelihood of dangerous climate change by limiting greenhouse gas emissions) are the primary policy responses to address the health risks of climate change. Health adaptation can reduce the current and projected burdens of climate-sensitive health outcomes over the short term in many countries, but the extent to which it could do so past mid-century will depend on emission and development pathways. Under high emission scenarios, climate change will be rapid and extensive, leading to fundamental shifts in the burden of climate-sensitive health outcomes that will challenging for many countries to manage. Unmanaged disease burdens could erode gains made in public health, economic development, and living standards worldwide. Sustainable development pathways could delay but not eliminate associated health burdens.

Students in this course will gain foundational knowledge in the health effects of climate change, methods for quantifying climate change health effects, adaptation needs and strategies, and health benefits of mitigation activities.

Learning objectives

Students will be able to:

- Identify the major health risks of climate variability and change, including the sources of vulnerability to those risks
- Analyze the methods and tools for assessing risks for specified populations domestically and in several international settings

- Enumerate key issues in implementing, monitoring, evaluating, learning from, and continuously updating, adaptation policies and programs
- Outline the health co-benefits of mitigation policies to reduce greenhouse gas emissions
- **Graduate student only** - Evaluate policy options to address the health risks of climate variability and change

Expectations of Students

Students are expected to prepare for, attend, and participate in class discussions, demonstrate knowledge of assigned readings, and demonstrate teamwork/professionalism. Students are also expected to take the midterm exam, the final exam, and write one paper on a relevant topic chosen between the student and the instructors. (see Grades)

Grades

- 25% Political context assignment
- 25% Risk communication assignment
- 10% Risk communication peer review
- 40% Final paper

We will use the UW's grading guidelines.

Assignments

Required readings will be posted on Canvas and will include:

- IPCC Summary for Policy Makers for the Working Group II contribution to the 6th Assessment Report (2022)
- USGCRP 2018 *4th US National Climate Assessment: Human Health chapter*
- Romanello et al. 2022 *Lancet Countdown on Health and Climate Change*

Students also will be assigned readings from the recent literature.

Students will complete two partner assignments and one final paper:

Assignment 1: Political Context: Students will work in groups to develop a policy brief or podcast on an aspect of the national or international political context for managing the health risks of climate variability and change. Written policy briefs should be no more than 1,000 words, excluding references, and should contain at least five references, but may include more. Podcast policy briefs should be approximately 10 minutes long and include information from at least five sources from the peer-reviewed or gray literature. A written bibliography should be included with the podcast.

Grading will be based on a clear statement of the issue(s) chosen, a description of the background and arguments to support a particular perspective and the group's assessment of the validity and robustness of the chosen issue. The political context policy brief or podcast will be due **February 6th by midnight** (submitted on Canvas, one submission per group).

Assignment 2: Risk Communication The goal of this assignment is to utilize principles of risk communication and think creatively about how best to present information about the health risks of climate change. Students will work in groups to develop a poster, podcast, video, or presentation on an aspect of communicating the health risks of climate change and options to manage these risks within the context of a local or national case study. Each media/presentation should include information from at least five sources from the peer-reviewed or gray literature. A written bibliography should be included with the submission.

Grading will be based on a clear statement of the case study chosen and why, a description of how the case study is an example of best practice or an example of where communication could improve understanding or action on managing the risks of climate change, and a discussion of specific approaches to improve communication, with an evaluation of their likely effectiveness. Grading also will consider adherence to the stated guidelines, depth of engagement and comfort with the topic, and quality and style of presentation/media, including adherence to time limits.

Each student in the group should plan to spend equal time on the assignment. All students working in a team will receive the same grade.

- Posters should be developed and formatted for submission to a scientific conference.
- Podcasts should be approximately 10 minutes long.
- Videos should be approximately 5 minutes long.
- Presentations should include no more than 12 slides including slides for references. The slides should include a clear statement of the topic covered and learning objectives for the talk as well as a summary of the conclusions of the talk. All material and literature should be cited. Presentations can be solely lecture style or can incorporate short activities, discussions, and group work.

The risk communication assignment will be due **February 15 by midnight** (submitted on Canvas, one submission per group).

Assignment 3: Peer feedback: During the quarter, each student will watch three risk communications made by classmates and provide them with constructive feedback. Students get 1 point for each submission of detailed, constructive feedback.

0 - no submission

0.50 - vague feedback that does not address specific strengths or areas of improvement

1.0 - specific, constructive feedback that identifies strengths and constructively points out areas of improvement

The risk communication peer review will be due the week after the risk communication assignment, on **February 27th by midnight** (submitted on Canvas, three submissions for each student).

Final Paper (undergraduate student only): Each student will develop an individual paper on some aspect of managing the health risks of climate variability and change. This can be a subject covered by the readings or some other aspect of climate change that is of particular interest. A one-paragraph summary of the topic for the individual project will be due **February 8th at midnight**. The paper will be 6-10 double-spaced pages and contain a minimum of 5 references that are peer-reviewed, scholarly articles found in scientific journals. The paper will be due **March 10th at midnight**. Please include your last name in the file name.

Final Paper (graduate student only): Each student will develop an individual paper on some aspect of managing the health risks of climate variability and change. This can be a subject covered by the readings or some other aspect of climate change that is of particular interest. A one-paragraph summary of the topic for the individual project will be due **February 8th at midnight**. The paper will be 10-15 double-spaced pages and contain a minimum of 10 references that are peer-reviewed, scholarly articles found in scientific journals. In addition to the added length and number of references, it is expected that this paper reflects a level of thought and analysis reflective of a graduate student. In addition, graduate students will give one slide lightning talks on their paper topics (less than 5 minutes with questions). Lighting talks will take place on **March 8th during class**. The paper will be due **March 10th at midnight**. Please include your last name in the file name.

Email Policy

Emails received after 5 pm will be answered within 24 hours whenever possible, and not before 9 am the following morning.

UW Writing and Research Center:

The Odegaard Writing & Research Center (OWRC) offers free, one-to-one, 45-minute tutoring sessions for undergraduate, graduate, and professional writers in all fields at the UW. They will work with writers on any writing or research project, as well as personal projects such as applications or personal statements. Their tutors and librarians collaborate with writers at any stage of the writing and research process, from brainstorming and identifying sources to drafting and making final revisions. For more information or to schedule an appointment, please see their website (**http://depts.washington.edu/owrc (Links to an external site.)** (https://depts.washington.edu/owrc) or visit in person on the first floor of Odegaard Undergraduate Library.

Microsoft Word: It is beneficial in this course for students to have access to Microsoft Word. The Microsoft Office suite is available for free to all UW students and can be downloaded from this **online site** (https://itconnect.uw.edu/wares/uware/microsoft/microsoft-software-for-students/) . If you have additional questions, please contact the TA.

Winter quarter respiratory illnesses – protocols and safety

This class will be conducted in person. Therefore, you should plan to attend class in person unless you meet the criteria for an accommodation from Disability Resources for Students (DRS) or a special arrangement approved by the SPH Office of the Dean that allows you to take the course remotely.

Winter quarter is a time of increased risk of acquiring respiratory illnesses including COVID, RSV, cold, and flu. If you feel ill or exhibit respiratory or other symptoms, you should not come to class. Seek medical attention if necessary and notify your instructor(s) as soon as possible by email.

Please check your email daily BEFORE coming to class. If we need to conduct class remotely because the instructor or a guest speaker is unable to attend in person, we will send all registered students an email with a Zoom link for remote instruction or a plan for making up the class.

Additional recommendations include:

1. **Get boosted with the updated COVID-19 vaccines** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-ku4dK1F60Qwx5sVB9F2zPf2PtjPbEQN0oAXWTw4xyUlayD-3Dn6tkPV-b9qYPVKN_s=) **.**These vaccines are available at clinics and pharmacies, as well as **through UW Medicine** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-rZLyUV3OKyCGDzGK2pj5QyxQq14YnSJSLWoEiG_BskVghbuDCoOCaDQZDj1HhDtQ28=) and local health agencies.
2. **Get your annual flu shot** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-p8AShT60UfuTPp6L1-t9MeMiS8rrCJoY1HdFNMDUpsMKUh95VFz6INtjkf3R2dEH3M=) **.**
3. **Wear a high-quality mask in indoor public spaces and while traveling. Masks are strongly recommended the first two weeks of winter quarter.**High-quality masks help protect against a range of respiratory viruses, and are **available for free in locations on each UW campus** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-vvPawo32qTEDivNHXudxfJ86KNJ7wSFb24jzmDKknFXp_Icn7BOiAk0vTZcfssVCQY=) .
4. **Take a coronavirus test if you have symptoms or have been exposed. R**apid antigen tests are widely available for **free in at on campus locations linked here** (https://www.washington.edu/coronavirus/testing/?mkt_tok=NTI3LUFlUi0yNjUAAAGIkoz8-lh4rJkVTP0uu0x9Qjo03it8Dqjcg-b8MMF3oVqsuHG2uoxdCV_LSqQ4pXPG_I3dC3Pl76N-P0Pk7a0LzK9p8iT0fsJ4PvzXS155og) . The **Husky Coronavirus Testing** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-vzM5PdwrHbUB_QiTo_vUCpaMHj5R4-EPxZHeHpW885q6tKNP_evGy-Nqcx025qjyxc=) voluntary research study is also available for UW students.
5. **Activate WA Notify on your phone** (http://we.discover.uw.edu/NTI3LUFlUi0yNjUAAAGIkoz8-pPDyiN6Gl5YTqHyjmQA3y8d4y3WLT-C66__TuWe9QeeuVV_YE2asMhxcqxv8m4XSZM=) to receive exposure notifications and so that you can anonymously let others know of their exposure if you test positive.

SPH Land Acknowledgement

The University of Washington acknowledges the Coast Salish people of this land, the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

Classroom Climate

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to create an environment that reflects community and mutual caring. We encourage students with concerns about the classroom climate to talk to your instructor, your advisor, a member of the departmental or SPH Diversity Committee and/or the program director. **vg@uw.edu (mailto:vg@uw.edu)** is a resource for students with classroom climate concerns.

Equity, Diversity, and Inclusion

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of university education. In SPH, students are expected:

1. To respect individual differences, which may include, but are not limited to, age, cultural background, disability, ethnicity, family status, gender, immigration status, national origin, race, religion, sex, sexual orientation, socioeconomic status, and veteran status
2. To engage respectfully in the discussion of diverse worldviews and ideologies embedded in course readings, presentations, and artifacts, including those course materials that are at odds with personal beliefs and values
3. To encourage students with concerns about classroom climate to talk to their instructor, advisor, a member of the departmental or SPH EDI Committee, the Assistant Dean for EDI, or the program's director

Bias Concerns

The Office of the Dean has a student concern policy, a faculty concern policy and standard HR procedures for staff concerns. Our 2018 climate survey states that most people in SPH do not report bias incidents because they do not know where to go. Students are encouraged to report any incidents of bias to someone they feel comfortable with, including instructors, advisers, or department staff. They can email dcinfo@uw.edu for immediate follow up. Bias concerns can be anonymously and confidentially reported at this link https://sph.washington.edu/about/diversity/bias-concerns (**Links to an external site. (https://sph.washington.edu/about/diversity/bias-concerns)**). Data are collected by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for resolution and areas are identified for further training.

Personal Pronouns

According to the UW First Year Programs, being an ally is not just about intention, it's also about behavior. We share our pronouns because we strive to cultivate an inclusive environment where people of all genders feel safe and respected. We cannot assume we know someone's gender just by looking at them. We invite everyone to share their pronouns. Faculty training and consultation on pronoun use is available for SPH faculty from the Assistant Dean for EDI. Including pronouns on syllabi is optional as we work to develop and provide further training to all teaching faculty.

Religious Accommodation Statement

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at **Religious Accommodations Policy (https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/)**. Accommodations must be requested within the first two weeks of this course using the **Religious Accommodations Request form (https://registrar.washington.edu/students/religious-accommodations-request/)**.

UW Disability Statement

Access and Accommodations: Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with DRS to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or **uwdrs@uw.edu (mailto:uwdrs@uw.edu)** or **disability.uw.edu (http://depts.washington.edu/uwdrs/)**

Academic Integrity Statement

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the **SPH Academic Integrity Policy (http://sph.washington.edu/students/academicintegrity/)**. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

Safety

Call SafeCampus at 206-685-7233 anytime – no matter where you work or study – to anonymously discuss safety and well-being concerns for yourself or others. SafeCampus's team of caring professionals will provide individualized support, while discussing short- and long-term solutions and connecting you with additional resources when requested.

Excused Absence from Class

Students are expected to attend class and to participate in all graded activities. A student who is anticipating being absent from class due to a Religious Accommodation activity needs to complete the Religious Accommodations request process by the second Friday of the quarter. Students who anticipate missing class due to attendance at academic conferences or field trips, or participation in university sponsored activities should provide a written notice to the instructor ahead of the absence. The instructor will determine if the graded activity can be rescheduled or if there is equivalent work that can be done, as determined by the instructor.

Medical Excuse Notes

Students are expected to attend class and to participate in all graded activities, including midterms and final examinations. To protect student privacy and the integrity of the academic experience, students will not be required to provide a medical excuse note to justify an absence from class due to illness. A student absent from any graded class activity due to illness must request, in writing, to reschedule work as appropriate.

Course session schedule:

Class	Instructor	Topic	Assigned Readings
WEEK 1 Class 1 WED 1/4	Ebi	Introduction and overview	· IPCC AR6 Working Group II: Executive Summary of Chapter 7 (Health, Wellbeing, and the Changing Structure of Com <**https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Chapter07.pdf** (https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Chapter07.pdf) > · Ebi and Hess 2020 <**https://www.healthaffairs.org/doi/epdf/10.1377/hlthaff.2020.01125** (https://www.healthaffairs > · Romanello et al. 2022 *Lancet Countdown* << https://www.lancetcountdown.org/2022-report/>>
WEEK 2 Class 2 MON 1/9	Ebi	International organizations and processes	· US 2022 Lancet Countdown Policy Brief << **https://www.lancetcountdownus.org/2022-lancet-countdown-u-s-brief** (https://www.lancetcountdownus.org/2022-lancet-countdown-u-s-brief/) · UNFCCC <**https://unfccc.int/resource/docs/convkp/conveng.pdf** (https://unfccc.int/resource/docs/convkp/conver <<**https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement** (https://unfccc.int/process paris-agreement) >> · Sultana 2022 << **https://www.academia.edu/76832957/The_Unbearable_Heaviness_of_Climate_Coloniality** (https://www.academia.edu/76832957/The_Unbearable_Heaviness_of_Climate_Coloniality) > > **https://sdgs.un.org/goals** (https://sdgs.un.org/goals)
WEEK 2 Class 3 WED 1/11	Bond	Weather, climate, climate variability, and climate change	· IPCC AR6 SPM Working Group I <**https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pd** (https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf) > · USCRP *Executive Summary Climate Science Special Report* <<***https://www.globalchange.gov/browse/reports/clim national-climate-assessment-nca4-volume-i*** (https://www.globalchange.gov/browse/reports/climate-science-special- assessment-nca4-volume-i) >>
WEEK 3 MON 1/16	***Martin Luther King Day***	No class	No reading assignments
WEEK 3	Ebi	Methods for assessing current and	· Ebi et al. 2020 (detection and attribution) << **https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2020.01004** (https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2020.01004) >>

Class 4 WED 1/18		projecting health risks of climate change	· Vicedo-Cabrera A et al. 2021 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7611104/ (https://www.ncbi.nlm.n · Shindell et al. 2020 (heat) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7125937/pdf/GH2-4-e2019GH000234 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7125937/pdf/GH2-4-e2019GH000234.pdf) >> · McPherson et al. 2017 (Lyme disease) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5730520/pdf/EHP57.pdf (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5730520/pdf/EHP57.pdf) >>
WEEK 4 Class 5 MON 1/23	Boyer	Framework for understanding and managing risks; vulnerability and adaptation assessments	· Vo et al. 2022 (local adaptation) <<https://pubmed.ncbi.nlm.nih.gov/36294229/ (https://pubmed.ncbi.nlm.nih.gov/3 · Scheelbeek et al. 2021 (adaptation low-income countries) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC82760 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8276060/) >> · Boyer et al. 2020 (implementation science) << https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2020.01101 (https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2020.01101) >> · Hess & Ebi 2016 (heat early warning systems) << https://pubmed.ncbi.nlm.nih.gov/27788557/ (https://pubmed.nc · WHO 2015 (climate-resilient health systems) << https://www.who.int/publications/i/item/9789241565073 (https://www.who.int/publications/i/item/9789241565073) >> · WHO 2021 (guidance on vulnerability and adaptation assessments) << https://www.who.int/publications/i/item/9789 (https://www.who.int/publications/i/item/9789240036383) >> · World Health Organization 2021 Health and Climate Change Survey Report << https://www.who.int/publications/i/it (https://www.who.int/publications/i/item/9789240038509) >>
WEEK 4 Class 6 WED 1/25	Busch-Isaksen	Thermal extremes and their health risks	**Policy brief brainstorming sheet submitted on Canvas by Midnight** · Ebi et al. 2021 (overview) << https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2901208-3>> · Jay et al. 2021 (management options) <<https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2901209 · Thompson et al. 2022 (North America heatwave) << https://www.science.org/doi/10.1126/sciadv.abm6860 (https://www.science.org/doi/10.1126/sciadv.abm6860) >> · Lo et al. 2022 (estimating mortality real time) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7612535/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7612535/) >> · Vicedo-Cabrera A 2018 (heat and Paris Agreement) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6217994/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6217994/) >> · Arbuthnott et al. 2016 (adaptation to heat over time) <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4895245/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4895245/) >>
WEEK 5 Class 7 MON 1/30	Ebi	Communicating risk	· Ebi et al. 2021 (burning embers) <https://iopscience.iop.org/article/10.1088/1748-9326/abeadd (https://iopscienc 9326/abeadd) > · Six Americas << https://climatecommunication.yale.edu/about/projects/global-warmings-six-americas/ (https://climatecommunication.yale.edu/about/projects/global-warmings-six-americas/) >> · Lim et al. 2022 (disaster risk management) << https://onlinelibrary.wiley.com/doi/epdf/10.1111/risa.13957 (https://onlinelibrary.wiley.com/doi/epdf/10.1111/risa.13957) >> · Cann et al. 2021 (biases social media) <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8064565/pdf/pone.0250656.p · Abdolkhani et al. 2022 (women literacy) <<https://academic.oup.com/jamia/article-abstract/29/12/2174/6726200?re (https://academic.oup.com/jamia/article-abstract/29/12/2174/6726200?redirectedFrom=fulltext&login=false) >> · Formanski et al. 2022 (risk communication) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9676726/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9676726/) >>
WEEK 5 Class 8	Ebi	Extreme weather and climate events and their health	· EMDAT (disasters database) << https://www.emdat.be (https://www.emdat.be/) >> · McGregor & Ebi 2018 (ENSO) <<https://pdfs.semanticscholar.org/ef65/a32a0926729af7412ccd08eb97806f5e9b90.pdf _ga=2.211595164.80613401.1670646645-65782526.1670646645>>

WED 2/1		impacts / disaster risk management	· Agabiirwe et al. 2022 (floods and undernutrition) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9590165/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9590165/) >> · Zhang et al 2022 (bushfires and mental health) <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9359172/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9359172/) >> · Skinner et al. 2022 (bushfires and disaster preparedness) << https://www.ncbi.nlm.nih.gov/pmc/articles/PMC94705 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9470518/) >> · Thurston et al. 2021 (disasters and violence against women) <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC811 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8112410/) >> · Yari et al. 2020 (flooding mortality <<https://pubmed.ncbi.nlm.nih.gov/33312668/>>
		Food insecurity	
WEEK 6			· FAO State of Food Security 2022 <https://www.fao.org/documents/card/en/c/cc0639en (https://www.fao.org/docu
Class 9 MON 2/6	Ebi	**Political Context Assignment Due**	· Ebi et al. 2021 <https://iopscience.iop.org/article/10.1088/1748-9326/abfcfa/pdf (https://iopscience.iop.org/article **Policy briefs or podcast submitted on Canvas by Midnight**
WEEK 6 Class 10 WED 2/8	Ebi	Air quality **Final Paper topic due**	· https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9740977/pdf/ijerph-19-15616.pdf (https://www.ncbi.nlm.nih.gov/ 15616.pdf) · https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9694065/pdf/main.pdf (https://www.ncbi.nlm.nih.gov/pmc/articles · https://reader.elsevier.com/reader/sd/pii/S0013935122020291?token=F0E5EC926D619464C34C5F64B3F5BEA0E2383375E4CEBB8FCDE975194FCEBB7A5FE88E948B548E5E67 east-1&originCreation=20221218021532 (https://reader.elsevier.com/reader/sd/pii/S0013935122020291?token=F0E5EC926D619464C34C5F64B3F5BEA0E2383375E4CEBB8FCDE975194FCEBB7A5FE88E948B548E5E67B0901EEA0 1&originCreation=20221218021532) · https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9449330/pdf/fpubh-10-947971.pdf **Short description of final paper topic submitted on Canvas by Midnight**
WEEK 7 Class 11 MON 2/13	Morin	Infectious disease	Morin et al. 2018 (vector-borne disease early warning systems)
WEEK 7 Class 12 WED 2/15	Hess	Biodiversity loss **Risk communication due**	· Obura et al. (2022) <https://www.cell.com/one-earth/fulltext/S2590-3322(22)00589-9?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2590332222005899%3Fshowall% earth/fulltext/S2590-3322(22)00589-9?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS259033 · IPBES Summary for Policy Makers 2019 <https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.p (https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf) > **Risk communication media submitted on Canvas by Midnight**
WEEK 8 MON	***President's Day***	No class	No reading assignments

2/20			
WEEK 8 Class 13 WED 2/22	Matthews-Trigg Ranadive Boyer	Experiences from the field on climate change impacts on health care / health systems	
WEEK 9 Class 14 MON 2/27	Ebi	Mitigation policies and health co-benefits **Peer review due**	· IPCC AR6 WGIII SPM 2022 <<https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf>> · Hamilton et al. 2021 (Paris Agreement) <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7887663/pdf/main.pdf>> · Hess et al. 2020 (health co-benefits) <<**https://ehp.niehs.nih.gov/doi/10.1289/EHP6745** **(https://ehp.niehs.nih.gov/** · Lo et al. 2019 (Paris and heat-related mortality) <<**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6551192/** **(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6551192/)** >>
WEEK 9 Class 15 WED 3/1	Ebi	Topic to be determined based on student interests, such as changes in our land and oceans	Reading assignments: TBD
WEEK 10 Class 16 MON 3/6	Student panel	Students working on climate and health	No reading assignments
WEEK 10 Class 17 WED 3/8	Ebi	Lighting talks for 518 students	No reading assignments

NO Final Exam – Final Paper due March 10 by Midnight

Course Summary:

Date	Details	Due
Wed Jan 4, 2023	**ENV H 418 A Wi 23: Understanding and managing the health risks of climate change** **(https://canvas.uw.edu/calendar?event_id=3028659&include_contexts=course_1612692)**	1pm to 2:30pm

Date	Details	Due
Sun Jan 8, 2023	Introduction survey (https://canvas.uw.edu/courses/1612692/assignments/8012949)	due by 11:59pm
Mon Jan 9, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028660&include_contexts=course_1612692)	1pm to 2:30pm
Wed Jan 11, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028661&include_contexts=course_1612692)	1pm to 2:30pm
Mon Jan 16, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028662&include_contexts=course_1612692)	1pm to 2:30pm
Wed Jan 18, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028663&include_contexts=course_1612692)	1pm to 2:30pm
Mon Jan 23, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028664&include_contexts=course_1612692)	1pm to 2:30pm
Wed Jan 25, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028665&include_contexts=course_1612692)	1pm to 2:30pm
Fri Jan 27, 2023	Policy brief brainstorming (https://canvas.uw.edu/courses/1612692/assignments/8070322)	due by 11:59pm
Mon Jan 30, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028666&include_contexts=course_1612692)	1pm to 2:30pm
Wed Feb 1, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028667&include_contexts=course_1612692)	1pm to 2:30pm
Mon Feb 6, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028668&include_contexts=course_1612692)	1pm to 2:30pm
	Assignment 1: Political context (https://canvas.uw.edu/courses/1612692/assignments/7917009)	due by 11:59pm
Wed Feb 8, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028669&include_contexts=course_1612692)	1pm to 2:30pm
	Final paper topic selection and summary (https://canvas.uw.edu/courses/1612692/assignments/7917220)	due by 11:59pm
Mon Feb 13, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028670&include_contexts=course_1612692)	1pm to 2:30pm

Date	Details	Due
Wed Feb 15, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028671&include_contexts=course_1612692)	1pm to 2:30pm
	Assignment 2: Risk communication (https://canvas.uw.edu/courses/1612692/assignments/7917164)	due by 11:59pm
Mon Feb 20, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028672&include_contexts=course_1612692)	1pm to 2:30pm
Wed Feb 22, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028673&include_contexts=course_1612692)	1pm to 2:30pm
Mon Feb 27, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028674&include_contexts=course_1612692)	1pm to 2:30pm
	Assignment 3: Risk communication peer review (https://canvas.uw.edu/courses/1612692/assignments/7917177)	due by 11:59pm
Wed Mar 1, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028675&include_contexts=course_1612692)	1pm to 2:30pm
Mon Mar 6, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028676&include_contexts=course_1612692)	1pm to 2:30pm
Wed Mar 8, 2023	ENV H 418 A Wi 23: Understanding and managing the health risks of climate change (https://canvas.uw.edu/calendar?event_id=3028677&include_contexts=course_1612692)	1pm to 2:30pm
	Lightning talks (graduate students only) (https://canvas.uw.edu/courses/1612692/assignments/7917316)	due by 2:20pm
Fri Mar 10, 2023	Assignment 4: Final Paper (https://canvas.uw.edu/courses/1612692/assignments/7917179)	due by 11:59pm