



GLOBAL ENVIRONMENTAL HEALTH LAB

LEARN | ACT | BUILD

Five Year Report: 2016 - 2020

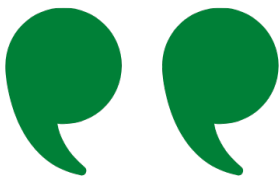




View from the top of Mandalay Hill, Myanmar

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'We look forward to continuing our work in support of the SDGs and working to improve the health of the communities where we work!' - Dr. Tomoyuki Shibata



Letter from the Executive Director

TO THE SUPPORTERS OF GEH LAB,

I would like to express my deepest gratitude to all patrons and supporters of Global Environmental Health LAB (GEH LAB). With your support over the last five years approximately 1,000 people from higher education institutions in the US, Indonesia, Myanmar, and Netherlands have attended our seminars and hands-on workshops to improve their interdisciplinary knowledge and skills to promote the UN Sustainable Development Goals (SDGs).

We have achieved a lot since our official incorporation on December 10, 2015 and obtaining federal 501(C)(3) non-profit status on May 13, 2016. In addition to our seminars, workshops and collaborative research projects, we have also assisted local stakeholders in the largest city in Eastern Indonesia in establishing and managing the Center for Tobacco Control and Non-Communicable Disease Prevention whose mission is to support implementation of the city's smoke-free law. Furthermore, a diverse group of 46 students and young professionals from Africa, the Americas, Asia, and Europe have been selected and mentored by GEH LAB to become the next generation of leaders in global health and sustainability. You can find more detailed information about our accomplishments in this five year report.

Our society faces a variety of challenges today. In collaboration with talented people from around the world, we will continue to do our best to improve the scientific basis for decision-making and build mechanisms for sustainable scientific practice. But, we need your support. Please join GEH LAB and let's make a difference together locally and internationally!

DR. TOMOYUKI SHIBATA

*Global Environmental Health LAB
Co-founder & Executive Director*



OUR STORY

Global Environmental Health LAB (GEH LAB) began as a research group under the leadership of Dr. Shibata at Northern Illinois University in 2009. Six years later, Dr. Shibata met Heidi West at the American Public Health Association (APHA) 2015 annual meeting. Dr. Shibata and Heidi discussed their common interests in conducting public health research and capacity-building projects to advance the United Nations Sustainable Development Goals (SDGs), and decided to leverage their complementary strengths and experiences into a new partnership .

2015-2016

GEH LAB was officially incorporated in December 2015 and the team hit the ground running to build the organizational foundation and expand partnerships with collaborators in the US, Indonesia, and Myanmar. In May 2016, GEH LAB was officially granted its 501(c)(3) status .

Next came the recruitment of our international team of students and young professionals for the first Research Program Field Experience in Myanmar. In the field, we conducted an intensive three-week research and capacity building program designed to develop and strengthen the skills, abilities, processes and resources of local organizations and communities.

By the end of our program, we engaged 75 faculty members and 83 students in 15 community-based research projects. Through this work, a foundation was laid for the community to engage local decision-makers with science, to help them better survive, adapt and thrive in a rapidly changing world.



Our team of staff, friends and research scholars meeting up in Bangkok, Thailand in the summer of 2016



The Grand Palace in Bangkok, Thailand

OUR STORY

2017-2020

Following the success of our first Research Program, we continued to work with the local communities to expand our research based programming, including the development of the Hasanuddin Center for Tobacco Control and NCD Prevention in Makassar, Indonesia.

We started our first research scholar trip to Myanmar in 2016 with just 3 scholars and 2 staff; over the last 5 years we have grown to take 25 scholars to Myanmar, Indonesia, Thailand, and Nigeria. We have also engaged over 25 interns from a diverse set of institutions and grown our partnerships around the world.



2018 Mosquito borne illness study conducted by Devin Mefoyer at the University of Mandalay, Myanmar



U Bein Bridge in Mandalay, Myanmar



Ryan Sutherland poses with students from Hasanuddin University in Indonesia



A peaceful sunset in Bagan, Myanmar

GEH LAB will continue to collaborate on public-health related research to promote the advancement of the UN Sustainable Development Goals worldwide. We are excited to foster the next generation of public health leaders with international research activities in 2021 and beyond.

RESEARCH PROJECTS



In the last 5 years, GEH LAB has launched 28 Research Projects in Myanmar and Indonesia, including the following:

- Understanding barriers and facilitators of maternal health care utilization in Central Myanmar
- Exploring the impacts of migration on community and occupational health
- Water, Sanitation, and Hygiene (WASH) in Myanmar's health care facilities
- Health risk perceptions related to mercury use in artisanal gold mining sites in Myanmar
- Understanding the psychological impacts of disasters on first responders and health care professionals in Magway, Myanmar
- Particulate matter exposure and occupational health of street vendors
- Occupational and environmental exposures to volatile organic compounds in a hand-dug petroleum extraction site
- Knowledge, perception, and behaviors surrounding traffic safety in Myanmar
- Occupational exposures, particulate matter (PM), and radiation in an artisanal coal mine in Central Myanmar
- Access to services and quality of life for children with disabilities in Myanmar
- Prevalence, policies, practices and norms surrounding antibiotic resistant diseases in Myanmar
- Assessment of public knowledge, perception, and attitudes regarding mosquito-borne disease in Myanmar
- Caregiver knowledge, practices, and attitudes regarding dengue fever in Mandalay, Myanmar
- The impact of flooding on the socio-economic conditions of vulnerable populations in Mandalay Region

MYANMAR

INDONESIA

- Assessment of head and neck cancer knowledge and smoking behaviors in a high-risk population
- Creating a stage for change: Using theater and the arts to address public health challenges
- Assessing community-level barriers to smoke-free public places
- Taxation on tobacco products in Indonesia
- Child tobacco use and smoking risk perception in resource-limited settings: Alternative schools in South Sulawesi, Indonesia

To learn more about our research projects, you may visit the Publications section of our website and also see the research and conference highlights in the remaining sections of this report.



Attending the opening ceremony of collaborative SDG projects in Myanmar.

2016 OVERVIEW

SUMMARY OF YEAR

In our inaugural year as a non-profit organization, GEH LAB held its first Research Scholars field program in Thailand and Myanmar in May and June 2016. Our team consisted of two staff members, Dr. Shibata and Heidi West, and 3 Research Scholars from 3 different countries: Maja Milkoska from Poland, Lizeth Galarza from the USA, and Kristin Ringstad from Canada.

The program started in Bangkok, Thailand where GEH LAB conducted introductory activities, visited cultural and public health-related field sites, and met with partners such as the Asian Institute of Technology. Then, we headed to Myanmar for a 3-week intensive research field program experience. The team undertook two large scale surveys for assessing community and occupational health and disaster response. The annual Research Scholars program was built on this successful engaging experience!

Over the year, GEH LAB staff and scholars presented at numerous conferences sharing our approach of incorporating research into the capacity-building process to maximize public health outcomes in LMICs and the importance of measuring global health competencies for trainees and local partners.

We also celebrated our Research Scholar, Kristin Ringstad, as she won the 2016 World Association for Disaster and Emergency Medicine (WADDEM) President's Award, and was featured in her university magazine for her accomplishments with GEH LAB.



Research Scholar, Kristin Ringstad at a temple in Bangkok



The inside of a pagoda Mandalay, Myanmar



LIZETH GALARZA, MPH

Senior Quality Manager at
Baxter International Inc.

MPH Health Service Management,
Northern Illinois University

BA Biology, Minor in Sociology,
Augustana College

2016 RESEARCH SCHOLARS

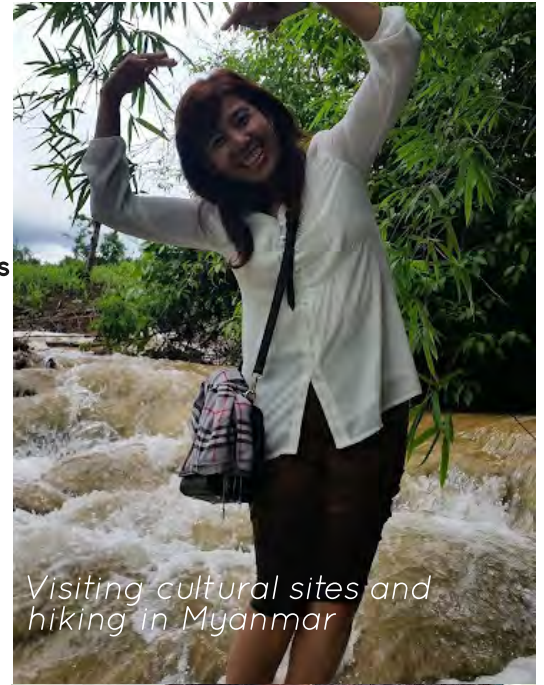


MAJA MILKOSKA, BSC, MSC

Project Assistant at Northern Illinois
University

MSc in European Public Health and
MSc in Global Health Maastricht
University

BSc Public Health (Healthcare
Management Specialization)
Poznan University of Medical
Sciences



*Visiting cultural sites and
hiking in Myanmar*



KRISTIN RINGSTAD, BSCN, RN, MN

PhD Candidate in Nursing at the
University of Victoria

Masters of Nursing, Advanced
Practice Leadership

BS Nursing (Global Competency
Accreditation), Thompson Rivers
University

Awards:

WADEM President's Award



Community Capacity-Building Project

PolyGlu, a Social Business

In collaboration with Yadanabon University and the University of Mandalay, we developed ideas for social enterprises to address local needs. One idea, PolyGlu, was based on a coagulation method for household water treatment. Led by Research Scholar Lizeth Galarza, this project entailed learning from successful social businesses in Thailand, conducting classroom and field demonstrations, and evaluating feasibility, impact and sustainability with local stakeholders. Our second cohort of Research Scholars followed up by testing the efficacy of household water treatment methods in consultation with international labs in Malaysia and sourcing local coagulation materials for the project

Research Snapshot

Maternal Health Care in Myanmar

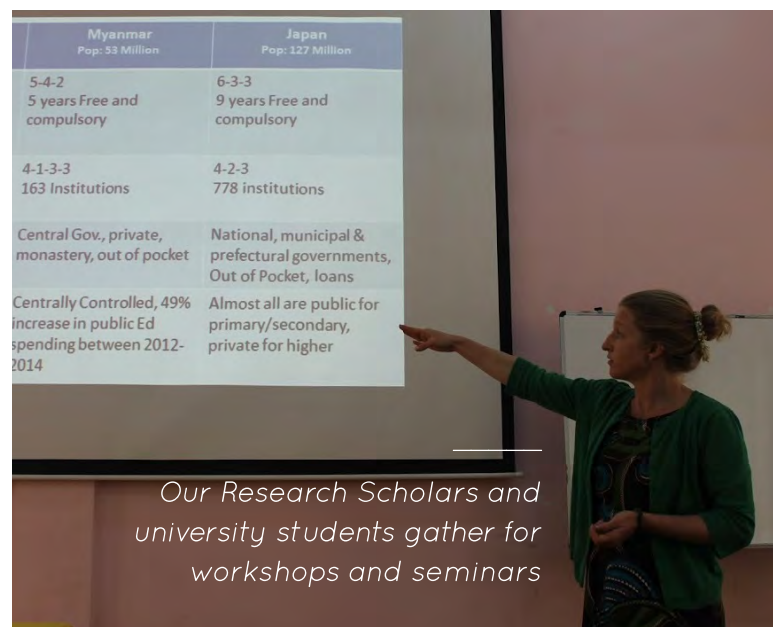
Research Scholar, Maja Milkoska led a project to investigate the barriers and facilitators of maternal health care utilization. Along with the GEH LAB team, Maja spearheaded the efforts to survey mothers in Mandalay and address the knowledge gap on risk factors associated with maternal health in marginalized populations. Results from this study were published in the International Journal of Environmental Research and Public Health.

Internal Migration and WASH

To learn more about the health of internal migrants in Myanmar, Heidi West helped lead the Mandalay Community and Occupational Health (MCOH) survey. This survey of 937 residents, which included a special migration module, helped the team to assess which populations might be at greater risk for things such as water borne disease or occupational injury. Results from this study, which are to be published in the Annals of Global Health, showed that internal migrants in Central Myanmar faced significant disparities in access to clean water and sanitation. Results from this study were published in the Annals of Global Health.



Dr. Shibata leads a community demonstration on using PolyGlu to obtain safe drinking water.



Our Research Scholars and university students gather for workshops and seminars

2016 CONFERENCES



2016 American Public Health Association Annual Meeting

Denver, Colorado, USA

October, 29 - November 2, 2016



'On a shoestring budget and lots of volunteer hours, we developed a robust research program and assembled a team of international scholars to work with local collaborators on meaningful projects in Mandalay, Myanmar -

Heidi West, Director of Programs and Operations

Collaborative Research Partnerships for Public Health Capacity Building: Connecting Academic, Community, and Non-Profit Professionals

Author: **Heidi West**

2016 Midwestern Universities for Global Health Annual Meeting

Chicago

April 11, 2016

Case Study in Myanmar: Understanding the Importance of Competencies of Global Health Trainees and Local Partners.

Author: **Maja Milkowska**



Global Health Practice: Interdisciplinary teams and cross-sector collaboration for research and capacity-building in Myanmar

Author: **Heidi West**





2017 OVERVIEW SUMMARY OF YEAR

SDG Symposium in Mandalay Myanmar

In our second year, GEH LAB returned to Myanmar to build on the work done during the previous year's program. The Research Scholars revisited some of GEH's core projects of 2016, such as our work on Water, Sanitation, and Hygiene (WASH), household water treatments, and integrated exciting new projects, such as, the effect of particulate matter exposure on occupational health and raising awareness of environmental hazards in gold mines.

GEH LAB had a great international team with students and young professionals from Malaysia, the USA, Switzerland, Pakistan, the Netherlands, Poland, and Canada serving as interns, associates, and Research Scholars. Several interns and Research Scholars received support from their universities and employers for their participation in our programs. This includes research scholar Jack Saddemi, who received a University of Miami travel scholarship award for the summer field program in Myanmar.

Scholars and staff attended a variety of conferences in 2017 and crafted GEH LAB's university outreach to include information sessions at Maastricht University in the Netherlands and New York University in the USA.

GEH LAB also hosted a conference in Myanmar to give partners an opportunity to share their work with an international audience. The Symposium for the 3rd Workshop and Collaborative Research for the Sustainable Development Goals (SDGs) in Myanmar was held at Yadanabon University and included over 200 attendees and two dozen scientific presentations.

2017 RESEARCH SCHOLARS



SEDA KOJOYAN

**Evaluation Manager at UN
FAO**

MA International Affairs
(with focus on
environmental governance),
Graduate Institute of
International and
Development Studies,
Geneva, Switzerland

BA Economics, International
Development. University of
Maryland, USA.



LAY HOON LEE

M.Sc. Chemistry, University
of Science Malaysia, B.Sc.
Chemistry, National
University of Malaysia

B.A. Religion, University of
Southern California



*Checking out the street vendors in
Mandalay, Myanmar*



JACK SADDEMI, MSc

**Medical Student at
Rowan University**

Master's of Public Health
(Epidemiology), University
of Miami Miller School of
Medicine,

B.Sc. Health Science



Air Quality Study in Mandalay, Myanmar

2017 PROJECTS

COMMUNITY CAPACITY-BUILDING PROJECT

Special Sustainable Development Goals Workshop and Curriculum Development

GEH LAB collaborated with the Bandung Institute of Technology in Indonesia, the university of current board member, Dr. Herto Dwi Ariesyady on implementing the “Adapting Sustainable Development Goals Workshop”, which took place in August 2017.

This workshop was the launchpad for new courses to address environmental health and a school wide effort to incorporate sustainable development throughout the curriculum. Through our joint course, “Strengthening Environmental Health,” we were able to engage local stakeholders in implementing the SDGs to advance environmental health in their community.



Field visit to a gold mining site in Myanmar

RESEARCH SNAPSHOTS

Occupational Health in Gold Mines

In 2017, GEH LAB began research on the health effects of working in gold mines and artisanal gold ore processing, which is often conducted in homes. Two projects that were initiated by Research Scholars Seda Kojayan and Lay Hoon Lee were: 1) evaluating the occupational and environmental risk perceptions of gold mining in the community and 2) understanding health risk perceptions related to mercury use in artisanal mining villages. These projects involved surveys, as well as soil and water testing. The research carried over to the 2018 research program and expanded to include measuring air quality in gold mines and additional assessments of occupational exposures.

2017 CONFERENCES

20TH WADEM CONGRESS ON DISASTER AND EMERGENCY MEDICINE

Toronto, Canada

April 25-28, 2017

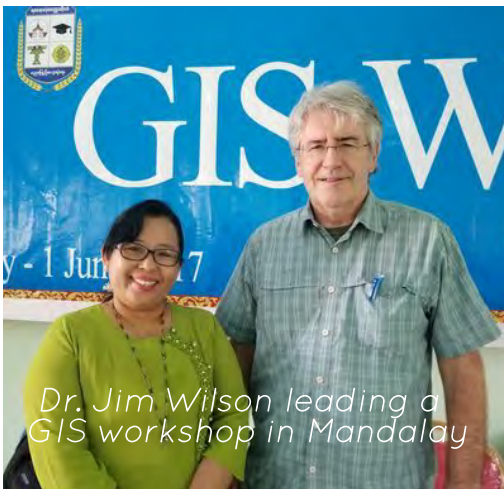
The Impact of Social Media Platforms on the Engagement of Stakeholders in the Context of the Provision of Humanitarian Data

Conducting High Quality Research for Disaster Nurses: Challenges and Opportunities

The Occupational Health and Safety of First Responders and Health Care Professionals in Magway, Myanmar

Understanding the Psychological Impacts of Disasters on First Responders and Health Care Professionals in Magway, Myanmar

Author: **Kristin Ringstad**



180 DEGREES CONSULTING AMERICAS CONFERENCE

New York, NY USA

November 12, 2017

How to Make the Greatest Social Impact:

Connecting Academic, Community, and Non-Profit Professionals

Author: **Heidi West**



2017 CONFERENCES

“ The GEH LAB Summer Research Program has enriched me with a great amount of knowledge and practical skills that are highly valuable in my professional field. Developing international research programs, executing program plans, distant and inter-professional collaboration, effective utilization and organization of resources are the skills particularly relevant when pursuing a career in global health.”...

- Jack Saddemi, 2017 Research Scholar

AMERICAN PUBLIC HEALTH ANNUAL MEETING 2017

November 4-8, 2017

Atlanta, Georgia, USA

Evaluating Factors Associated with Maternal Health in Myanmar Towards the New Development Agenda

Author: **Maja Milkowska**

Labor Migration and Social Determinants of Health in Myanmar

Author: **Heidi West**



*Sustainable Development Goals Conference
in Magway*

2018 OVERVIEW

SUMMARY OF YEAR

2018 was a landmark year for GEH LAB. We offered research programs in three countries; adding Indonesia where Dr. Shibata had long standing partners, and Nigeria, the home country of Research Scholar, Chukwuyem Ekhator, to our ongoing program in Myanmar.

The 2018 Myanmar research program also included a week in Thailand for the 13th International Burma Studies Conference where staff and scholars, including return 2017 scholar Lee Lay Hoon, presented research on community & occupational health associated with the Sustainable Development Goals.

The program in Indonesia centered around the activities of the newly formed Hasanuddin Centre for Tobacco Control and Non-communicable Disease, funded by The Union and Bloomberg Initiative to Reduce Tobacco Use. GEH LAB partnered with the faculty of public health at Hasanuddin University in Makassar, Indonesia to obtain funding and launch the center which focuses on a key public health issue in a community where over 75% of adult men smoke.

Two Research Scholars, Adwight Risbud and Sasha Sarkar, received the Population Health Scholar Award from the University of Miami for their participation in the 2018 Indonesia program.



Local artists perform a traditional dance.

2018 RESEARCH SCHOLARS



DEVIN METOYER, MPH

**Environmental Health Scientist
Coordinator for the state of
Louisiana**

MPH, University of Miami Miller
School of Medicine

BS Biology (Natural Science
concentration), Northwestern
State University

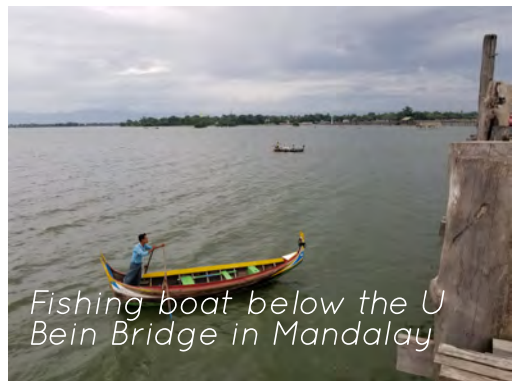


HANNAH SPEAKS, MSPH

**Regional Epidemiologist for the
state of Kentucky**

MSPH, University of Miami Miller
School of Medicine

BS Chemistry, Industrial Hygiene,
University of North Alabama



Dr. Chukwuyem Ekhaton, MBBS, MPH

Masters of Public Health (Health
Promotion) Northern Illinois University
- Class of 2018

Bachelors of Medicine

Bachelors of Surgery (MBBS 2013)
University of Benin Nigeria



2018 RESEARCH SCHOLARS



RYAN SUTHERLAND, MPH

Study Coordinator at Yale
University School of Medicine

MPH, Yale University

BS Biology, Music Performance,
Emory University

Award:

Dean's Prize for Outstanding MPH
Thesis titled "Tobacco Use,
Knowledge of Tobacco Risks, and
Perception of Smoking Behaviors
Among Urban and Rural Youth in
Indonesia"



ALEXANDRIA SASHA SARKAR

Medical Student at University of Miami Miller
School of Medicine

MD/MPH, University of Miami Miller School of
Medicine

BS Microbiology & Immunology, University of
Miami

Award:

Population Health Scholar Award, Department of Public
Health Sciences, Miller School of Medicine MD/MPH Program



ADWIGHT RISBUD

Jr. Research Specialist at UC Irvine School of Medicine

MD/MPH, University of Miami Miller School of Medicine

BS Human Biology, BA Religion, University of Southern
California

Award:

Population Health Scholar Award 2018, Department of
Public Health Sciences, Miller School of Medicine
MD/MPH Program

2018 PROJECTS

RESEARCH SNAPSHOTS

Nigeria Maternal Health Literacy

According to UNICEF, Nigeria ranks as the second largest contributor to under-five and maternal mortality globally. We wanted to help reduce this by improving maternal health literacy and utilizing evidence-based surveys to organize community outreach workshops in 5 communities: Okitipupa, Ore, Oredo, Ugbowo and Esan. Once we evaluated baseline maternal health literacy, we developed hands-on educational materials. Mothers learned to recognize early signs of highly prevalent diseases such as diarrhea, malaria, and pneumonia, and the importance of breastfeeding, prenatal care, and newborn immunizations.

Smoke-Free Law and Environmental Tobacco Smoke in Indonesia

Makassar is the largest city in Eastern Indonesia. Despite establishing a Smoke-Free-Law in 2013 to regulate smoking and tobacco sales, environmental pollution from smoking persists and tobacco advertising dominates the visual space in the city. GEH LAB Research Scholars engaged in three major projects aimed at reducing tobacco use and preventing the harmful effects of smoking for communities. Alexandria Sasha Sarkar conducted research on the evaluation of tobacco control laws and community level barriers to decreasing environmental tobacco smoke in Makassar, Indonesia. The project consisted of administering a survey to 1260 residents of Makassar to determine knowledge, perceptions, and attitudes about tobacco use in public spaces. Adwight Risbud led a study to assess knowledge of head and neck cancer and smoking behavior in a high-risk population. Ryan Sutherland used his interdisciplinary experience in performing arts and public health to “Create a Stage for Change.” Ryan and the team built relationships with educators to reach students through interactive health education performances at schools and in community settings for hundreds of youth throughout Makassar.

2018 PROJECTS

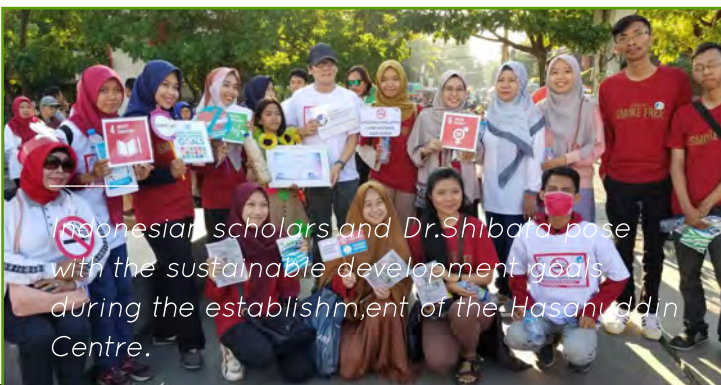
Hasanuddin Centre for Tobacco Control and Non-Communicable Disease

Given the high rate of smoking in Eastern Indonesia, one of GEH LAB's goals was to strengthen the implementation of the 100% smoke-free law and ban tobacco advertising in Makassar, Indonesia. We partnered with Universitas Hasanuddin (UNHAS) to design and establish the Hasanuddin Centre for Tobacco Control and Non-communicable Disease Prevention (CONTACT) under the Faculty of Public Health. Our primary focus was on community mobilization, gathering the viewpoints of diverse stakeholders such as universities, civil society organizations, local government officials, and the media, to advocate for stronger implementation of the smoke free policy.

Key activities of the CONTACT center fall into 4 categories:

1. Research: Provision of evidence about the current state of the problem and local knowledge, perceptions and attitudes regarding tobacco control policies
2. Training: Training of local leaders: government, civil society, media, business leaders, community leaders, universities
3. Events: Hosting awareness raising events and activities in districts throughout the city
4. Technical Assistance: Provision of technical assistance to the Mayor and city government

The target population for the interventions included key leaders and stakeholders in local government, universities and schools, religious institutions, business, healthcare, and public transit. The program takes a "triangle approach" to target decision makers through 1.provision of scientific evidence and capacity building by academic partners, 2. community mobilization, and 3. Direct and indirect engagement with the government.



Indonesian scholars and Dr. Shibata pose with the sustainable development goals during the establishment of the Hasanuddin Centre.



International Symposium in Indonesia

2018 CONFERENCES

13th International Burma Studies Conference
August 3-5, 2018
Bangkok, Thailand

Health Risk Perceptions Related to Mercury Use in Artisanal Mining Sights

Authors: **Lay Hoon Lee** and **Seda Kojoyan**

Migration and Social Determinants of Health in Myanmar

Author: **Heidi West**

Understanding Health Seeking Behaviors in Myanmar

Authors: **Devin Metoyer** and **Lizeth Galarza**

Risk Factors Associated with Maternal and Child Health in Myanmar

Author: **Tomoyuki Shibata, Maja Milkowska and Hannah Speaks**



Buddha statue



U Bein Bridge Mandalay



Research Scholar Devin Metoyer working with his team

GEH LAB Summer Program is an excellent opportunity for young public and global health professionals to gain valuable research experience and increase learning and networking opportunities. It provides a great stepping stone for the further career in the field.

- 2016 Research Scholar



Attending the 5th workshop and Collaborative Research for Sustainable Development Goals at the University of Magway;

2019 OVERVIEW

SUMMARY OF YEAR

2019 marked the largest Research Scholar cohort yet, with 8 scholars across 2 programs. Ryan Sutherland, returned to Indonesia to take his “Stage for Change” health project to the next level. He led a school based survey to provide evidence on how to prevent tobacco use initiation and turned this into an award winning thesis for his MPH at Yale University. Jacqueline Bell led a project that explored taxation on tobacco products as a means of tobacco control in Indonesia.

Our 6 scholars in Myanmar representing both the University of Southern California and Northern Illinois University focused on capacity-building in Magway, Myanmar leading workshops on GIS, survey research and data collection tools for low resource settings, collection of environmental specimen data and preparation of scientific abstracts.

Dayton Kimbark and Celine Taylor were GEH LAB’s first undergraduate Research Scholars and they excelled in advancing our mission to support sustainable development for health in low and middle-income countries. We were proud to support several GEH LAB scholars and affiliates in presenting their work at international conferences including APHA and the 19th Science Council of Asia conference in 2019.

2019 RESEARCH SCHOLARS



HARRIS ROSENBLUM

**Rosalinde & Arthur Gilbert
Fellow at Los Angeles Business
Council Institute**

MUP/MPH University of
Southern California

BA Sociology, Tulane
University



HANNAH STEWART, MPH

Doctoral student at UT Austin

MPH Global Health Leadership,
University of Southern
California

BSc Psychology, Baylor
University

Certificate in Health
Emergencies in Large
Populations, Johns Hopkins

Award:

APHA 2020 International Health
Section Top-scoring Early
Career Professional Abstract
(\$500 scholarship) - Impact of
natural disasters on mental
health outcomes of first
responders in central Myanmar



DIANA GARCIA

MPH (Health Promotion
emphasis), Northern Illinois
University

BS Nutrition, Health, and
Wellness, Northern Illinois
University

Award:

Featured in the NIU Student
Spotlight

NIU Graduate Student Travel Grant
2020

2019 RESEARCH SCHOLARS



CELINE TAYLOR

BS Public Health
(Environmental Health
emphasis),
Northern Illinois University

Award:

1st Place Community
Engagement Showcase,
(Poster #109)
Traffic-Related Injuries in
Myanmar



RYAN SUTHERLAND, MPH

**Study Coordinator at Yale University School
of Medicine**

MPH, Yale University

BS Biology, Music Performance, Emory
University

Award:

Fellow - Harvard Public Health Review



JACQUELINE BELL

**Legislative & Regulatory Analyst at
America's Health Insurance Plans (AHIP)**

MSPH, University of Miami Miller School of
Medicine

BS Chemistry, Industrial Hygiene, University
of North Alabama

2019 RESEARCH SCHOLARS



DAYTON KIMBARK

BSc Environmental Studies,
Minor in Biology, Northern Illinois
University



WILLIAM JARDELL

Project Coordinator for USC Institute of Global Health

MPH (Global Health emphasis), University of Southern
California

BS. Biomedical Science, Texas A&M University



2019 PROJECTS

COMMUNITY CAPACITY-BUILDING PROJECT

Natural Disasters and Mental Health of First Responders

In Myanmar, GEH LAB investigated the impact of natural disasters on the mental health outcomes of first responders in Myanmar. This project was spearheaded by Research Scholar, Kristin Ringstad in 2016 and furthered by Hannah Stewart who won an American Public Health Association (APHA) award for her work on this important topic. Surveys were administered to 234 participants, which included firefighters, healthcare professionals and volunteers from local NGOs. Results from this pilot study revealed that natural disasters have the potential to impose immense psychological distress upon those who respond to them, and that the strengthening of mental health systems in LMICs is crucial.



Research team in Magway

19th Science Council of Asia Conference
December 3-5, 2019
Myanmar Academy of Arts and Science (MAAS), Nay Pyi Taw,
Myanmar

The impact of flooding on socio-economic condition of
vulnerable populations in Mandalay Region

Author: William Jardell and Saw Nan Nwe

Plastic Bottle Waste in Mandalay: Identifying recycling
knowledge and practices among residents

Author: Harris Rosenblum and May Myat Noe

Association Between Dengue Fever and Meteorological
Conditions in Rural Myanmar

Author: Hannah L. Stewart

Knowledge, Attitudes, and Practices Regarding Plastic
Bag Usage in Mandalay

Author: Dayton Kimbark and Hnin Phyu Wai

American Public Health Association Annual Meeting 2019
November 2-6, 2019
Philadelphia, PA

Assessment of Head and Neck Cancer Knowledge And
Smoking Behaviors in High-Risk Population

Author: Adwight Risbud

Assessment of Public Knowledge, Perception, and
Attitudes Regarding Mosquito-borne Disease in Myanmar

Author: Devin Metoyer, MPH

Evaluation of Smoke-Free Law and community-level
barriers to decreasing environmental tobacco smoke in
Indonesia

Author: Alexandria Sasha Sarkar



Devin Metoyer in Indonesia



Su Taung Pyae Pagoda in Mandalay, Myanmar.

2020 OVERVIEW

SUMMARY OF YEAR

2020 brought on new challenges for GEH LAB and the world. In light of the COVID-19 pandemic, the summer research program was converted to a fully virtual experience. Along with challenges come great opportunities. GEH LAB was able to draw on its years of experience as an international organization that was accustomed to online meetings and virtual connections to build new partnerships in new regions of the world and offer a robust research experience to 3 scholars.

The annual APHA conference was held virtually this year as well, and we had a record 5 GEH LAB presentations. In addition to presenting her 2019 project on oil extraction sites at APHA, Celine Taylor, returned in 2020 to start a new project on traffic accidents for which she won 1st place in the NIU Community Engagement Showcase. Hannah Stewart shared her work on the impact of natural disasters on the mental health of first responders, and Diana Garcia introduced her work on caregiver knowledge, practices, and attitudes regarding dengue fever in Myanmar, both award winning projects. Finally, Heidi West was awarded the Samuel J. Tibbitts Fellowship for academic excellence and dedication to public health.

2020 RESEARCH SCHOLARS



SABRINA HENNECKE

**MD/MPH Candidate at
University of Miami**

MD/MPH, University of Miami
BSc Biology, McGill University



[This is] a program to build your own and local partners' capacity to conduct quality research and better understand issues on the ground."

- Seda Kojoyan, 2017 Research Scholar



CELINE TAYLOR

BS Public Health (Environmental Health emphasis)
Northern Illinois University

Award:

1st Place Community Engagement Showcase 2020, (Poster #109)
Traffic-Related Injuries in Myanmar

**Honorable Mention: Heidi West -
Co-founder, Samuel J. Tibbitts
Fellowship for Academic
Excellence and Dedication to
Public Health**



ALYSSA ZLATKIN

**MD/MPH Candidate at University of
Miami**

MD/MPH, University of Miami Miller
School of Medicine

BA Health and Societies: Global
Health, Minor in Chemistry, University
of Pennsylvania

2020 PROJECTS

COMMUNITY PROJECTS

Partnership with Shirati for Active Rehabilitation & Development Organization (SARDO)

Our team has partnered with the Tanzanian non-profit Shirati for Active Rehabilitation & Development Organization (SARDO), led by Archy Gomba. Together, we built a disabilities-inclusive grassroots campaign to support persons with disabilities (PwD) during COVID-19. The project was led by Archy and GEH LAB Administrative and Communications Associate, Samantha Noor, a former intellectual disabilities researcher at the USC Brain & Creativity Institute.

GEH LAB Research Scholar Alyssa Zlatkin, Grants Associate Asha Coutrier, and Samantha worked to put together PwD-tailored WASH solutions and literacy-sensitive program materials for the UN International Day for Persons with Disabilities collaborative project. A total of 100 WASH informational flyers and protective face masks were distributed in Shirati while SARDO worked with PwD to communicate proper handwashing and hygiene techniques. GEH LAB and SARDO will continue their collaboration after this UN Day to promote the health and wellbeing of PwD in Shirati, East Africa, and beyond.

2020 Research Scholar Alyssa Zlatkin has been an advocate for the PwD community for nearly a decade. Alyssa's GEH LAB research project involved investigating children with disabilities' quality of life, access to healthcare, and access to education in Myanmar. The ultimate goal of Alyssa's study is to enact positive change for children with disabilities in Myanmar and around the world. We are proud to have had the opportunity to partner with SARDO and support research efforts virtually this year!

2020 CONFERENCES AND PUBLICATIONS

American Public Health Association Annual Meeting 2020

October 24-28, 2020 Virtual

Occupational and environmental exposures to volatile organic compounds in a hand-dug petroleum extraction site
Author: **Celine Taylor**

Occupational exposures PM and radiation in an artisanal coal mine in central Myanmar

Author: **Dayton Kimbark**

Perspectives on male partners' smoking and the potential role of females in tobacco control in Indonesia

Author: **Uswatun H Purnama Sari and Heidi West**

Impact of natural disasters on mental health outcomes of first responders in Central Myanmar

Author: **Hannah Stewart**

Caregiver knowledge, practices, and attitudes regarding dengue fever in Mandalay, Myanmar

Author: **Diana Garcia**

Peer Reviewed Publications

Understanding Barriers and Facilitators of Maternal Health Care Utilization in Central Myanmar

Authors: Maja **Milkowska-shibata**, **Thin Thin Aye**, **Yi San Myint**, **San Myint**, **Khin Thein Oo** , **Kyi Khaing**, **Marlar Than**, **Thinzar Win**, **Su Yi Myo**, **Su Yi Toe** , **Heidi West**, **Kristin Ringstad**, **Lizeth Galarza**, **Can Meng** and **Tomoyuki Shibata**

Journal: International Journal of Environmental Research and Public Health

Knowledge of Head and Neck Cancer and Smoking Behavior in a High-risk Population in Indonesia

Authors: **Adwight Risbud**, **Asmaryadi Amma**, **Ismi Sultan**, **Musyarrifah Hamdani**, **Meliana Handayani**, **Andi Padoheng**, **Shabir Achmad**, **Hadijah Hasyim**, **Ahmad Wadi**, **Alimin Maidin**, **Alexandria Sarkar**, **Heidi West**, **Can Meng** and **Tomoyuki Shibata**

Journal: Southeast Asian Journal of Tropical Medicine and Public Health



GEH LAB Research Scholars with Indonesian students.



Dr. Shiba and the GEH Research Scholars



The GEH LAB program expanded my research capacity significantly. The collaboration with different scientists from such diverse fields is rare and offers amazing learning opportunities. I also greatly enhanced my leadership skills.

- 2019 Research Scholar



FINANCIAL SUMMARY

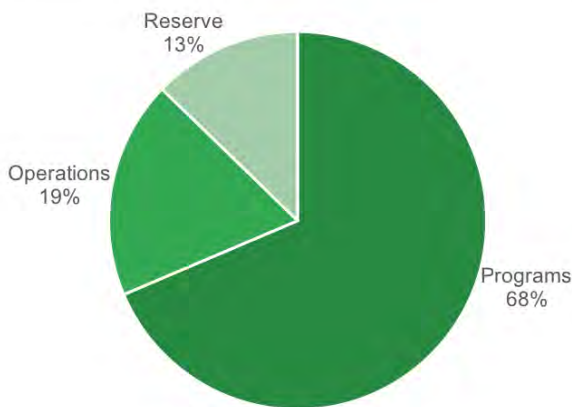
REVENUE

Fiscal Year	Programs	Operations	Reserve	Total
2016	\$8,700 (64%)	\$4,974 (36%)	0\$ (0%)	\$13,674
2017	\$8,700 (57%)	\$3,561 (23%)	\$2,964 (19%)	\$15,225
2018	\$14,300 (66%)	\$5,786 (27%)	\$1,621 (7%)	\$21,707
2019	\$20,423 (88%)	\$517 (2%)	\$2,347 (10%)	\$23,287
2020	\$3,250 (48%)	\$211 (3%)	\$3,355 (49%)	\$6,816
	\$55,373 (69%)	\$15,049 (19%)	\$10,287 (13%)	\$80,709

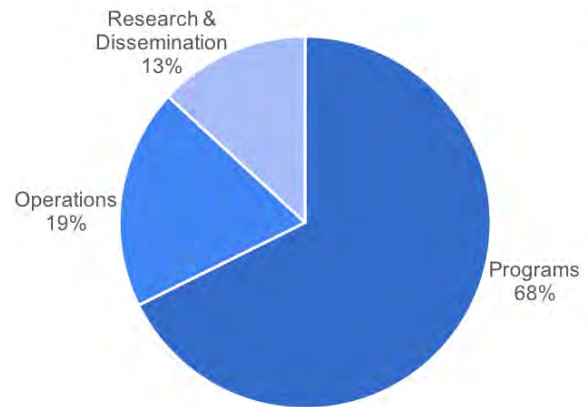
EXPENSES

Fiscal Year	Programs	Operations	Research Dissemination	Total
2016	\$7,264 (68%)	\$3,025 (28%)	\$345 (3%)	\$10,634
2017	\$10,101 (75%)	\$2,749 (20%)	\$613 (5%)	\$13,463
2018	\$11,016 (57%)	\$2,394 (12%)	\$5,801 (30%)	\$19,211
2019	\$16,114 (81%)	\$2,680 (13%)	\$1,135 (6%)	\$19,929
2020	\$0 (0%)	\$1,743 (69%)	\$771 (31%)	\$2,514
	\$44,495 (68%)	\$12,591 (19%)	\$8,665 (13%)	\$65,751

*2020 programs impacted by COVID-19 pandemic



2016-2020 Revenue



2016-2020 Expenses

Each year, as our organization grows, we develop larger programs that extend our impact. We categorize our revenue into 3 main streams: programs (e.g. research program fees), operations (non-program donor contributions, board fundraising), and reserve (revenue minus expenses from the prior year). Similarly, our expenses are categorized into 3 main categories: programs (travel and research program group expenses), operations (banking fees, insurance, marketing and advertising, technology & telecommunications), and research and dissemination (publication fees, registration for conferences and trainings, research equipment and consumables). For inquiries regarding our financial reporting, please feel free to contact us at admin@gehl.org

THANK YOU TO OUR GREATEST SUPPORTERS

Alice Court
Alec Metzger
Alyssa Zlatkin
Andy Orr
Anna-Michelle Mcsorley
Adwight Risbud
Alexandria Sasha Sarkar
Avanti Wadugodapitiya
Barbara Ringstad
Betsy Arnold
Brian Taylor
Can Meng
Cassie Dunn West
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Tomoyuki Yatsuhashi
Wendy Bostick
William Jardell
Yohei Shibata

On behalf of the entire Global Environmental Health LAB team, I want to express my sincere gratitude to all of our donors, especially those who have supported us year after year. We could not do this work without your generosity and support! Thank you and we look forward to leveraging your generosity to make a difference in the lives of others! A special thanks goes out to those of you who donated your time and expertise including photographer Karl Seifert* (www.karlportfolio.com) and the interns who helped produce this report, Samantha Noor, Kimberly Soliven, Katrina Jacoby and Asha Coutrier

HEIDI WEST, MA

Director of Programs & Operations
Global Environmental Health LAB



DR. TOMOYUKI SHIBATA

Executive Director

Dr. Shibata has been passionate about making a difference locally and internationally for over 3 decades. As the Executive Director of GEH LAB, Dr. Shibata works to create safe, healthy, and sustainable environments together with communities, governments, NGOs, and the private sector. He also serves as an Associate Professor of Public Health at Northern Illinois University

Co-Founders

As a passionate and resourceful international program director with over 10 years of experience, Ms. West has dedicated her life to the realization of the Universal Declaration of Human Rights and to building an informed global community in support of multifaceted development issues. Currently, she is completing her PhD in the Department of Health Policy and Management at the University of California, Los Angeles.



HEIDI WEST, MA

Director of Operations & Programs



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Dr. Gray is an Associate Professor of the Public Health Program at Northern Illinois University, College of Health and Human Sciences.



JULIE HOLLENBECK, PhD, MA

Dr. Hollenbeck is an environment and human health researcher, with extensive experience in science communication and program management.



KYOKO KUSAKABE, PhD, M.SC

Dr. Kyoko Kusakabe is a professor of Gender and Development Studies at the Asian Institute of Technology in Thailand.



MARIE LEGRAND, MPH

Marie LeGrand is the Director of Education & Healthcare Relations for the Multiple Sclerosis Association of America (MSAA) and received her MPH from Loma Linda University.



NICHOLAS DAVIS, MS

Nico is an HIV/STI data analyst for Howard Brown & Health in Chicago and received his Masters of Science in Epidemiology at the University of Illinois at Chicago.



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Dr. Herto is a Senior Lecturer of the Environmental Engineering Department, Faculty of Civil and Environmental Engineering at Institut Teknologi Bandung (ITB) in Bundung, Indonesia

HEIDI WEST, MA

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*Research Coordinator
2019-2020*

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*Research, Grants and
Operations Intern 2020*

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SEO Intern 2020

Kevin Yamamae

*Research Program &
Operations Associate
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Asha Coutrier

*Grants Associate
2020-2021*

Samantha Noor

*Administrative &
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Kimberly Soliven

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Katrina Jacoby

*Programs and Events
Associate 2021*



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Let's Work Together

If you are interested in utilizing our environmental services, wish to partner with us on a project related to the SDGs, or would like to join the GEH LAB Board of Directors, contact us at admin@gehlab.org or tshibata@gehlab.org

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