

NIHR

Global Health Research Centre
for Non-communicable Diseases
and Environmental Change

Project Activity Report





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A Centre of Excellence

The National Institute for Health Research (NIHR) Global Health Research Centre (GHRC) for Non-communicable Diseases and Environmental Change, launched in 2022, is a four-country multi-institutional collaboration that aims to generate actionable evidence to address the dual challenges of global environmental change and non-communicable diseases.

Our Partners

Hosted by The George Institute for Global Health India, in partnership with Imperial College London, and in collaboration with Sri Ramachandra Institute of Higher Education and Research, India, the International Centre for Diarrhoeal Disease Research, Bangladesh, and Brawijaya University, Indonesia, the NIHR GHRC for Non-communicable Diseases and Environmental Change endeavours to make strides towards sustainable and equitable global health research by bringing together an interdisciplinary group of academics, global experts, and more, to empower world-class research, training, community engagement, and policy advocacy for health equity.



The NIHR GHRC for Non-communicable Diseases and Environmental Change is funded by the National Institute for Health Research. A leader in health and social care research, focusing on improving individual health and well-being while also promoting economic growth and innovation. As part of its commitment to empowering global health research in low- and middle-income countries, NIHR supports Global Health Research Centres around the world through funding from the Official Development Assistance (ODA) provided by the UK aid budget.

Paving the Path

Committed towards generating critical evidence and developing practical, cost-effective interventions at the intersection of climate change and non-communicable diseases, we at the NIHR GHRC for Non-communicable Diseases and Environmental Change work closely with vulnerable communities in Bangladesh, Indonesia, and India to co-create solutions that can drive positive and equitable impact.



Encouraging conversations and learning among our research partners, policymakers, healthcare workers, and the communities we work with has been central to our aim of promoting a high-quality, sustainable, culturally appropriate, and locally relevant research agenda.

Dr. Vivekanand Jha

Principal Investigator
The George Institute for Global Health



Fostering early and mid-career researchers as they transition into leaders driving research impact with enhanced capacity-building initiatives and increased policy engagement, the NIHR GHRC for Non-communicable Diseases and Environmental Change supports scalable and sustainable strategies designed to strengthen global health systems.



The Centre supports the participating institutions to develop their capacity to deliver the high quality, trans-disciplinary research that policy makers and communities need to reduce the impact of climate change on health in our focus countries and beyond.

Dr. Christopher Millett

Principal Investigator
Imperial College London



Our Leadership

Stepping into the fourth year of the Centre's journey, we celebrate the foundational principles of inclusivity and equity in our unified vision of the implementation of co-designed interventions in our partner countries. We recognise that expanding impactful interventions through advocacy, enhancing research capacities, and fostering meaningful policy dialogues are essential for lasting change.



We are committed to generating actionable, policy-relevant evidence that improves health outcomes and reduces inequities in a cost-effective manner, ensuring a healthier and more sustainable future for everyone. By striking a careful balance between developing cutting-edge technological tools for healthcare delivery, water salinity adaptation, and heat exposure protection, while introducing farming-based interventions to enrich nutrition quality and dietary diversity, the Centre demonstrates that for research to be truly equitable, it needs to be agile, robust, and grounded in real-world feasibility.

Dr. Devarsetty Praveen

Program Director
NIHR GHRC for Non-communicable
Diseases and Environmental Change

Our Projects: Coastal Water Salinity and Hypertension



In coastal Bangladesh, sea water intrusion has created low-arsenic but highly saline drinking water, which increases risks of hypertension, kidney disease, and pregnancy complications, while existing mitigation technologies have had limited adaptation.

Primary care services for non-communicable diseases (NCDs) remain limited in hard-to-reach areas necessitating pragmatic, co-designed interventions that simultaneously provide low-salinity, pathogen-free water and strengthen NCD prevention and care.



Project Priorities

- Reduction of Cardiovascular Disease (CVD) risks among the population living in vulnerable rural areas
- Mitigation of drinking water salinity in coastal region



We are co-creating evidence-driven, community-centered solutions at the intersection of non-communicable diseases and environmental change, building resilient health systems in Bangladesh and beyond to protect vulnerable populations, advancing global health equity & informing policy.



Dr. Aliya Naheed

Country Director

NIHR GHRC for Non-communicable Diseases and Environmental Change, Bangladesh

Collaborators & Stakeholders

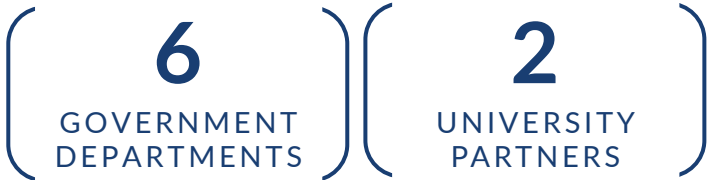
Collaborating with government departments, policymakers, and educational institutions, the project aims to affect sustainable positive change towards mitigation of drinking water salinity in coastal Bangladesh.



The significance of this project lies in its ability to bridge evidence and implementation. By strengthening primary health care and addressing environmental drivers of NCDs, it will directly inform national strategies and help achieve our health and development goals.



Dr. Syed Zakir Hossain
Former Line Director
Directorate General of Health Services (DGHS)



We see this project as a vital step toward addressing the growing health risks our communities face from non-communicable diseases and environmental change. It ensures that solutions remain practical, inclusive, and truly responsive to local needs. From my experience, I have seen how digital innovations can transform service delivery. The development of the NCD module within the OpenMRS platform under this project will further strengthen NCD service delivery through a unified, government-owned digital system.



Dr. Shah Ali Akbar Ashrafi
Former Director
Management Information System

Our Projects: Food Systems & Nutrition



The Comprehensive National Nutrition Survey (2016-2018) reveals an increasing prevalence of non-communicable diseases among children and adolescents. In rural India, both children and adults tend to consume diets that are high in cereals and carbohydrates, but have a low intake of pulses, dairy products, eggs, meat, and vegetables.

With the high prevalence of diet related NCDs like hypertension, diabetes in both urban and rural India, it becomes imperative to have a family-based approach to address the risk factors of NCDs through a life course approach that can improve dietary diversity and reduce food insecurity.



Launch event for VATIKA project

Project Priorities

- Food systems and nutrition
- Enrich nutrition quality and dietary diversity



Engaging with the community to promote production of nutritious foods, consuming them at household level by family members and supplying the surplus for institutional meals for the children is the real essence of VATIKA (Village bAsed nuTri garden and nutrition Knowledge and Awareness for diversified diets in children). A project that aims to enrich the diets of nutritionally vulnerable communities in a sustainable manner.

Dr. Suparna Ghosh Jerath
Program Head, Nutrition
The George Institute for Global Health

Collaborators & Stakeholders

The **VATIKA** “Village bAsed nuTri garden and nutrItion Knowledge and Awareness for diversified diets in children” project is an integrated intervention that strengthens institutional feeding programs, promotes sustainable procurement, and reinforces nutrition education to enhance dietary diversity.



“The establishment and maintenance of nutrition gardens should be made more community-driven, where major activities such as seed distribution, sowing, and the supply of vegetables to schools and anganwadi centres are celebrated as community events with active involvement of community-based organizations and local leaders.

Vikas Kumar Tandon

NGO Executive

Professional Assistance For Development Action (PRADAN)



IMPLEMENTATION PARTNERS



Community-managed nutrition gardens

10
SCHOOL FEEDING PROGRAMS

8
ANGANWADI INITIATIVES

50
COMMUNITY - MANAGED NUTRITION GARDENS

“Working without incentive is never easy, but this initiative makes it meaningful—by promoting organic farming and motivating farmers, as their vegetables find a market in schools and anganwadi centres.

Gangaram Paikra

Founder and Director

Chaupal Gramin Vikas Prashikshan Evam Shodh Sansthan



Our Projects: Heat Exposure & Adaptation Tools



The World Health Organization (WHO) articulates an unparalleled need to build health system resilience to meet the NCDs prevention and care needs of vulnerable populations. Primary health care is the first point of contact for the rural population, and it plays a key role in protecting communities from climate change related NCDs.

This study aims to co-produce, co-implement, and assess multi-sectoral, co-designed primary health care-embedded adaptation interventions to prevent and manage heat stress and related illnesses in high-risk communities and workplaces in Andhra Pradesh.



Co-creation workshops with primary health care workers

Project Priorities

- Extreme Heat Stress
- Heat & Health



Our work has revealed a stark reality. Heat doesn't discriminate, but suffering does—the poor bear the greatest burden. At the Centre, we take on the challenge of strengthening health systems and building climate resilience, turning today's imperative into tomorrow's protection.

Dr. Vidhya Venugopal

Country Director

NIHR GHRC for Non-communicable Diseases and Environmental Change, India

Collaborators & Stakeholders

The **HEAT-PROTECT** Project (**H**eat **E**xposure & **A**daptation **T**ools **P**ROtection via intervention **T**echniques to **C**ombat **h**o**T** temperatures), is designed to evaluate & address health impacts, identify primary care gaps, and co-design community-driven interventions to protect the general & vulnerable population in Srikakulam district, Andhra Pradesh, India



If I stop, I lose my pay. But when I continue, I feel dizzy, angry for no reason, and I sometimes cry without knowing why.

Female Brick Kiln Worker
on her struggle with heat-induced eco anxiety, emotional distress, and physical anguish.



Migrant workers at a brick kiln



In conversation with heat vulnerable community members

650+

COMMUNITY
MEMBERS ENGAGED

40+

ACCREDITED SOCIAL
HEALTH ACTIVIST
(ASHA) WORKERS



Fieldwork teaches us the reality behind the statistics of scorching temperatures, and human suffering. The challenges faced on ground guide our reflections at the desk, where evidence becomes strategy. Together, field experiences and office work help us overcome barriers and drive meaningful change for heat-affected communities.



Raja Maarthi

Research Fellow

Sri Ramachandra Institute of Higher Education and Research

Our Projects: Plastic Burning & Air Pollution



In Indonesia, nearly 48% of unmanaged waste is openly burned, and plastic waste fuels informal industries that release toxic pollutants. Primary health care systems remain under-equipped to address environmentally linked NCDs, with limited screening, prevention, and integration of environmental data.

Air-quality-triggered digital health intervention in Malang and Banyuwangi using the RE-AIM framework, combining quantitative (air quality, exposure, clinical outcomes) and qualitative (case studies, interviews, focus groups) approaches are being evaluated.



Co-creation with primary health care workers

Project Priorities

- Air-quality-triggered digital health intervention
- Exposure risks to plastic burning caused air pollution



The impact of plastic waste incineration remains poorly understood, and this study aims to address that gap. Our research can contribute to reducing the incidence of non-communicable diseases. Ongoing work also includes the development of an early warning system and cultural mapping.



Dr. Sri Andarini
Dean, Faculty of Medicine
Brawijaya University

Collaborators & Stakeholders

The study aims to reduce air pollution through targeted interventions and policy engagement to lower exposure to household and ambient pollutants, with a focus on improved air quality monitoring. While empowering communities through participatory approaches (photovoice, circle communication) and evidence-based tools (life cycle assessment of plastic waste) to strengthen advocacy, inform sustainable policy, and ensuring community ownership in addressing air quality.



The NIHR GHRC for Non-communicable Diseases and Environmental Change explores how research can effectively inform public policy on urgent global health and environmental challenges. I am honoured to serve on its Public Advisory Board, collaborating with international experts to address these issues.

Dr. Yanuar Nugroho

Senior Advisor

Centre for Innovation Policy & Governance

60+

ENVIRONMENTAL
CADRES

21

WASTE BANKS
ESTABLISHED



IMPLEMENTATION PARTNERS



As an institution focused on waste management and the circular economy, Wastehub® emphasises socio-cultural, regulatory, and five other aspects for sustainable solutions. Multi-stakeholder collaboration, such as with the NIHR GHRC for Non-communicable Diseases and Environmental Change, is vital to transforming research into action against pollution and disease.

Ranitya Nurlita

Field Supervisor

Wastehub®



Our New Research Leaders



Dr. Chris Mary Kurian

Current Focus: Heat in Pregnancy-India, Harnessing tacit knowledge at The George Institute for Global Health to aid research

Dr. P.K Latha

Current Focus: Enhancing thermal comfort in unconditioned indoor workplaces through passive cooling technologies



Dr. Moh. Shadiqur Rahman

Current Focus: Towards a plastic-free Indonesia, a discrete choice experiment on household preferences for waste management

Dr. Rekha Shanmugam

Current Focus: Effects of extreme heat on maternal, placental, and foetal physiology, lactation, and newborn health in India



Our New Research Leaders



Dr. Widya Rahmawati

Current Focus: Primary health care strengthening in Indonesia, Promoting healthy eating habits: behavioral nutrition education in adults with metabolic syndrome

Dr. Noshin Farzana

Current Focus: Water salinity in Bangladesh under NIHR GHRC for Non-Communicable Diseases and Environmental Change



Dr. Sahiba Kohli

Current Focus: Food systems interventions in India integrated with community engagement to address non-communicable diseases with better environmental outcomes



In our New Research Leaders program, we've seen firsthand how effective mentorship accelerates skill development, fosters confidence, and opens doors to meaningful collaboration. It's not just about technical guidance—it's about cultivating a supportive relationship where emerging researchers can explore ideas, navigate challenges, and build independence to lead their own research programs in the future.

Dr. Laura Downey

Program Lead, Universal Health Coverage
The George Institute for Global Health



Our Core Value: Community Engagement and Involvement

Community Engagement and Involvement lies at the core of our mission to ensure that research is both sustainable and equitable. We aim to improve the health of populations by conducting research that is relevant, responsive, and accountable.



In conversation with community members

300+

FORMAL & INFORMAL
COMMUNITY ENGAGEMENT
ACTIVITIES

6,000+

COMMUNITY MEMBERS
AND STAKEHOLDERS
ENGAGED ACROSS OUR
FOCUS COUNTRIES



Community Engagement and Involvement brings the voices of communities into research, making it more relevant and trusted. By involving communities directly, it helps ensure that evidence translates into meaningful change for those whose lives are most affected.

Chhavi Bhandari

Co-Director, Impact and Engagement
The George Institute for Global Health



Our Core Value: Multi-Sectoral Interventions

Health and well-being are shaped by a complex interplay of factors. Our multi-sectoral interventions are designed to foster active collaboration, outreach, and partnerships. Effectively promoting community participation and empowerment, we are making strides, by actively partnering with local communities, health workers, and government stakeholders to create sustainable, cost-effective strategies that safeguard vulnerable groups.



Bringing together global experts, policymakers, researchers, and community members.

“

Health doesn't exist in isolation – it is shaped by food systems, climate shocks, and the strength of primary health care. Our job is to connect these dots into action and translate research into real-world change – whether it's a community heat action plan, a new food basket, or a digital tool in the hands of frontline health workers.



Suruchi Aggarwal

Program Manager

NIHR GHRC for Non-communicable Diseases and Environmental Change

Our Core Value: Primary Health Care

Harnessing the power of co-design, capacity building, and digital innovation, *SMARThealth*—a groundbreaking mobile health platform—empowers frontline health workers and doctors to deliver health care to underserved communities in **India** and **Indonesia**.



Co-creation workshop with primary health care workers

“

Breaking data silos is vital for advancing innovation and equity. Through collaboration, digital tools can connect regions, open knowledge pathways, and drive equity in health for communities.

Dr. Sabhya Pritwani

Research Fellow

The George Institute for Global Health



Our Core Value: Research Capacity Strengthening

Research capacity strengthening aims to enhance the evidence-to-policy ecosystem for our partner countries and collaborative institutes to generate high-quality research through a four-pronged approach delivering tailored country-specific initiatives, building resilience and sustainability as well as fostering collaborative efforts to bridge capacity gaps.

140+

HOURS OF PRE-RECORDED
AND INTERACTIVE
SESSIONS

300+

PARTICIPANTS SUPPORTED
IN THEIR PRACTICAL SKILL
BUILDING IN RESEARCH
MANAGEMENT,
COMMUNICATIONS & MORE



In-person research capacity strengthening workshop in Hyderabad



For research to be relevant and impactful, research should be driven by local researchers and communities. This is what the NIHR GHRC for Non-communicable Diseases and Environmental Change is aiming to achieve with its multipronged research capacity strengthening initiative of mentoring individuals, strengthening institutions, and empowering communities.

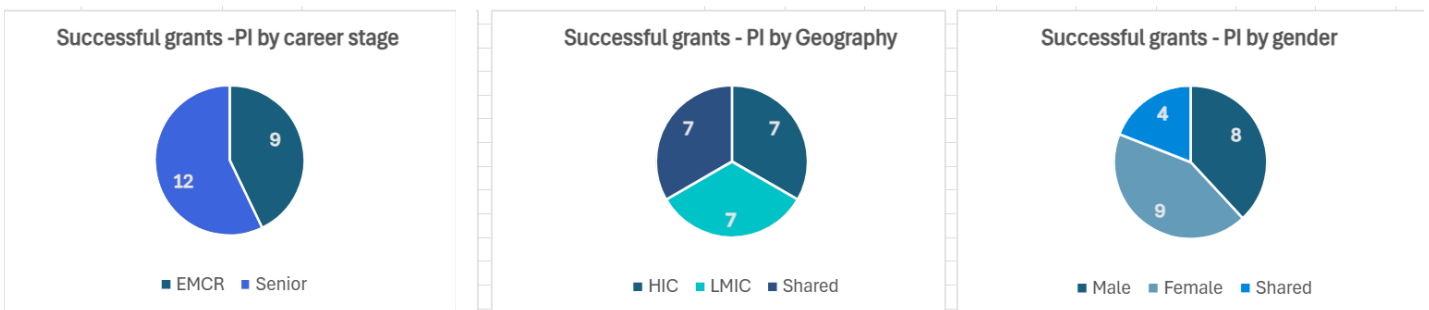
Dr. Niveditha Devasenapathy

Program Head, Academic Clinical Trials Unit
The George Institute for Global Health



Our Research

We believe that successful research programs thrive on strong teamwork and a supportive environment. To foster this, we assist researchers in developing leadership skills in several key areas, including crafting competitive grant applications, effectively communicating their research, and enhancing their methodological expertise. Working with partners and communities across the world to conduct rigorous, high-quality research while fostering communities of practice for scholars, students, managers, and experts alike.



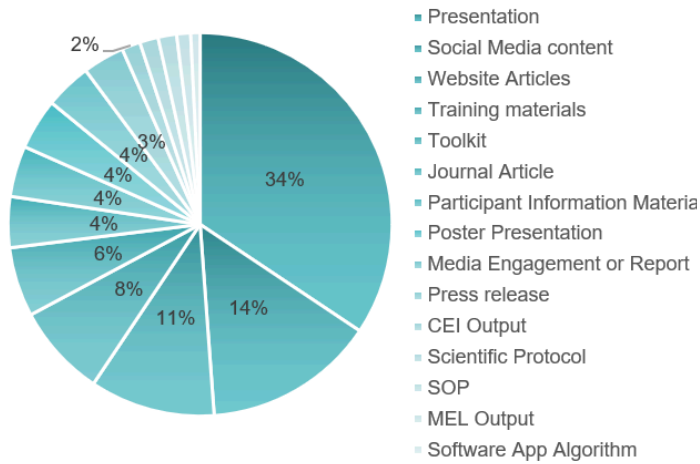
We enhance research programs through dedicated central support units that provide expertise in data management, statistics, and quality assurance. Investing in the growth of those who support researchers by offering a range of workshops and training courses designed to build their skills and confidence.



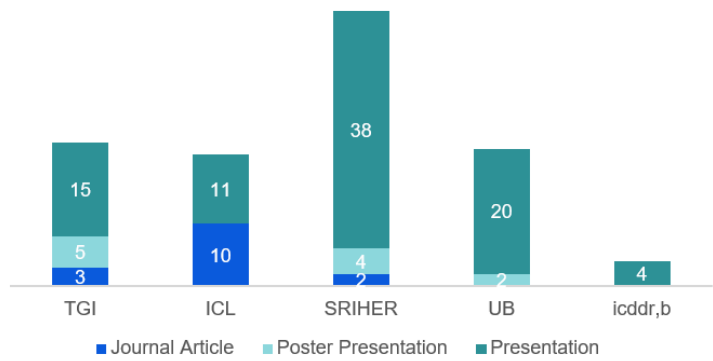
Dr. Madhuri Dutta

**Head, Strategic Partnerships and Commissioned Research
The George Institute for Global Health**

Output Types

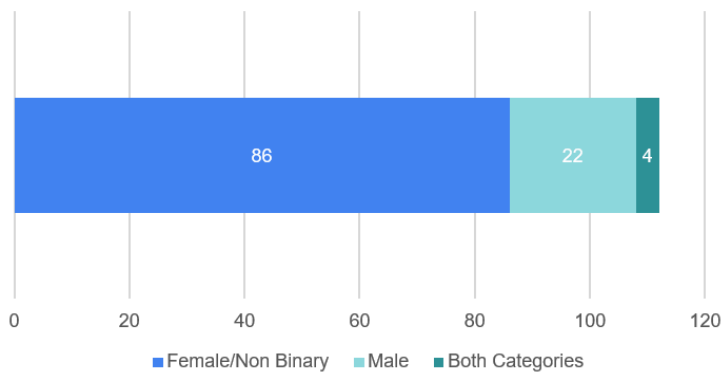


Academic outputs by Institution

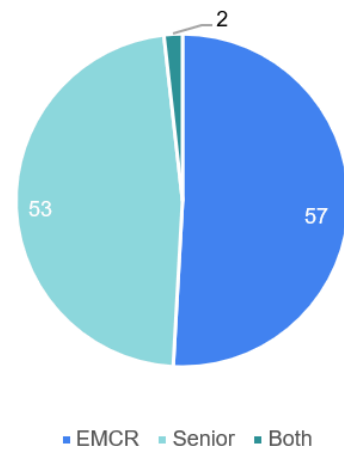


*2 papers are shared between ICL and TGI

Contribution mapped by gender



Contribution mapped by career stage



Monitoring, Evaluation & Learning

The Centre's Monitoring Evaluation & Learning (MEL) has been designed in a participatory manner to track progress towards its scientific goals, plan next stages of work, and learn from the experiences gained.



Our MEL strategy employs a participatory, learning-oriented approach. The MEL framework has not only helped us in tracking progress but also in assessing the effectiveness of research capacity strengthening and community engagement & involvement initiatives and integrating learning into decision making.

Dr. Deepika Luthra

Monitoring, Evaluation & Learning Manager
The George Institute for Global Health

The research capacity strengthening pillar aims to create a pool of independent researchers that engage with empowered community and generate locally relevant evidence.



Cohort Academic Development Award (CADA) Workshop



My role has highlighted that research capacity strengthening transcends mere systems; it is fundamentally about engaging with people. Cultivating strong relationships with stakeholders and the academic community is essential towards bolstering research capabilities.

Dr. Aakanksha Mehrotra

Research Capacity Strengthening Manager
The George Institute for Global Health



“

The training provided is excellent, and the courses are very informative. I believe the knowledge I gained from this experience will be beneficial for my future projects. Whenever I write a proposal, I can incorporate these insights. GHRC has been incredibly helpful in this process.

Academic Cohort Member

Feedback received through anonymized assessment forms



The Community Engagement & Involvement pillar aims to build trust and relationships with communities, field research staff, project managers and PhDs to develop equitable, sustainable and community-driven interventions that address local needs effectively.

“

Applying Community Engagement and Involvement in a multi-country project has shown that there is no one-size-fits-all model. Approaches must evolve to adapt to local contexts, social hierarchies, cultures, and lived experiences of communities.

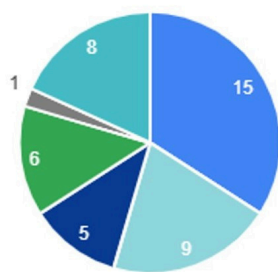
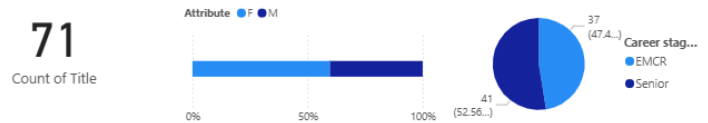
Maroof Khan

Community Engagement and Involvement Manager
The George Institute for Global Health



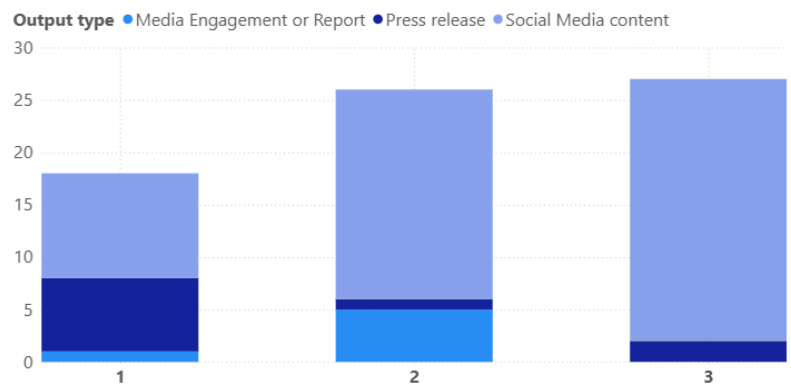
Knowledge Management

We are committed to embedding strong knowledge management practices that enable systematic recording, storage, and sharing of knowledge outputs with a diverse range of stakeholders. Through this approach, we aim to strengthen resilience that can help organisations scale insights and improve performance over time.



- Toolkit
- Press release
- Podcast
- Blogs
- Media Engagement or Report
- Social Media Videos

Count of Title by Award year and Output type



We aim to foster systems and behaviors that encourage efficient documentation, open sharing, and continuous learning.

Dr. Sarah Iqbal

Research Manager

The George Institute for Global Health

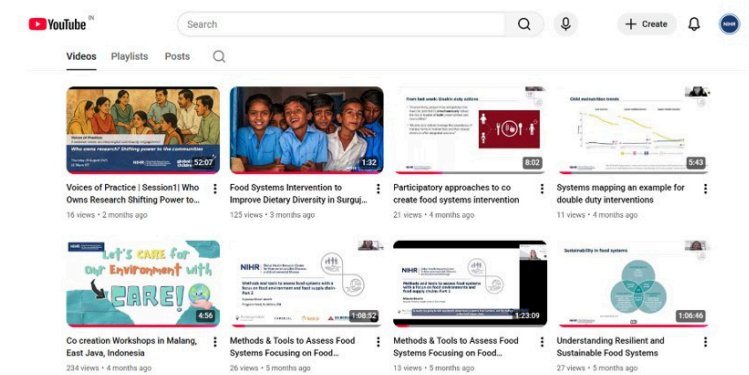
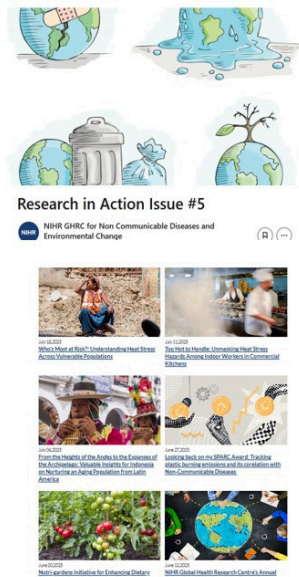


Knowledge Dissemination

Through regular reflective dialogues, co-development of non-academic outputs on a range of platforms, we empower researchers articulate field realities, promote reflexive practice, and foster a dynamic feedback loop among research teams, communities, and stakeholders.

125+
NON ACADEMIC
OUTPUTS

27%
FOREGROUNDING
COMMUNITY VOICES



Knowledge dissemination is at its core storytelling. Narratives make complex research and scientific data easier to understand, memorable, and actionable for diverse audiences.



Neha Sen

Communications Officer
The George Institute for Global Health

Our Publications

2024

Pathways to a healthy net-zero future: Report of the Lancet Pathfinder Commission

Effects of environmental change on health and the critical need for sex- and gender-disaggregated data

City mobility patterns during the COVID-19 pandemic: Analysis of a global natural experiment

Longitudinal transitions of the double burden of overweight and stunting from childhood to early adulthood in India, Peru, and Vietnam

Integration of Multiple Climate Change Mitigation Actions and Health Co-Benefits: A Framework Using the Global Calculator

Salinisation of drinking water ponds and groundwater in coastal Bangladesh linked to tropical cyclones

2025

Power to the people: Towards greater social participation in planetary health

Future-proofing cities against negative city mobility and public health impacts of impending natural hazards: A system dynamics modelling study

Effects of city design on transport mode choice and exposure to health risks during and after a crisis: A retrospective observational analysis

Co-creation of Integrated Interventions Addressing Non-communicable Diseases and Environmental Degradation: Protocol for a Participatory Qualitative Study

Adverse health outcomes associated with drinking highly saline water: A systematic review

Effectiveness of heat stress interventions among outdoor workers: A protocol paper

Exploring eco-anxiety among women amid climate-induced heat: A comprehensive review

2026

Impacts of heat on sleep quality among heat-exposed workers: A systematic review

Overcoming data collection challenges in rural settings by community engagement initiatives: Reflections from the research team

Our research is readily accessible to policymakers, researchers, and academics through our publications. Advancing and disseminating knowledge our publications offer expert insights, comprehensive examinations, and more.



Get in Touch

