



UNESCO CHAIR ON AI AND ENVIRONMENTAL
STEWARDSHIP FOR SUSTAINABLE FUTURES

UNESCO CHAIR REPORT

MAY 2025 ISSUE



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MISSION STATEMENT

The UNESCO Chair at UVU on AI and Environmental Stewardship for Sustainable Futures advances the integration of artificial intelligence and sustainability in education to improve learning, empower faculty, and support student-led initiatives. Through collaboration with Global South partners and K-12 institutions, the Chair promotes environmental stewardship, intercultural dialogue, and the development of resilient, inclusive education systems that prepare learners for a sustainable future.

OBJECTIVES

1. Integrate sustainability education into curricula, support student-led initiatives, and foster K-12 partnerships for environmental stewardship.



2. Foster global partnerships with Global South institutions for intercultural dialogue, collaborative research, and enriching exchange programmes.



3. Provide faculty with AI tools and sustainability training to enhance teaching and drive innovation in education.



4. Implement AI-driven adaptive learning systems to enhance student engagement, personalise learning, and improve course completion rates.



5. Cooperate closely with UNESCO, other UNESCO Chairs and UNITWIN Networks on relevant programmes and activities.



INTRODUCTION TO OUR PROJECTS

CAMBODIA

The Cambodia Sanitation Project, a partnership between Utah Valley University and the doTERRA Healing Hands Foundation, improves health and dignity in rural Cambodia by providing sustainable sanitation, clean water access, and hygiene education.



CAMEROON

This project brings together UNESCO Chairs from the University of Buea and Utah Valley University to advance inclusive education through AI, sustainability, and global collaboration, fostering the Most Enabling Learning Environments for all students.



CHINA

In collaboration with scholars in Beijing, this project explores human-computer collaborative teaching by integrating AI into education, optimizing task distribution, and enhancing personalized learning through adaptive technologies.



DOMINICAN REPUBLIC

The Dominican Republic EMS project, led by Utah Valley University faculty and students, aims to provide clinical training for DR and UVU students, deliver essential medical education to local communities, and promote cultural exchange through global healthcare collaboration.



PHILIPPINES

Utah Valley University is collaborating with Philippine institutions to enhance AI education and research through national assessments, specialized training, and student outreach programs.



PERU

Utah Valley University and partner institutions in Peru and Bolivia are collaborating on the Lago Titicaca/Utah Lake Project to address critical water quality challenges through multidisciplinary research, education, and sustainable environmental solutions.



T H A I L A N D

This education project between UVU and Atlantic Education Schools in Thailand fosters academic exchange, joint research, and cultural understanding through presentations, collaborative discussions, and planning for student and faculty exchange programs.



U K R A I N E

Utah Valley University and Khmelnytskyi Humanity and Pedagogic Academy in Ukraine are partnering to advance research on PTSD and mental health, foster academic and cultural exchange, and develop collaborative initiatives that promote resilience, healing, and innovation amid ongoing conflict.



C U R R E N T P R O J E C T S

I N D O N E S I A

(UVU Occupational Therapy) – Dr. Lynn Farley

C H I N A

Beijing Normal University (AI – UVU School of Education, Dr. Bing Han & UVU Behavioral Science Dr. Yi Yin)

U K R A I N E

(University Khmelnytskyi Humanity and Pedagogic Academy) UVU – Dpt. of Psychology and Social Work, Dr. Acacia Overono)

P H I L I P P I N E S

(Far Eastern University) – UVU Information Systems Dr. Carl Canlas

C A M E R O O N

(University of Buea) – UVU School of Education

“Congratulations on the awarding of your UNESCO Chair at UVU!”

The establishment of a UNESCO Chair is rare event and will have significant impacts your university, the United States, and our global partners. Chairs go through an incredibly rigorous review process, and your success is a testament to the excellence achieved through your work”.

Mark Brennan
UNESCO Chair on Global Citizenship for Sustainable Peace through Youth and Community Engagement
The Pennsylvania State University

Robert Chaskin
UNESCO Chair on Inclusive Urbanism
University of Chicago



Phyllis Magrab
UNESCO Chair on Sustainable Development, Early Childhood, Inclusive Education and Gender



Georgetown University

Shannon Biscoff
Perdue University



David Pietz
UNESCO Chair on Environmental History
University of Arizona



Steven Shankman
UNESCO Chair in Transcultural Studies, Interreligious Dialogue, and Peace
University of Oregon



We are so grateful for the many messages of congratulations from UNESCO Chair colleagues around the country. Receiving the UNESCO Chair Award provides UVU with increased opportunities to connect with influential universities in the country and around the world.



FIRST UNESCO CHAIR EXECUTIVE BOARD MEETING

March 26, 2025

The first Executive Board meeting of the UVU UNESCO Chair on AI and Environmental Stewardships for Sustainable Futures marked a key moment in launching academic projects focused on sustainability and innovation. Faculty members from various colleges within the university gathered to propose project ideas aligned with their research fields, fostering interdisciplinary collaboration. This meeting set the stage for initiatives that tackle both local and global challenges related to AI and environmental stewardship.

As a result, two subcommittees were formed: one on AI and Education, and the other on Social and Environmental Sciences. These groups will work on projects with global partners and universities, leveraging funding and promoting collaboration. The UNESCO Chair serves as a platform to connect UVU faculty with researchers worldwide, and the board looks forward to the exciting possibilities ahead.

EXECUTIVE BOARD



Dr. Baldomero Lago
UNESCO CHAIR, DIRECTOR
CHIEF INTERNATIONAL OFFICER
GLOBAL ENGAGEMENT



Dr. Maritza Sotomayor
UNESCO CHAIR, ASSOCIATE DIRECTOR
THE WOODBURY SCHOOL OF BUSINESS
ECONOMICS



Dr. Adam Ogurlu
SCHOOL OF EDUCATION
ELEMENTARY EDUCATION



Dr. Carl Canlas
SMITH COLLEGE OF ENGINEERING AND TECHNOLOGY
INFORMATION SYSTEMS



Dr. Hilary Hungerford
COLLEGE OF SCIENCE
EARTH SCIENCE



Dr. Yi Yin
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
BEHAVIORAL AND SOCIAL SCIENCES



Dr. Cheung Chau
SCHOOL OF THE ARTS
DEPARTMENT OF MUSIC



Dr. Kevin McCarthy
COLLEGE OF HEALTH AND PUBLIC SERVICES
EMERGENCY SERVICES



Dr. Kathren Brown
ACADEMIC AFFAIRS
DEPUTY PROVOST



Kaise McLane
UNESCO CHAIR ADMINISTRATIVE
ASSISTANT

UNESCO CHAIR COMMITTEE ON AI AND EDUCATION MEETING



The Committee on AI and Education explored innovative ways to integrate AI into educational tools, emphasizing the need to equip teachers with the skills to model AI use for future leaders. The meeting welcomed

members Yi Yin, Carl Canlas, and Adam Ogurlu, representing diverse academic institutions. Key discussions centered on the UNESCO CHAIR's objectives, including sustainability education, student-led initiatives, and fostering

global partnerships with Global South institutions for research and exchange. Ongoing projects address AI's impact on higher education, digital equity, and AI-driven teaching tools. The committee also highlighted ethical AI, responsible implementation, and potential collaborations with international partners.

AI AND EDUCATION COMMITTEE MEMBERS

Adam Ogurlu - Assistant Professor - Elementary Education

Armen Ilikchyan - Associate Professor - Technology Management

Bing Han - Assistant Professor - Elementary Education

Carl Canlas - Assistant Professor - Information Systems

Emily Hedrick - Associate Professor - Web Design and Development

Krista Ruggles - Associate Professor - Elementary Education STEM

Laurie Toro - Director - Faculty Development

Majid Memari - Assistant Professor - Computer Science

Matt North - Professor - Information Systems

Rachael Hutchings - Professional in Residence - Strategic Management

Susan Thackeray - Associate Professor - Technology Management

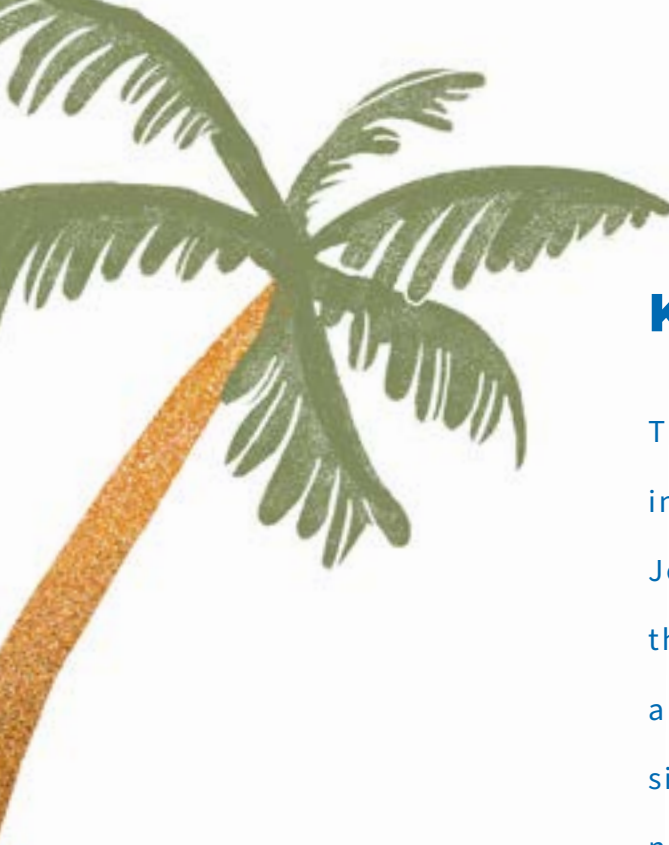
Yi Yin - Assistant Professor - Social & Behavioral Sciences



EMS TRAINING IN THE DOMINICAN REPUBLIC

UVU FACULTY AND STUDENTS BRING EMS TRAINING TO THE DOMINICAN REPUBLIC

A team of faculty and administrators from Utah Valley University (UVU) recently traveled to the Dominican Republic as part of an initiative to provide emergency medical services (EMS) training. Led by Jeannette German, Steve Allred, and Ben Williams, the project aims to offer clinical experiences for UVU students, deliver critical medical training to local communities, and foster cultural exchange.



KEY OBJECTIVES

The Dominican Republic EMS project has been in development for four years, initiated through Jeannette German's professional connections with the Dominican Republic. After extensive planning and coordination, the team recently conducted a site visit to solidify partnerships and assess training needs. Their objectives included three key goals:

1. Providing US students with clinical experiences that count toward their required hours and skills development.
2. Delivering service projects that include CPR and medical training for local communities.
3. Offering cultural immersion opportunities to enrich students' understanding of global healthcare practices.



CPR TRAINING AND COMMUNITY ENGAGEMENT



One of the most impactful aspects of the trip was the team's CPR training sessions. Over 240 individuals received instruction, including 172 university students interested in Basic Life Support (BLS) training, 22 hotel employees in La Romana, and dental, nursing, and physical therapy students at Universidad Católica Santo Domingo.

While official certification was not possible due to the unexpectedly high number of participants and the nature of the training, many students expressed a strong desire to pursue further certification in the



his demanding schedule, he took an entire day to personally drive the UVU team to small neighboring towns, markets, and local sights. His warmth and generosity left a lasting impression on the team, as did his willingness to fully engage in the experience—even participating in some of the CPR training sessions himself. His enthusiasm and hands-on approach reflected the welcoming spirit of Universidad Católica and the Dominican hosts, whose kindness and support were invaluable to the success of the trip. The UVU team remains deeply grateful for their time, generosity, and commitment to fostering global collaboration.



future. Their enthusiasm was remarkable, with many staying an extra 1.5 to 2 hours beyond the scheduled training time to continue learning. Several students even shared their excitement with the university’s Rector, expressing how much they enjoyed the sessions and eagerly asking when the UVU team would return to teach again. Universidad Católica provided professional photography and warm hospitality, further cementing the partnership between UVU and the local institutions.

FRIENDSHIP AND COLLABORATION

A special highlight of the trip was the extraordinary hospitality of the university’s Rector. As both a religious leader who holds mass and fulfills ecclesiastical duties and the equivalent of a university president, his time is highly valuable. Despite



Additionally, the collaboration between UVU and Universidad Católica Santo Domingo was strengthened through shared experiences and mutual appreciation. The exchange of Emergency Services and Global Engagement items, such as UVU swag, became a fun and symbolic gesture of the growing friendship between the two institutions. Faculty, staff, and students on both sides expressed gratitude for the opportunity to connect. This sense of camaraderie and mutual respect reinforces a partnership that will continue to flourish through future projects and training initiatives.



Pictured from left to right:

- Ing. José Armando Tavarez Rodríguez - Vice President of Research Engagement and Quality Assurance
- Dilenia Lizardo Barrera - Director of Research
- Omar Díaz - Dean of Health Sciences
- Inmaculada Estévez - Director of the School of Nursing
- Inmaculada Torres - Academic Vice President
- Francisco Hernández - Vice President of Administration and Finance
- Rev. José Luis De La Cruz - President
- Jeannette Vargas German - UVU EMS Lab Manager
- Ben Williams - UVU EMS Adjunct
- Steven D. Allred - Paramedic Program Director / Professor EMS



HOSPITAL PARTNERSHIPS AND CLINICAL EXPERIENCE OPPORTUNITIES

The UVU team secured arrangements with two hospitals to facilitate clinical experiences for their students. Padre Virgini Hospital, a public institution, approved UVU student participation with the support of a key hospital decision-maker. Meanwhile, CEDIMAT, a private hospital with English-speaking staff and American-style operations, became an ideal training site for students focusing on airway management and labor/delivery. Although language barriers posed some challenges, students engaged in skill-based learning rather than full clinical rotations. Additionally, hospital physicians expressed interest in developing pre-hospital care systems with UVU's guidance, opening doors for future collaborations.





Training session with hotel employees

EXPANDING CPR TRAINING TO LA ROMANA’S HOTEL EMPLOYEES

Making the most of their time in the Dominican Republic, the UVU team also provided CPR training sessions for hotel employees at the resort where they were staying in La Romana. The hotel manager and employees were incredibly enthusiastic about the opportunity to learn basic life-saving skills, despite the fact that attendance was neither required nor compensated. Their eagerness to participate highlighted the widespread interest in emergency preparedness and further emphasized the importance of these training initiatives. The UVU team was impressed by the employees’ commitment to learning and their engagement in the sessions, further reinforcing the value of expanding CPR education across different community sectors.



GOALS MOVING FORWARD

Beyond immediate training and hospital partnerships, UVU’s involvement in the Dominican Republic holds long-term potential. Future initiatives may include supporting Dominican institutions in strengthening their EMS education programs, conducting research collaborations to enhance pre-hospital care practices, and continuing to develop professional development opportunities for both UVU and Dominican students. The Basic Spanish Medical Assessment Guide, created by Jeannette Vargas German, has been incredibly well-received by participants. Its availability in both Spanish and English has made it an invaluable resource for students and professionals alike.



Jeannette German at the Universidad Católica Santo Domingo

Short-term goals include bringing more students to the Dominican Republic, donating medical supplies, and providing ongoing CPR and medical training. In the long term, the focus will shift to developing and enhancing the Dominican EMS program, improving ambulance services, and further advancing pre-hospital care strategies.



“Several students even shared their excitement with the university’s Rector, expressing how much they enjoyed the sessions and eagerly asking when the UVU team would return to teach again.”

The Dominican Republic EMS project has already proven to be a meaningful and impactful initiative, successfully fostering hands-on learning, cross-cultural exchange, and medical training. This achievement would not have been possible without the dedication and leadership of faculty members and enthusiasm of the participating students. Deep gratitude is also extended to the partners in the Dominican Republic, including Universidad Católica Santo Domingo, its Rector, and hospital staff, whose hospitality and commitment to collaboration made this experience truly special. As UVU looks ahead, there is great anticipation for further training opportunities, and the ongoing development of emergency medical services in the Dominican Republic.



COLLECTING WATER IN PERU

March 26-30, 2025

Recently, UVU faculty and researchers traveled to Peru to conduct water sampling for two projects being done on water quality. On the western side of Lima, the municipalities of Santa Eulalia, Chosica, and Trujillo are facing significant challenges due to excessive water, resulting in flooding. Researchers, collaborating through UVU, are actively working to address these issues. Flooding can have widespread impacts on various aspects of the community, such as horticulture, local water sources, and infrastructure. These researchers are studying the effects and developing solutions to help mitigate the consequences of such water-related problems.

In another project on the eastern side of Peru, Lake Titicaca is facing similar water quality issues as those of Lake Utah. To address these challenges, collaborators are working together to develop solutions. The focus of the project includes analyzing the contents of the water, such as the presence of heavy metals, microplastics, pollution, and algae blooms. Researchers are exploring methods for harvesting the algae to reduce its impact on the ecosystem. Their findings and experience collaborating with fellow universities was deeply influential for future studies on these water sources.

UVU RESEARCHERS

Speaking at the Congress of the Republic of Peru on water issues

DR. SALLY ROCKS

*Chemist
Microplastics*



DR. EDDY CADET

*Earth Scientist
Trace metals*

DR. LAUREN BROOKS

*Biologist
Residual and fecal waters*



PARTICIPATING UNIVERSITIES

Universidad Nacional de Educación

Universidad Nacional de Huancavelica

Universidad Nacional de Trujillo

Universidad Nacional del Altiplano

Universidad Nacional del Santa



UNIVERSIDAD
NACIONAL
DE TRUJILLO



Universidad
Nacional del
Altiplano de Puno



UNS
UNIVERSIDAD
NACIONAL DEL SANTA

Chosica

Santa Eulalia

Trujillo

Puno

MUNICIPALITIES



MEETING WITH THE CONGRESS OF PERU

March 26, 2025

During their visit to Peru, researchers from Utah Valley University (UVU) met with the Congress of Peru to discuss their water testing project, which examines the quality of Lake Titicaca, the Rímac River, and the springs of surrounding municipalities. The event provided an opportunity for government officials and community members to engage in a Q&A session with the researchers, fostering dialogue on water

safety and environmental sustainability. We are grateful for the support of the Peruvian government in our efforts to promote cleaner water for local communities.



The session was broadcast live and can be found on YouTube

MEETING AT THE NEU



The trip started with a visit to the Universidad Nacional de Educación (NEU). Researchers had the honor of meeting with the Rector Dr. Lida Salcedos, President of the National Rectors Association of Peru. We are grateful for the collaboration that took place with this university.





THE WATER PUMP

MICROPLASTICS

Research Group II, led by Dr. Sally Rocks of UVU and Peruvian scholars Mg. Augusto Manrique Ruiz (UNH) and Dr. Jorge Vera Alvarado (UNT), is tackling microplastic pollution in freshwater systems. The project aims to measure and identify tiny plastic particles—called microplastics—in rivers, reservoirs, drinking water, and freshwater fish across several regions of Peru.

Microplastics are minuscule fragments that come from the breakdown of larger plastic waste or are used in products like cosmetics and cleaning agents. Though invisible to the naked eye, they are increasingly being found in our food, water, and even air. This project seeks to understand how widespread the problem is by testing both natural water sources and household tap water, comparing results to see how much plastic may be entering the water during treatment and transport. Researchers will also examine freshwater fish to determine how microplastics make their way into the human food chain.

This work is especially important because the health impacts of microplastics are still largely unknown, though early research suggests potential risks to digestive, hormonal, and immune systems. By identifying how and where microplastics are entering Peruvian water supplies, the research team is laying the groundwork for future solutions. This study marks an essential first step in safeguarding water quality and public health—not just for Peru, but for similar regions facing the hidden threat of plastic pollution.

*Dr. Sally Rocks
collects water
samples from the
main water pump at
NEU*

THE WATER TANK



*Dr. Lauren Brooks
taking samples
from the water
tank at NEU*

MICROBIOLOGY

Research group III, led by Dr. Lauren Brooks, Dr. Weihong Wang, Dr. Alessandro Zanazzi, at UVU, alongside Dra. Lurdes Tuesta Collantes (UNT) and Dr. Guillermo Atencía Guerra (UNE), investigates how pollutants—including excess nutrients and human or animal waste—are affecting microbial communities and ecosystem health in Peruvian lakes.

This research tackles pressing questions: How contaminated are these waters? Where is the fecal pollution coming from? Are dangerous pathogens or antibiotic-resistant bacteria present? The team is also studying harmful algal blooms—rapid overgrowths of algae that can produce toxins dangerous to humans, wildlife, and water supplies. Understanding what organisms are behind these blooms, what toxins they produce, and what eventually causes them to die off could lead to better prevention and treatment strategies.

Microbiology plays a key role in both environmental and public health. By identifying how pollution, heavy metals, and even microplastics influence microbial life in water systems, the team is uncovering how small-scale changes can have large-scale impacts. This collaborative project also provides valuable opportunities for student research and opens doors to comparing microbial dynamics in Peru to similar ecosystems like Utah Lake.

THE CAFETERIA SINK

*Dr. Eddy Cadet
taking samples
from the
cafeteria sink
at NEU*

HEAVY METALS

Led by Dr. Eddy Cadet at UVU and Peruvian colleagues Dr. Dante Salas and Dr. Rómulo Loayza, the team is focusing on metals such as mercury (Hg), lead (Pb), arsenic (As), and cadmium (Cd), among others. Their research examines how these metals accumulate in the environment—especially in water, sediment, and fish species like rainbow trout and ispi.

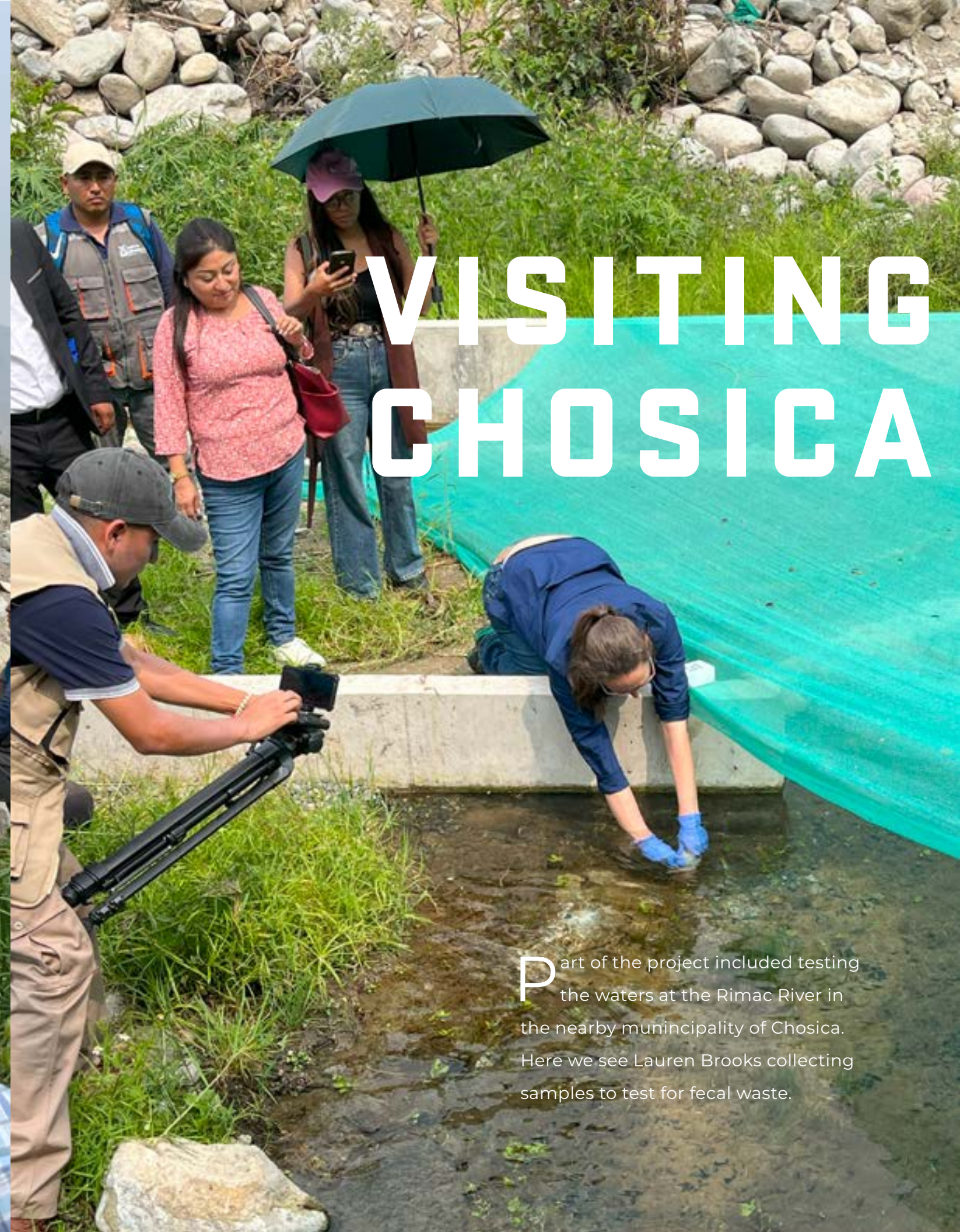
The project is particularly concerned with bioaccumulation and biomagnification, which refer to how toxic substances build up in organisms over time and increase in concentration higher up the food chain. This means that even small traces of metals in water can become more concentrated in fish—and ultimately affect human populations that rely on these fish as a food source. The team is also working to identify the sources of pollution, with particular attention to mining activity in the region.

This work is crucial because heavy metals pose serious health risks to both humans and wildlife. Contaminants like lead and mercury can cause neurological damage, especially in children, while arsenic and cadmium have been linked to cancer and other chronic diseases. By studying the spread and concentration of these pollutants, the research group aims to inform both public health policy and environmental protections in Peru—and contribute to global understanding of water contamination challenges.

Hiking to a spring source in Chosica



VISITING CHOSICA



Part of the project included testing the waters at the Rimac River in the nearby municipality of Chosica. Here we see Lauren Brooks collecting samples to test for fecal waste.

VISITING SANTA EULALIA

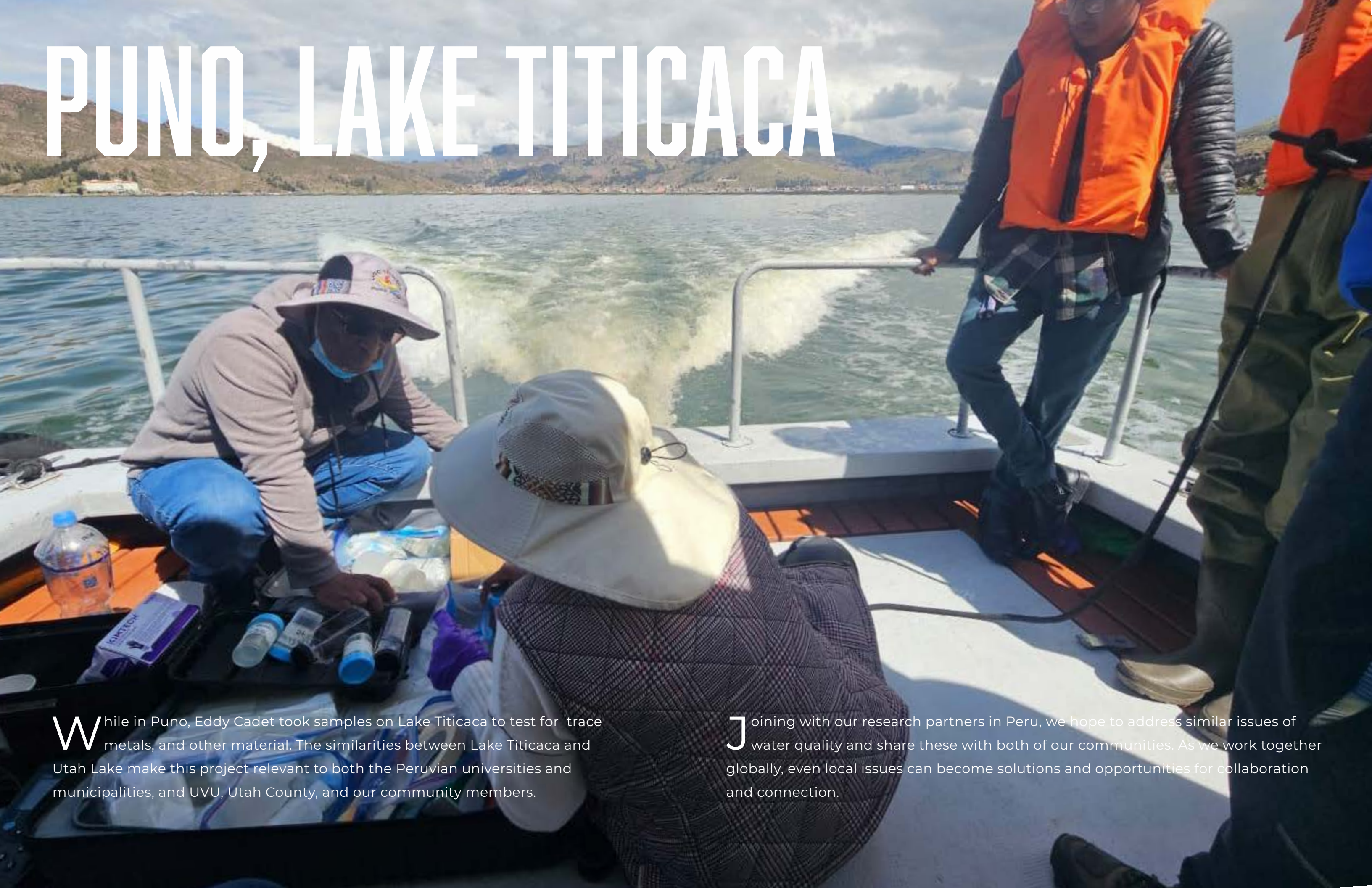
*Lauren Brooks
collects samples
of a well source
in Santa Eulalia*



*Samples were also taken from a residential area
from a community member's sink.*

*UVU UNESCO
Chair Director,
Baldomero Lago,
who helped
orchestrate the
project, assisted
in water sampling
at an Elementary
School in Santa
Eulalia.*





PUNO, LAKE TITICACA

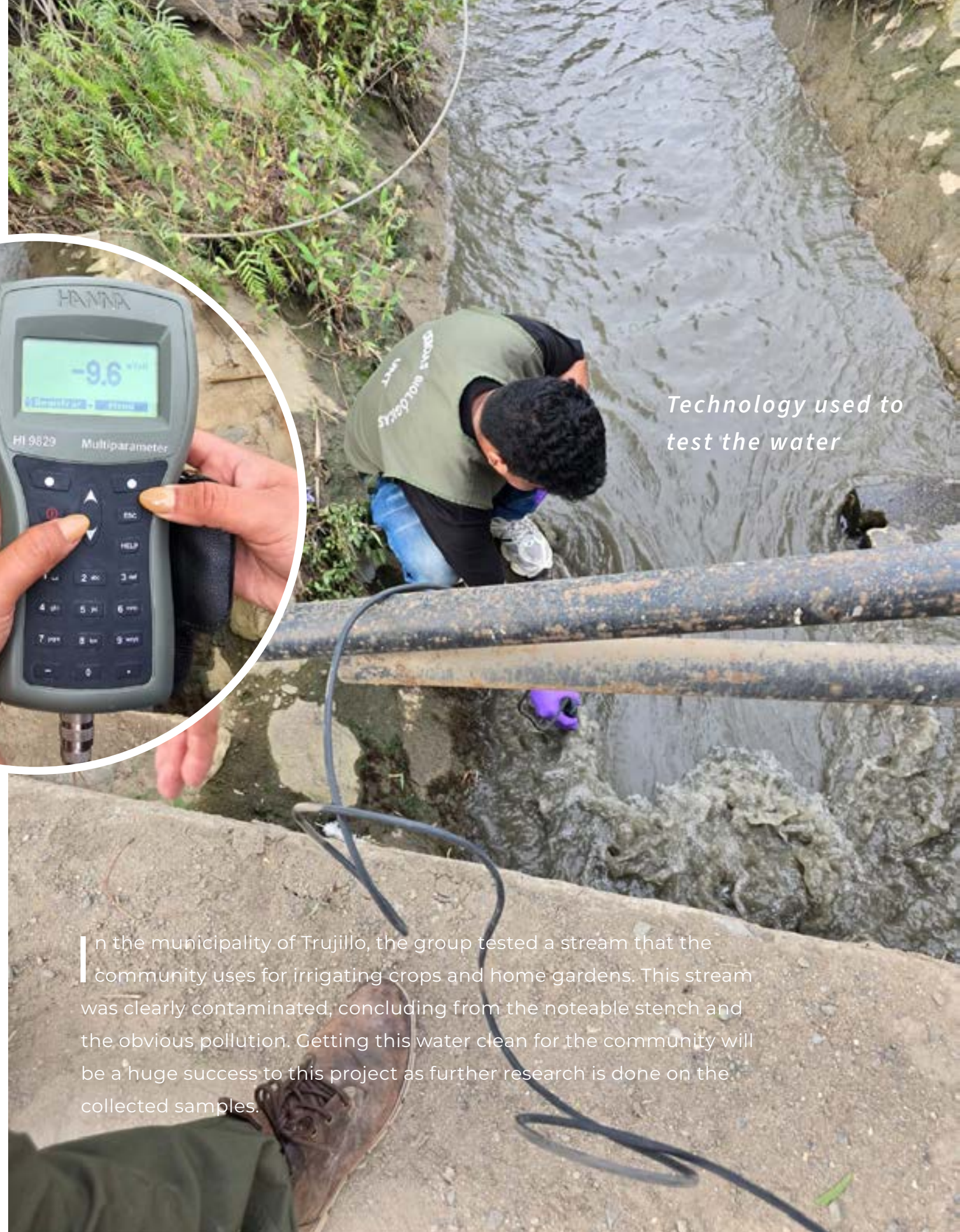
While in Puno, Eddy Cadet took samples on Lake Titicaca to test for trace metals, and other material. The similarities between Lake Titicaca and Utah Lake make this project relevant to both the Peruvian universities and municipalities, and UVU, Utah County, and our community members.

Joining with our research partners in Peru, we hope to address similar issues of water quality and share these with both of our communities. As we work together globally, even local issues can become solutions and opportunities for collaboration and connection.



VISITING TRUJILLO

Samples from stream in Trujillo taken by Dr. Baldomero Lago. Samples being tested for plastics have to have specific, glass containers to avoid contamination.



Technology used to test the water

In the municipality of Trujillo, the group tested a stream that the community uses for irrigating crops and home gardens. This stream was clearly contaminated, concluding from the notable stench and the obvious pollution. Getting this water clean for the community will be a huge success to this project as further research is done on the collected samples.



“THAI EDUCATORS VISIT UVU TO FOSTER GLOBAL EDUCATION PARTNERSHIPS”

UVU was honored to welcome two distinguished visitors from Thailand’s Atlantic Education group: Nakharin Sormad, Global Ambassador and Education Counselor, and Makhsat Saniyaz, Head of Educational Technologies. Representing three international schools in Bangkok, their weeklong visit from April 5–12, 2025, focused



on academic exchange, cross-cultural learning, and exploring future collaboration between UVU and Thai institutions.

During their time on campus, the visitors toured UVU facilities, engaged in discussions with faculty, and presented on the Thai education system to students and professors in the School of Education. Their presentations sparked meaningful dialogue on educational challenges, technology integration, and curriculum development. Meetings with UVU’s International Affairs Office and School of Education leadership laid the groundwork for potential faculty and student exchange programs, as well as joint research in teacher training and global education practices.

This visit marked a significant step in building a lasting partnership rooted in shared

values and a commitment to educational excellence. Beyond academic collaboration, the visit also fostered cultural exchange and mutual understanding between Thailand and the UVU community. Both institutions look forward to future opportunities that will broaden horizons for students and educators on both sides of the globe.



CONTACT INFORMATION

Dr. Baldomero Lago
UNESCO CHAIR, DIRECTOR

lagoba@uvu.edu

Dr. Maritza Sotomayor
UNESCO CHAIR, ASSOCIATE DIRECTOR

maritza.sotomayor@uvu.edu

Kaisë McLane
UNESCO CHAIR, ADMINISTRATIVE ASSISTANT

Kaise.McLane@uvu.edu

