Aaron Salzberg PhD (Clearance: TS/SCI)
Director, the Water Institute at UNC
Don and Jennifer Holzworth Distinguished Professor
Department of Environmental Sciences and Engineering
Gillings School of Global Public Health
University of North Carolina at Chapel Hill
salzbergaa@unc.edu
https://waterinstitute.unc.edu

#### I. Recent Selected Accomplishments

- Secured over \$2 million in grant funds for the Water Institute (since 2019); an additional \$3, 325,000 is being processed.
- Raised over \$3 million in gift funds for the Water Institute (since 2019), including \$350k in student scholarships
- Led the development and launch of a new global, multistakeholder, partnership globalleadfreewater.org to eradicate the use of lead-leaching parts and components in the construction of new water systems by 2025.
- Built the <u>UNC Water and Health Conference</u> into the World's largest, annual, international Conference on water and health and a recognized follow-up mechanism for the commitments made at the 2023 UN Conference on Water related to water and health.
- Supported the development of the first White House Action Plan on Global Water Security.
- Lead UNC's engagement in a multi-partner consortium that successfully bid to be a prime contractor under USAID's Water and Development II (WADI II) Indefinite Delivery Indefinite Quantity Contract. USAID's largest contracting mechanism on water.
- Under the auspices of the Research Board of the World Meteorological Organization, led the
  development of the WMO's first <u>Research Strategy on Hydrology</u>. The Strategy was adopted by
  193 countries. The Secretary General of the WMO has sent the Strategy along with a letter to the
  scientific funding agencies of each of the 192 countries urging them to prioritize these research
  areas in their own funding plans.
- Co-edited and co-authored the UNECE "Practical Guide for the Development of Agreements or
  other Arrangements for Transboundary Water Cooperation." This checklist was endorsed by
  UNECE members on September 29 at a meeting of the parties to the UNECE Watercourse
  Convention. This guide should provide support to those countries seeking to develop formal and
  informal arrangements on transboundary waters leading to greater cooperation and more
  effective and resilient management.
- Nominated by the National Academy of Sciences to the National Climate Security Roundtable.
  The roundtable was established by Congress to provide strategic guidance to U.S. national
  intelligence agencies on how to identify and mitigate climate related risks to U.S. strategic
  interests. We have worked directly with Avril Haines, the Director of National Intelligence the
  President's daily intelligence briefer.
- Helped secure a NSF GFRP fellowship for PhD student Lucy Tantum
- Helped secure a Don and Jennifer Holzworth Climate Change Fellowship for PhD student Sarah Lebu.

## **II. Earned Degrees**

PhD	Genetic Toxicology, Department of Biological Engineering, Massachusetts Institute of Technology (1998) Advisor: Peter Dedon
MS	Technology and Public Policy, Technology and Policy Program, Massachusetts Institute of Technology (1998) Advisor: John Ehrenfeld
MS	Aerospace Engineering, Department of Aerospace Engineering, University of Maryland (1986) Advisor: Inderjit Chopra
BS	Aerospace Engineering, University of Maryland (1983)

## **III. Employment History**

2019 – present	Don and Jennifer Holzworth Distinguished Professor, Department of Environmental Sciences and Engineering, Gillings School of Global Public Health, University of North Carolina at Chapel Hill
2012 - 2019	Chief, Water Division, U.S. Department of State, Washington DC
2012 – 2015	Special Coordinator for Water, U.S. Department of State, Washington DC (appointed position, not senate confirmed)
2007 - 2012	Supervisory Foreign Affairs Officer, U.S. Department of State, Washington DC
2001 - 2007	Foreign Affairs Officer, U.S. Department of State, Washington DC
1998 – 2001	Physical Sciences Admin Officer, U.S. Department of State, Washington DC (AAAS Diplomacy Fellow)
1996 – 1998	Harvard Law School Mediation Program, Cambridge, MA (unpaid)
1986 – 1992	Spacecraft Analyst / Program Manager, Naval Center for Space and Technology, Washington DC

## IV. Appointments, Honors and Awards

### A. Appointments

2023 – present	National Academies of Sciences U.S. Global Change Research Program Advisory Committee
2023	U.S. Delegation to the 19 <sup>th</sup> World Congress of the World Meteorological Organization (led by the National Oceanographic and Atmospheric Agency)
2022-present	National Academies of Sciences Roundtable on Climate Security
2021 – present	Senior Fellow, Center for Strategic and International Studies

2020 – present	World Meteorological Organization Research Board
2020 – present	World Meteorological Organization Hydrological Coordination Panel
2020 – present	Scientific Planning Committee for World Water Week
2019 – present	Global Fellow, Woodrow Wilson Center

### B. Honors and Awards

2022	Faculty Award for Global Excellence, University of North Carolina
2019	U.S. Water Prize, U.S. Water Partnership
2018	Superior Honor Award, U.S. Department of State
2017	Meritorious Honor Award, U.S. Department of State
2016	Superior Honor Award, U.S. Department of State
2013	President's Award, U.S. Water Alliance (declined)
2010	Frank E. Loy Award for Environmental Diplomacy, U.S. Department of State
2010	Superior Honor Award, U.S. Department of State
2006	Superior Honor Award, U.S. Department of State
2006	Meritorious Honor Award, U.S. Department of State
2001	Meritorious Honor Award, U.S. Department of State
1999	Superior Honor Award, U.S. Department of State
1999	Meritorious Honor Award, U.S. Department of State
1998, 1999	American Association for the Advancement of Science Diplomacy Fellowship
1997	Young Investigator's Award, American Association for Cancer Research
1993	Alan Berman Research Publication Award, Naval Research Laboratory
1990	Outstanding Performance Award, Naval Center for Space and Technology
1989	Outstanding Performance Award, Naval Center for Space and Technology
1988	Outstanding Performance Award, Naval Center for Space and Technology
1985, 86, 87	United States Army Rotorcraft Fellow, United States Army

### C. Mentored Students Honors and Awards

2023	National Science Foundation Graduate Research Fellowship (4 years) – Lucy Tantum
2020	Don and Jennifer Holzworth Climate Fellowship (2 years) – Sarah Lebu

### V. Research, Scholarship, and Creative Activities

### A. Reports, Technical Guides, Published Books, Book Chapters, Edited Volumes, and Policy Briefs

A1. Reports and Technical Guides (editor)

- Rieu-Clarke, A., Tignino, M., **Salzberg, A.,** Koeppel, S., Sangbana, K. 2021 <u>Practical Guide for the Development of Agreements or other Arrangements on Transboundary Water Cooperation</u>. United Nations Publication. ISBN 978-92-1-117271-3
- A2. Policies Adopted (primary author and process chair)
- Salzberg, A (ed.) 2021 <u>WMO Hydrological Research Strategy 2022-2030 "Operational Hydrology Research Priorities</u> Adopted at the Extraordinary Session of the World Meteorological Congress (2021)

#### A3. Book Chapters

- 4 Manga, M., Semiyaga, S., \*Lebu,S., Nakagiri,A., Niwagaba, B.C., **Salzberg, A.**, \*Muoghalu, C., (Accepted 2023). Bioprocessing of organic municipal solid waste for biomethane and biohydrogen production. In Material and Energy Recovery from Solid Waste for Circular Economy. CRC Press Taylor & Francis Group, Florida, USA.
- \*Lebu, S., \*Muoghalu, C., **Salzberg, A.,** Semiyaga, S., Niwagaba, B. C., Manga, M++. (Accepted 2023). Evaluation of social acceptance and market for human excreta-derived products. In Material and Energy Recovery from Solid Waste for Circular Economy. CRC Press Taylor & Francis Group, Florida, USA.
- Salzberg, A., Mathur, P., and Dedon, P. 1996 The intrinsic flexibility and drug-induced bending of calicheamicin DNA targets in B. Meunier (eds.), NATO Workshop: DNA Cleavers and Chemotherapy of Cancer or Viral Diseases, Kluwer Academic Publishers, Dordrecht.
- Salzberg, A. Informed discussion / Formal authority," in B. Shrag (ed.), *Research Ethics*" *Fifteen cases and commentaries*, 1, Association for Practical and Professional Ethics, Bloomington, 1997.

#### B. Refereed Publications

- B1. Published and Accepted Journal Articles
- Anderson, D., Mahamane, E., Bauza, V., Kairou Oudou Bilo Mahamadou, Tantum, L., **Salzberg, A.**, Effects of environmental conditions on healthcare worker wellbeing and quality of care: A qualitative study in Niger. PLOS Glob Public Health. 2023 Dec 20;3(12):e0002590. doi: 10.1371/journal.pgph.0002590. PMID: 38117837; PMCID: PMC10732385.
- Lebu, S., Lee, a., **Salzberg, A.**, Bauza, V., (2024) Science of the Total Environment, Adaptive strategies to enhance water security and resilience in low- and middle-income countries: a critical review. Science of the Total Environment; <a href="https://doi.org/10.1016/j.scitotenv.2024.171520">https://doi.org/10.1016/j.scitotenv.2024.171520</a>
- Lebu, S., Gyimah, R., Nandoya, E., Brown, J., **Salzberg, A.,** Manga, M. (2024)
  Assessment of sanitation infrastructure resilience to extreme rainfall and flooding:
  Evidence from an informal settlement in Kenya. Journal of Environmental Management;
  <a href="https://doi.org/10.1016/j.jenyman.2024.120264">https://doi.org/10.1016/j.jenyman.2024.120264</a>

- Lebu, S., Kibone, W., Muoghalo, C., Ochaya, S., **Salzberg**, **A**, Bongomin, F., Manga, M. (2023) Soil-transmitted helminths: the impact of co-infections and implication for control and elimination. PLOS Neglected Tropic Diseases. <u>Soil-transmitted helminths: A critical review of the impact of co-infections and implications for control and elimination | PLOS Neglected Tropical Diseases.</u>
- Bauza V, Furey S, Alvarez-Sala J, Bartram J, Danert K, De France J, Diarra S, Fisher M, Hansen D, Hutchins P, Lindsay C, Mulhern R, Norman R, Ramseier C, Strandberg J, Studer P, **Salzberg A.** (2023) Eliminating lead exposure from drinking water—A global call to action. PLOS Water 2(4): e0000122. https://journals.plos.org/water/article?id=10.1371/journal.pwat.0000122
- 9 VerKuilen, A., Sprouse, L., Beardsley, R., Lebu, S., **Salzberg, A.**, & Manga, M. 2023. Effectiveness of the Swachh Bharat Mission and barriers to ending open defecation in India: a systematic review [Systematic Review]. *Frontiers in Environmental Science*, 11. https://doi.org/10.3389/fenvs.2023.1141825
- 8 Conaway, K., Lebu, S., Heilferty, K., **Salzberg, A.**, and Manga, M. 2023. On-site sanitation system emptying practices and influential factors in Asian low- and middle-income countries: A systematic Review. Hygiene and Environmental Health Advances, 6, 100050. https://doi.org/10.1016/j.heha.2023.100050
- Bartram, J., Fisher, M., **Salzberg, A.**, Liang, K. 2021 Prevention of Unnecessary Lead Poisoning. Water Science Policy; May 20, 2021
- **Salzberg, A.A.,** and Dedon, P. 2000 DNA Bending is a determinant of calicheamicin target recognition. *Biochemistry* 39: 7605-7612
- **Salzberg, A.** and Dedon, P. 1997 An improved method for the rapid assessment of DNA bending by small molecules. *Journal of Biomolecular Structure & Dynamics* 15(2):277-84
- 4 Yu, L., **Salzberg, A.**, Dedon, P. "New Insights into Calicheamicin-DNA Interaction Derived from a Model Nucleosome System," *Bioorganic and Medicinal Chemistry*, 3(6):729-741.
- Haughton, J and **Salzberg, A.**, 1990 Combined high level acoustic and mechanical vibration testing and analysis," paper presented at the *Proceedings* of the 8<sup>th</sup> International Modal Analysis Conference, 1990.
- 2 **Salzberg, A** 1989 Validation of LACE spacecraft vibroacoustic prediction model. *J. Environmental Sciences*, **32**, 1989, ppp.53-59
- Salzberg, A. 1997 Commentary on 'The social responsibilities of biological scientists' *Journal of Science and Engineering Ethics I, 3*, pp. 149-152.
- B2. Submitted Articles (in Review or Revision)

Gregory, A., Kelly, E., Landa, S., Muthike, D., Samo, J., Lopez, J., Burrows, G., McManus, C., Sobesey, M., **Salzberg, A.**, Cronk, R., Challenges and opportunities for enhancing groundwater data access and usability in low and middle-income countries: insights and recommendations from WaSH researchers and practitioners, (in review)

Lebu, S., Kowalski, C., Dalton, J., Gyimah, R., Cronk, R., **Salzberg, A.**, Manga, M., Resilience of sanitation systems under extreme rainfall and flooding conditions: a systematic review and evidence mapping (**in review**)

Lineberger, H., Cronk, R., Kpodzro, S., **Salzberg, A.**, Anderson, D., Does WAHS FIT improve water, sanitation, and hygiene and related health impacts in healthcare facilities? A systematic review (**in review**)

Anderson, D., Lineberger, H., Cronk, R., Kpodzro, S., **Salzberg, A.**, (**in review**) Does WASH FIT improve, water, sanitation, and hygiene and related health impacts in healthcare facilities, Hygiene and Environmental Health Advances

Miller, J., Staddon, C., **Salzberg, A.,** Lucks, J., Bruine de Bruin, W., Young, S., (**Under revision**) Widespread global concern over harm from drinking water, Nature Communications

Gyimah, R., Lebu, S., Owusu-Frimpong, I., Ngasala, M. T., Fisher, M., Semiyaga, S., **Salzberg, A.**, Manga, M., (**in review**)) Septic System and Impacts on Groundwater Contamination: A Systematic Review. Science of the Total Environment. Manuscript ID: STOTEN-D-23-08792

Muoghalu, C., Lebu, S., Bongomin, F., Ochaya, S., **Salzberg, A.**, Manga, M. (**in review**) Prevalence, Influencing Factors and Intervention Strategies for Soil Transmitted Helminths amongst Preschool - and School - Aged Children in India: A systematic review and meta-analysis. BMC Journal of Infectious Diseases of Poverty. Manuscript ID: IDOP-D-23-00057.

Lee, A., Strott, R., Reckling, S., Cahoon, L., Berkowitz, S., Engel, L., Holcomb, D., Christensen, A., Mitasova, H., **Salzberg, A.**, Clerkin, T., Blackwood, D., Stewart, J., Guidry, V., Noble, R., Serre, M., (**Not yet Submitted**) Space/Time Estimation of Precipitation and Evaluation of Daily Inflow and Infiltration across North Carolina Wastewater Treatment Plants to Inform Wastewater-based Epidemiology.

#### C. Presentations

- C1. Recent Invited Keynote and Plenary Addresses
- 2024 ICR24 Building the Foundations of Climate Reslience, April 19
- 2023 Elements of Leadership, World Vision WaSH Global Forum, June 22
- 2023 <u>Commitments to Accelerate Cooperation on Water, Environment, Climate, and Peace, UN Headquarters, March 23</u>
- 2023 Stopping the Flow of Lead in Drinking Water, UN Headquarters, March 23
- 2023 <u>UN 2023 Conference Multi-Stakeholder Webinar Preparing for the Water Conference</u>, January 17
- 2023 Science in a Highly-functioning Democratic Society, American Meteorological Society Presidential Session, January 10
- Integrating the Cop28 Global Stocktake of the Paris Agreement with the other Major Events in 2023, January 10
- 2022 Deadly Droughts-Adapting to a Drier World, Council on Foreign Relations, December 15
- 2022 International Water Issues, UNC World View, September 27
- 2022 Water Security Preventing Conflicts Over Water, Presidential Seminar; the American Meteorological Society Annual Meeting, January 25

- 2022 Science and Diplomacy, Presidential Seminar; the American Meteorological Society Annual Meeting; January 27
- 2021 International Water Issues, CEO Global Perspectives Series, August 11
- 2021 Water, Climate, and Diplomacy, SISCO Forum, September 9
- 2021 Water Insecurity, UNC Global Leadership Council, October 14
- 2021 Water, Conflict, and Cooperation, John's Hopkins University; October 21
- Water, Peace, and Cooperation, DOD Resource Competition, Environmental Security and Stability group, July 19
- Egyptian-Ethiopian Tensions over the Grand Ethiopian Renaissance Dam, U.S. Military Intelligence Training Center and Middle-East Africa Center, July, 30
- 2020 Current Challenges of the Middle East The Conflicts over Water, The UCLA Center for Middle East Development; August 20
- 2020 <u>Addressing Systemic Inequalities in WaSH It's Me</u>, Not You, UNC Water and Health Conference, October 22
- 2020 <u>Damned if you do and dammed if you don't: troubled Waters over the Nile, UNC Center</u> for Middle East and Islamic Studies; October 1
- C2. Recent Invited Conference and Workshop Presentations
- 2022 Informing the 2023 Political Agenda through Science, World Water Week, August 22
- 2022 International Water Issues, American Meteorological Society Summer Policy Colloquium, June 17
- 2022 U.S. World Bank Cooperation on Water, 1818 Society (a group of the World Bank), May 26
- 2022 Building Political Will with International Partners, U.S. Department of State, March 17
- 2022 Engaging in Health Diplomacy, UNC American Mock World Health Organization, February 19
- How Science can Inform Policy, FGV CERI and IADB Resilient Infrastructure Roundtable, March 14
- Water, Science, and Diplomacy, American Meteorological Summer Policy Colloquium; June 11
- Water, Climate, and Conflict, U.S. Department of State; June 14
- Overview of the WMO's Research Strategy on Hydrology, World Meteorological Congress, October 12
- 2021 <u>Environmental, Peace, and Conflict: Opportunities and Risks for the New Administration,</u> Woodrow Wilson Center, February 24
- 2020 Global Water Issues, American Meteorological Society Summer Policy Colloquium; September 2
- 2020 Taking the GERD Negotiation Forward, We Aspire, November 15,

#### C3. Recent Invited High-level briefings

- 2022 Melanie Nakagawa, Special Assistant to the President and NSC Senior Director for Climate and Energy, the White House
- 2022 Mike Hammer, Special Coordinator for the Horn of Africa, U.S. Department of State
- 2022 Lise Grande, President, U.S. Institute of Peace
- 2021 Elizabeth Biser, Secretary, North Carolina Department of Environmental Quality
- 2021 Alex Rondos, Special Representative to the Horn of Africa, European Union
- 2021 Inger Anderson, Director General, United Nations Environment Program
- 2021 Jeff Feltman, Special Envoy to the Horn of Africa, U.S. Department of State
- 2020 Gavin Gramstad, Chief of Staff to David Beasley, Director General of the World Food Program

#### C4. Recent Media Interviews

2023	Tahrir Podcast
2021	Jivetalking with David Zetland
2020	Reveal, Center for Investigative Journalism
2020	Voice of America
2020	Let's Talk About Water Podcast, Jay Famglietti
2020	New Security Beat, Woodrow Wilson Center
2020	RWSN
2020	<u>Viet Anh</u>
2020	New York Times
Others	Al Jazeera, OOSKA News, Washington Post, National Geographic

#### C4. Other Past Speaking Engagements

World Wide Human Geography Data Working Group (2020), National Executive Leadership Seminar (2018, 2017, 2016, 2015, 2014), National Defense University (2018, 2017, 2016, 2015, 2014), Congressional and Senate Staff briefings (2020, 2019,2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010), Woodrow Wilson Center (2018, 2018, 2010), George Washington University Elliot School of International Affairs (2017, 2016, 2015, 2014, 2010), CNA Military Advisory Board (2016), National Military Education School (2016), World Bank Water Week (2015), World Water Forum (2015, 2012), U.S. National Security Council (2015, 2012), National Assembly of Vietnam (2015), Stimson Center on International Studies (2015), Rotary International (2015), National Geospatial Agency (2014), American University (2014, 2013), Foreign Affairs Subcommittee on Africa, Global Health, Global Human Rights, and International Organizations, House of Representatives (2013), Asian American Forum (2013), U.S. Institute of Peace (2013), Atlantic Council (2012), Missouri State University (2012), American Geophysical Union (2012), Senator Tom Lantos Human Rights Commission, House of Representatives (2011),

Corporate Council on Africa (2011), United States African Command (2011), Subcommittee on Water and Power; Senate Committee on Energy and Natural Resources (2011), African Ministers Council on Water (2011), African Water Week (2010), International Hydropower Association (2011), University of Wisconsin Institute of World Affairs (2010), U.S. Army War College (2010), Irrigation Association (2010), Keenan Institute (2010), American Association for the Advancement of Science (2009), American Water Resources Association (2009), John's Hopkins School of Advanced International Studies (2009), United States Southern Command (2008), Massachusetts Institute of Technology (2005), National Association of Water Companies (2005), Columbia University School of International and Public Affairs (2004), Foreign Policy Association (Tulsa 2005; Williamsburg 2005), National Academy of Sciences Water and Science Technology Board (2004), United Nations Association (2003), World Water Week (2014, 2013, 2012)

### VI. Teaching Record

#### A. Courses

#### A1. Courses Developed/Taught

Semester & Year	Course Number	Title	Students
Fall 2021	ENVR 582	Sanitation for Development (non-lead instructor)	23
Spring 2021	ENVR 989	Environmental Crisis Management (co-instructor)	45
Spring 2022	ENVR 989	Environmental Crisis Management (co-instructor)*	48
Spring 2023	ENVR 989	Environmental Crisis Management (co-instructor)*	67
Spring 2024	ENVR 989	Environmental Crisis Management (co-instructor)*	52

<sup>\* -</sup> denotes significant course development

#### A1. Courses Contributed to (guest lectures)

UNC-Chapel Hill ENVR 275/775: Global Climate Change: Interdisciplinary Perspectives

NUTR 175: Water and Food Security

ENVR 685: Water and Sanitation Policy in Lesser Developed Countries

ENVR 230: Issues in Environmental Health

POLI 723: Conflict Management: The Practice of Mediation and

Negotiation

PLCY/PWAD 330: Negotiation & Mediation: The Practice of Conflict

Management

#### B. Individual Student Guidance

B1. PhD Students

B1.a Graduated PhD Students

#### None

#### **B1.b In Process PhD Students**

Jan 2021 – present	Carlos Nunes, University of North Carolina, primary advisor
Aug 2021 – present	Sarah Lebu, University of North Carolina, co-advisor with Joe Brown
Aug 2021 – present	Rita Gymah, University of North Carolina, primary advisor
Aug 2022 – present	Lucy Tantum, University of North Carolina, primary advisor
Aug 2022 – present	Sylvia Landa, University of North Carolina, primary advisor
Jan 2022 – present	Anjerul Islam, University of North Carolina, co-advisor with Joe Brown
May 2023 – present	Kyle Rezik, University of North Carolina, primary advisor

- B2. MS, MSc, MPH, MSPH, and MSEE Students
- B2.a Graduated MS, MSc, MPH, MSPH, and MSEE Students, primary advisor
  - 2019-2022 Timothy Purvis, University of North Carolina, Primary advisor
     Title: An Evaluation of Low-cost Novel Methods for Risk-based Monitoring of
     Water Quality for Fecal Contaminants
  - 2019-2022 Katharine Conaway, University of North Carolina, Primary advisor Title: Unsafe Release of Fecal Sludge and E. coli During Emptying and Transport
  - 2019-2022 Sarah Bates, University of North Carolina, Primary advisor
    Title: Integrating Green Infrastructure into the Watershed Flow and Allocation
    (WaterFALL®) Model to Support Watershed Planning at Multiple Scales
- B2.b In Process MS, MSc, MPH, MSPH, and MSEE Students, primary advisor

None

B3. Graduate Student Mentoring (MSPH) ( $\geq 1$  semester supervision)

UNC: Sara Green, Sample Quynh, Bridger Trap, Marion Cavanaugh, Omolade Akomolafe

B4. Undergraduate Students (BSPH) (≥ 1 semester supervision)

UNC: Esha Agarwal, Samantha Morinville, Prithika Roy, Neha Bollam, Julien Rubin Goldner, Aditya Harsh Roy, Tegan Jeanette Hibbard

B5. Service on Thesis or Dissertation Committees (all at UNC)

Student Degree		Advisor	Dates
Joshua Miller	PhD	Adair	8/21 - Present

Rosa Cuppari	PhD	Characklis	8/20 - present
Gouthami Rao	PhD	Brown	2019 - 2023
Saumitra Sinha	PhD	Whittington	2019 - 2024
Mark Radin	PhD	Whittington	2021 - 2024
Catherine McManus	PhD	Whittington	8/18 - present
Cassidy Rice	MSEE	Weinberg	2021 - 2023
Allison Lee	MSEE	Serre	2021 - 2023
Darcy Anderson	PhD	Bartram	2018 - 2022
Hayley Schram	MSEE	Whittington	2018 - 2020

### VII. Professional Service

### A. Global Level

2023	U.S. Delegation to the 19 <sup>th</sup> World Congress of the World Meteorological Organization
2020 – present	World Meteorological Organization Research Board
2020 – present	World Meteorological Organization Hydrological Coordination Panel
2020 – present	Scientific Planning Committee for World Water Week

## B. National Level

2023 – present	National Academies of Sciences U.S. Global Change Research Program Advisory Committee
2022 – present	National Academies of Sciences Roundtable on Climate Security

## C. North Carolina

2020 – present North Carolina Environmental Health Collaborative

## D. <u>University of North Carolina Chapel Hill</u>

2021 – present	UNC Carolina Sustainability Council
2022 - present	UNC Diplomacy Initiative Advisory Board
2022 - present	Gillings Global Health MPH Committee
2021 – present	Board of Directors, Conflict Management Institute
2021 - 2022	ESE Budget Committee
2020 - 2023	Gillings School Business Committee

## E. Faculty Mentor

2022 – present Musa Manga2022 – present Mike Fisher

# VIII. Grant History

## A. Grants Awarded

2023	UNC Water Institute Conference Grant, Conrad N. Hilton Foundation, \$100k, PI
2023	UNC Water Institute Conference Grant, Bill and Melinda Gates Foundation, \$75k, PI
2023	Strengthening Evidence and Advocacy for WASH in HCFS, Wallace Genetic Foundation, \$70k, PI
2023	Managing the WaSH in HCF Community of Practice, Wallace Genetic Foundation, \$30k, PI
2023	SWSC Nepal WASH Costing in HCFs, Helvetas USA, \$8.1k, PI
2023	Exploratory Groundwater Availability Research in Western Kenya, The Water Project, \$6.2k, PI
2022	UNC Water Institute Conference Grant, Bill and Melinda Gates Foundation, \$75k, PI
2022	Strengthening Evidence and Advocacy for WASH in HCFS, Wallace Genetic Foundation, \$120k, PI
2022	Water Security and Resilience in LMICs, World Vision, \$38k, PI
2022	WASH Services in HCFs, World Vision, \$150.8k, PI
2022	Build the Capacity of Leaders in WASH in the Global South, Deutche Gesellschaft fur Internationale Zusammernarbeit (GIZ), \$46.9k, PI
2022	Validation and Prevention of Toxic Metal Contamination of Rural Water Supply Systems in Ghana, World Vision, \$788k, PI
2022	Develop Training Materials and Provide Training to Laboratories in Caribbean Small Island Developing States on Environmental Quality Monitoring, United Nations Institute for Training and Research, \$40k, PI
2021	Strengthening Evidence and Advocacy for WASH in HCFS, Wallace Genetic Foundation, \$70k, PI
2021	UNC Water Institute Conference Grant, Bill and Melinda Gates Foundation, \$75k, PI
2021	Evaluating Methods for Rapid, On-site, Decontamination of Facemasks for Reuse in Low Resource Settings, World Health Organization, \$99.9k, Co-PI (Fisher)
2021	PRO-WASH water quality monitoring technical guide and training package, Save the Children, \$199.9k, PI

2020	Strengthening Evidence and Advocacy for WASH in HCFS, Wallace Genetic Foundation, \$50k, PI
2020	Conference Grant: DEI in WASH, Bill and Melinda Gates Foundation, \$11k, PI
2020	Bridge II: Monitoring, Evaluation, and Learning for WASH, World Vision, \$176.6k, PI
2019	Communicating and Disseminating the costs of WASH in HCFs, Wallace Genetic Foundation, \$50k, PI
2019	Conference Grant: Scholarships, \$25.3k, PI

#### B. Major Grants in Progress

Support for the Global Lead Initiative, Hilton Foundation, \$250k, PI (funds have been authorized, the agreement is being finalized)

WADI II, Chemonics, \$ unknown, PI (Master Services Agreement being finalized)

Support for Urban Water and Sanitation in India (SUWASI), KPMG Advisory Services, \$362k, PI (funds have been authorized, Master Services Agreement being finalized.)

Enhanced Sustainable Faecal Sludge Treatment and Valorization in Less Developed Countries, NSF, \$490k, Co-PI (Manga, Brown) (rejected by NSF; being resubmitted)