

YALE CENTER ON CLIMATE CHANGE & HEALTH
2022 SUMMER INTERNSHIP PROGRAM

The Yale Center on Climate Change and Health (YCCCH) is pleased to announce its Summer Internship Program, which matches Yale students with meaningful internships related to climate change and health research and practice. **Initial applications are due Friday, January 22, 2022**. Internships are available at the following organizations:

- California Department of Public Health
- Connecticut Department of Public Health
- Connecticut Institute for Resilience and Climate Adaptation (CIRCA)
- Dejusticia
- East Shore District Health Department
- Minnesota Department of Public Health
- New Haven City Plan Department
- North Carolina Climate and Health Program at the NC Department of Health and Human Services
- Yale Center on Climate Change and Health
- Yale Program on Healthcare Environmental Sustainability

Eligibility:

- Returning (non-graduating) Yale School of Public Health MPH students
- Current [YCCCH Student Associates](#) (non-graduating)
- Undergraduate Environmental Studies majors (non-graduating)

Process: This is a two-stage application process:

- **Stage 1: Eligible students apply to be matched with a specific internship from the list of opportunities (see below).** To apply, send a cover letter addressed to the host organization or Dr. Laura Bozzi, YCCCH Director of Programs, that identifies your preferred project and describes the skills, experience, and perspective you would bring to the project. If there are required skills or eligibility criteria listed for that project, be sure to respond to those explicitly. With the cover letter, include an up-to-date resume/CV and a transcript (unofficial is ok). ***You may apply to more than one internship; to do so, you must write one cover letter per internship project.*** Stage 1 applications are due **Friday, January 22, 2022** (11:59pm) by email to Mr. Mauro Diaz-Hernandez, YCCCH Program Administrator (mauro.diaz-hernandez@yale.edu). Each internship host will review its applications (some may also conduct interviews), and determine who to offer the internship to; YCCCH will relay offers to the applicants.
- **Stage 2: Those students matched with a YCCCH internship apply for funding through Yale summer funding opportunities.** YCCCH has limited funding that is prioritized for MPH students in the climate change and health concentration; specific application information will be provided to eligible students when notified about the internship matching outcome. The majority of students will need to apply for internship funding from other Yale sources; YCCCH can provide guidance, if needed.

Questions? Contact Mr. Mauro Diaz-Hernandez, YCCCH Program Administrator (mauro.diaz-hernandez@yale.edu).

PROJECT DESCRIPTIONS

Host: California Department of Public Health - Climate Change and Health Equity Unit

Project title: Management and Expansion of Climate Change and Health Vulnerability Indicators for California

Description: The Climate Change and Health Equity Unit at the California Department of Public Health seeks an intern to assist with the activities of the CDPH Climate Change and Health Equity Section's research team. Our team provides data to state and local stakeholders that help in assessing local climate and health vulnerability. These include demographic and social indicators, climate exposure indicators, and health outcomes indicators. The intern will be updating and managing our current data indicators using R and R Shiny applications. The intern may also develop new indicators, analyze health data for new research projects, perform literature reviews, and/or write brief reports related to the indicators and findings. The project goals are to maintain our current data visualization platform and to assist in our expansion of that platform to include new indicators, health data, and statewide summaries.

Preferred qualifications: Epidemiology background, data management and analysis experience using R, experience with R Shiny preferred, experience working with data sets such as Census products and/or death certificate data helpful, GIS experience may also be helpful.

Location: Online

Eligibility: MPH students, Other graduate or professional students

Host: Connecticut Department of Public Health

Project titles: Five (5) projects offered:

- 1. Climate and Health: Vulnerable Infrastructure**
- 2. Air Quality/Extreme Heat: Educational Curriculum**
- 3. Climate Change Impacts: Asthma Levels**
- 4. Food Security and Equity**
- 5. Environmentally Safe Housing**

Description: The Connecticut Department of Public Health (DPH) is forming a new Office of Climate Change and Public Health (OCPH). DPH under its Environmental Health & Drinking Water Branch has developed the OCPH and our team is currently seeking to partner with graduate level interns to help develop and expand Climate Change and Public Health efforts. Working with partners throughout the state, including the Yale Center on Climate Change and Health, DPH will implement actions that enhance health equity, increase resiliency, and ensure Connecticut communities are prepared for the health impacts of climate change. The new DPH OCPH will focus on populations most vulnerable to the health effects of climate change and address social determinants of health in the context of climate change. The OCPH is offering the following summer opportunities:

- 1. Climate and Health: Vulnerable Infrastructure** - Topic: Water Related Illnesses and Extreme Events. The intern will work with stakeholders to develop GIS data layers that identify public water systems serving critical facilities (CF) and large subsurface sewage disposal systems at risk due to climate change effects (including storm surge, localized flooding, sea level rise, and extreme drought events). Critical facilities include hospitals, shelters, nursing homes, and other places that would be severely and quickly impacted by a loss of public water service or sewage disposal in a way that endangers human life. Project steps include: (a) Develop a secure GIS database compatible with existing DPH GIS to represent critical facilities

and large subsurface sewage disposal systems at risk due to climate change; (b) Identify PWS that serve CF and facilities that are their own PWS. (c) Develop guidelines to assess critical facilities that are located far from their sources (to determine what infrastructure facilities are linked to critical facilities) improving restoration times. (d) Develop GIS layers to complement data DEEP/CIRCA have developed on zones of shared risk, particularly within socially vulnerable communities.

2. **Air Quality/Extreme Heat: Educational Curriculum** - The intern will work with the OCPH and DPH staff on a project to develop educational curriculum materials for K-12 teachers and staff on reducing student and staff exposures to extreme heat and ozone events. Separate modules are anticipated for the different staff groups, including teachers, school nurses, and administrators. Tasks may include: researching related curricula developed by other states; researching best practices in adult education; developing curriculum materials; and seeking feedback from stakeholders.
3. **Climate Change Impacts: Asthma Levels** - Working jointly between the DPH Asthma Program and OCPH, review existing data and literature to determine how climate change is affecting asthma levels in vulnerable populations. The intern also will review other states' programs addressing the link between asthma and climate change, and produce a summary brief. The intern also will identify funding sources used to create climate and health related programs that address asthma. Research and prepare a proposal for how the OCPH can incorporate addressing asthma, including through mapping, public health interventions, and communication and education.
4. **Food Security and Equity** - Work with partners to evaluate how regions are preparing for the effects of climate change on food availability and safety. Review and summarize existing action plans to identify gaps and needs within the plans.
5. **Environmentally Safe Housing** - Weatherization of homes helps to reduce greenhouse gases and adds climate resiliency. Thermal comfort (indoor temperature) is improved if existing building performance is enhanced by weatherization. Buildings with stable temperatures are safer places to shelter in place during extreme weather, pandemics, or other extended crises. Lead paint was identified as a health barrier for weatherization. The intern will research current laws and programs to identify pathways to weatherization for homes that have health barriers to energy-efficiency improvements (e.g., asbestos, lead, mold). The intern also will make recommendations on how DPH can support weatherization efforts.

Preferred qualifications:

Project 1: GIS mapping

Project 2: Communications, developing curriculum, education

Projects 3 - 5. The intern's project may be tailored to the student's interests and skill sets.

Location: In person and online

Eligibility: All projects: Undergraduates, MPH students, Other graduate or professional students

Host: Connecticut Institute for Resilience and Climate Adaptation (CIRCA) and Yale Center on Climate Change and Health (YCCCH)

Project title: Municipal Tools for Extreme Heat

Description: This is a joint project between UConn CIRCA and YCCCH and is part of CIRCA's Resilient Connecticut project to create a municipal "toolkit" for Connecticut municipal decision-makers in preparing for a changing climate. Specifically, the intern will work to create a toolkit module focused on extreme heat vulnerability, building on work by the project intern in summer 2021. The module will describe how heat stress and often co-occurring air quality impairment affects human health, explain the Resilient Connecticut project's findings on

extreme heat, and provide guidance on how municipalities can better protect health through communications, services (including cooling centers), and adopting or revising protocols based on best practices. Once the module materials are developed, the intern will pilot them and revise based on feedback (as time allows).

Qualifications: Preferred: Knowledge of climate science, public health, and environmental justice; strong written communication skills; experience with visual communication; attention to detail, self-starter, and independent worker; reliability and professionalism.

Location: Online (some in person if possible)

Eligibility: Undergraduates, MPH students, Other graduate or professional students

Host: Dejusticia (Bogota, Colombia)

Project title: Climate change and human rights litigation research

Description: Dejusticia is a center for legal and social studies located in Bogotá, Colombia. They are dedicated to strengthening the rule of law and promoting human rights in Colombia and in the Global South. They promote social change through rigorous studies and solid public policy proposals, and carry out advocacy campaigns in high-impact forums. They also conduct strategic litigation and design and deliver educational and training programs. For summer 2022, Dejusticia requires a researcher who can identify and research the following topics:

1. Climate litigation on human rights and a healthy environment in the world.
2. The main normative sources and obligations of the States in relation to the effects of climate change on human rights.
3. Normative trends of judges in the outlined litigations.
4. The human rights affected and their causal relationship(s).
5. The main barriers in litigation.

Preferred qualifications: Justice data collection & analysis

Location: Online or in person

Eligibility: Undergraduates, MPH students, Other graduate or professional students

Host: East Shore District Health Department (Branford, CT)

Project title: Climate Change in Connecticut : A Photojournalistic Road Map to Awareness

Description: This project aims to produce a photojournalism collection of written and oral stories about how climate change is impacting Connecticut residents. This project will objectively communicate facts to educate our residents that climate change has been and is currently in play and impacting every aspect of our anthropological ecosystem – physical, social, financial, emotional, etc. Our intent is to tell the visual “human story” of climate change, supported by existing state and local research, with the end goal to promote awareness and positive, sustainable behavioral change to soften mankind’s influences on our local ecology.

- Aim 1: Provide a review of existing climate change-related studies and data sources relevant to the selected communities.
- Aim 2: Within the selected communities (to include coastal, non-coastal, urban and rural communities): develop an outreach plan and list of oral history interview questions, identify interview subjects, and conduct oral history interviews.
- Aim 3: Create a photojournalism collection of stories and visuals. The intended outcome is to demonstrate that climate change, while at its baseline/core impacts everyone, the challenges vary greatly depending on one’s socioeconomic status and the community one resides within.
- Aim 4: Develop and assist in the execution of a public education and outreach effort, based on the photojournalism project

Preferred qualifications: Experience conducting interviews/oral histories, ability to review data, assemble oral histories and photos into a photojournalism media format.

Location: Combination of on-line & in-person in Branford, CT

Eligibility: Undergraduates, MPH students

Host: Minnesota Department of Health's Climate & Health Program

Project title: Communications and Outreach Internship

Description: The Climate and Health Program is seeking an intern to work on two related efforts. First, the intern will conduct outreach and dissemination on two ongoing projects. The first project was a survey of healthcare providers about climate change and health, which was conducted in 2020 to gain a better understanding of how climate change clinically manifests in Minnesota and to identify and respond to barriers facing nurses and physicians in addressing climate change with their patients. The second project was to create a resource, [*Responding to Youth Emotional Distress due to Climate Change: A Guide for Parents and Caregivers*](#), in response to the recognition that youth are increasingly reporting climate anxiety, and that parents and caregivers uniquely impact how children think about climate change and can influence feelings of powerlessness in the face of the climate crisis. For both of these projects, the intern will work toward a goal that key stakeholders partners are aware of the study and resource, results, and recommendations. Action steps include: identify key stakeholders and partners; identify communications channels (e.g., conferences, newsletters, blogs, interest groups); package information into materials tailored to audiences and channels (e.g., info sheet, presentation, web content) (Note: This will likely require collaboration with project steering group which includes university and nonprofit groups like Health Professionals for a Healthy Climate).

Second, the intern will review and update the [Program webpages](#) and web materials. The goal is for the Program's web presence to reflect up-to-date, well-organized, and comprehensive information. Last year, Program webpages had 17,870 hits. Action steps include: Review webpages and web materials; make recommendations for updates and modifications to content. (Note: This will likely require research); and work with the MDH web master to make webpage and material updates. (Note: This will likely require working with materials in Adobe InDesign).

Preferred qualifications: Adobe Creative Suite (particularly InDesign and Dreamweaver), accessibility, government writing style and tone, communications

Location: Online or in-person

Eligibility: Undergraduates (those with communications or public health- related majors encouraged to apply), MPH students

Host: New Haven City Plan Department

Project title: New Haven Resiliency and Adaptation: Planning for Climate Change in a Coastal City

Description: The City Plan Department, in collaboration with other agencies, is initiating a comprehensive resiliency and adaptation planning process, to develop specific land use policies and ordinances for the next century of change and shifting sea level rise (SLR) projections. This includes developing a resiliency/adaptation strategy with a specific and actionable implementation plan. This will be built upon a stock taking of existing research and planning work both by City of New Haven and partner institutions, identifying gaps, updating data, and identifying best practices.

This project is a cross cutting endeavor that engages many areas of expertise as well as different levels of scale of inquiry and planning. Depending on the Fellow's particular interests or skill set the Fellowship project

could range from a broader research /analytic project such as adaptation assessment tools or concentrating on a detailed place-based water's edge design proposal. The specific assignment would be co-designed with the applicant and well defined prior to commencement of work.

Assignments might include:

- Review existing data sets, plans and initiatives by the City of New Haven and partners to identify gaps as well as alignments between available knowledge and data sources.
- Research best practices and policies from similarly situated cities.
- Collect and analyze data regarding mapping and measuring existing conditions and forecasting potential impacts and solutions using 3D GIS platforms or other climate scenario and visualization tools.
- Assist staff with outreach and engagement to foster a collaborative and transparent process with stakeholders around climate change adaptation.
- Use creativity and design to develop a specific solution to a place-based climate or resiliency challenge.
- Focus on specific sector impacts such as transportation or waste management.

Preferred qualifications: This position requires strong research, writing and data analysis skills as well as graphics and communications and interpersonal and creative problem-solving skills. The department is a lean and fast paced environment with a high-volume workload so the applicant must be resourceful and self-directed. Students with a focus on urban studies, law, environmental studies, architecture, public health are especially encouraged to apply, however anyone with a passion for cities is welcome.

Location: Online (mostly) and/or at New Haven City Hall

Eligibility: Undergraduates, MPH students, Other graduate or professional students

Host: North Carolina Climate and Health Program at the North Carolina Department of Health and Human Services

Project title: North Carolina Climate and Health Program Evaluation Internship

Description: The North Carolina Climate and Health Program, housed in the North Carolina Department of Health and Human Services (NC DHHS), aims to build community resilience against the public health effects from complex climate hazards of heat, impaired air quality from wildfire smoke and flooding. The program seeks an intern to assist in the collection of baseline data to support the next 5 years of programmatic evaluation around the areas of service access, resource access, communication, education and instruction, and health policy. The intern will work closely with Climate and Health Program staff and local area stakeholders to ensure data collection for prioritized evaluation addressing the following questions:

1. To what extent has the recipient strengthened and expanded stakeholder engagement to support the identification of climate-sensitive health threats affecting the communities within the jurisdiction?
2. To what extent has the recipient created adaptation actions that are responsive to the threats described in the Climate Impact Compendium, feasible and include achievable outcomes?
3. What individual-level outcomes did the recipient's adaptation actions improve in the intended population?
4. What systems-level outcomes did the recipient's adaptation actions improve for the intended population?
5. What health outcomes did the recipient's adaptation actions improve in the intended population?

Preferred qualifications: Qualitative and quantitative data collection and analysis, would build on student's existing skill set

Location: Online and/or in-person; online possible and in-person would potentially allow for field experience that would involve some in-state travel.

Eligibility: Undergraduates, MPH students, Other graduate or professional students

Host: **Yale Center on Climate Change and Health**

Project title: **Policy Impact Unit: Building public health capacity to address climate impacts**

Description: The intern will join the YCCCCH Policy Impact Unit (PIU), which seeks to leverage YCCCCH research and public health practice projects to inform local, state, and national climate and health policy and programs. The specific internship project will be collaboratively determined by aligning the student's skills and interests with the PIU's prioritized project list. Possible projects include:

- YCCCCH is part of the CT Department of Health's CDC climate change and health grant program. For this program, the intern would develop a template municipal extreme heat and air quality response plan. Developing the template plan would include collaborating with CT DPH and other project partners, researching best practices, engaging stakeholders (through informal interviews or group meetings), and revising based on feedback.
- YCCCCH is exploring a project to support health departments to incorporate climate change into existing programs. For this project, the intern would research specific programs at health departments (e.g., maternal and child health services; vector-borne disease epidemiology; food safety; asthma program; drinking water program) and develop trainings and tools to incorporate climate impacts into the operation of these programs. Developing the materials would include collaborating with project partners, researching best practices, engaging stakeholders and/or reviewing qualitative research results, and revising based on feedback.

Qualifications: Knowledge of how climate change impacts health; qualitative research; strong research and writing skills; ability to work both independently and collaboratively

Location: Virtual (some in-person meeting in New Haven is possible)

Eligibility: Undergraduates, MPH students, Other graduate or professional students

Host: **Yale Program on Healthcare Environmental Sustainability**

Project title: **Greenhouse gas emissions impacts of pandemic-related telehealth expansion**

Description: Healthcare is responsible for 5% of total global greenhouse gas (GHG) emissions, a quarter of which is from the United States healthcare sector alone. To prevent catastrophic effects of climate change, urgent reductions in GHG emissions are needed. Over the past decade telehealth has been utilized more frequently to deliver healthcare remotely, improving access and quality, and reducing costs, for example by providing subspecialty care in remote locations. The COVID-19 pandemic has dramatically accelerated its adoption. Telehealth is one strategy that, in certain circumstances, can reduce travel-related emissions, offsetting increases in technology emissions to deliver care virtually, while improving access to care. However, barriers to telehealth can widen disparities due to lack of affordable technology and broad band access.

What was the impact of rapid expansion of telehealth due to the pandemic on greenhouse gas emissions for the Yale New Haven Health System? Which patient populations, providers, and specialties utilized these services the most? Which may benefit from continuation of program investments post-pandemic? These questions, and more will be addressed in this project, a collaboration between the Yale University Energy Studies Program, the Yale Center on Climate Change and Health, and Yale New Haven Health System Center for Sustainable

Healthcare. Work products include recommendations to Yale New Haven Health System, and academic publications with co-authorship.

Preferred qualifications: Biostatistics skills essential, writing skills a plus.

Location: Virtual, or hybrid if preferred

Eligibility: MPH students, Other graduate or professional students