



UK Research
and Innovation

UKRI GCRF Global Interdisciplinary Research Hubs

Building global research and innovation communities
for equitable and sustainable international development



The 12 Hubs

UKRI GCRF Accelerating Achievement for Africa's Adolescents Hub (Accelerate)

UKRI GCRF Accountability for Informal Urban Equity Hub (ARISE)

UKRI GCRF Action Against Stunting Hub

UKRI GCRF Gender, Justice and Security Hub

UKRI GCRF Living Deltas Hub

UKRI GCRF One Health Poultry Hub

UKRI GCRF One Ocean Hub

UKRI GCRF South Asian Nitrogen Hub

UKRI GCRF South-South Migration, Inequality and Development Hub (MIDEQ)

UKRI GCRF Trade, Development and the Environment Hub (TRADE)

UKRI GCRF Urban Disaster Risk Hub (Tomorrow's Cities)

UKRI GCRF Water Security and Sustainable Development Hub



Hubs at a glance

The pace of technological and economic change brought the world together, if unequally. What we have now seen is that we need collective responses to threats, challenges and opportunities and that inequality is a barrier to success.

We are constantly reminded of the interconnectedness of our world, from the continued fallout from the COVID-19 pandemic, devastating extreme weather events destroying communities and the far-reaching ramifications of wars forcing millions to flee and seek asylum and destabilising vital supply chains. Far from being removed from us, these global events impact all our lives in different ways, every day.

These pervasive, complex problems need creative, large-scale and joined-up approaches to find sustainable solutions for a safer, healthier, fairer and more prosperous world for us all. We have never before had such an opportunity to unite on an equitable platform all the skills, capacities and insights of the global population. Research and innovation are the keys which can unlock this endless potential.

That is why in 2019, UKRI launched an ambitious new approach to tackling some of the world's most pressing challenges by investing in 12 multinational interdisciplinary Research Hubs, the scale and scope of which are a first.

These challenge-led Hubs are focused on finding solutions to acute challenges which have proved resistant to change in the past and cannot be solved by one single organisation, discipline or country alone.



Success in development requires a depth of understanding that can only be achieved through equitable partnership and engagement of diverse stakeholders such as industrial sectors, civil society groups, Non-Governmental Organisations (NGOs) and governments. These 12 Hubs, funded through the Global Challenges Research Fund, do just that.

Made up of diverse individuals and organisations with a breadth of knowledge and expertise, the Hubs are building a greater understanding of multiple issues and developing scalable and sustainable solutions at a local, national and international level.

Community-voices are at the heart of all the Hubs, ensuring that the complexities of issues are explored through multiple perspectives, barriers to implementing interventions are understood and ultimately co-developed solutions are being developed and owned by the people they impact the most.

The exciting work of the 12 Hubs is outlined in this booklet with examples of successes so far.

£8-£15
million
investment in
each Hub over
five years

Over **400**
partner
organisations
involved across
the 12 Hubs

Between
each hub they
address **16** of
the Sustainable
Development
Goals



“ By driving and enabling equitable and diverse international partnerships these 12 Hubs are generating new ideas to tackle seemingly intractable challenges. The UK’s research and innovation system has great strengths, but we are only one part of what is a global scientific effort. To be truly successful we must play our part in bringing global capability to bear on global challenges. By harnessing the true breadth of global knowledge, the work of these Hubs are enriching and improving lives across developing countries as well as bringing benefits back to the UK. ”

Professor Christopher Smith, UKRI International Champion and Executive Chair, AHRC

UK Research and Innovation

UK Research and Innovation (UKRI) is the UK’s largest public funder of research and innovation and is composed of 7 disciplinary research councils, Innovate UK and Research England. Annually, we invest more than £8 billion to advance our understanding of people and the world around us and deliver benefits for society, the economy and the environment. Working in partnership, we aim to shape a more connected and agile research and innovation system in the UK that is an integral part of society, giving everyone the opportunity to participate and to benefit. Find out more in our new 5-year strategy, [Transforming Tomorrow Together](#).

Global Challenges Research Fund (GCRF)

The Global Challenges Research Fund (GCRF) supported cutting-edge research and innovation that addressed the global issues faced by developing countries. It was a £1.5bn Department for Science, Innovation and Technology (DSIT), formerly BEIS, fund and part of the UK Government’s Official Development Assistance* commitment. For more information visit www.newton-gcrf.org

* In line with Department for Science, Innovation and Technology policy for Official Development Assistance, all support for China partners will conclude by April 2023.

UN Sustainable Development Goals



The UKRI GCRF Interdisciplinary Research Hubs are contributing to the progress of the United Nations Sustainable Development Goals.

Accelerating Achievement for Africa's Adolescents Hub



By 2050, Africa will be home to half a billion teenagers, they are Africa's greatest unrealised asset, but despite their incredible creativity and potential, many millions are trapped in a cycle of poverty, violence, low education and poor health.

The Accelerate Hub is doing research differently by working with adolescents in resource-limited settings across Africa, as well as with interdisciplinary research teams, policymakers and Non-Governmental Organisations (NGOs) from around the world to generate evidence to understand the most effective combinations of interventions across all the sustainable development goals.

By integrating the knowledge and experience of teenagers with research excellence, capacity sharing, policy partnerships and service delivery, the evidence generated is being used to improve life outcomes for young people across Africa.

Hub info

Lead organisation:

University of Oxford

Geographical focus:

Africa

Principal investigator:

Professor Lucie Cluver



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Making a difference

With families under extreme stress during the COVID-19 pandemic, reports showed a global escalation of child abuse. Building on existing relationships, the Accelerate Hub led an urgent response with a coalition of World Health Organisation (WHO), UNICEF, the Global Partnership to End Violence, USAID and the US Centers for Disease Control and Prevention. Condensing evidence from randomised trials of child abuse prevention programmes in low-income countries this multinational team rapidly co-developed a set of open-source resources to help parents build more positive relationships with their children and reduce the likelihood of abusive situations arising.

The paper, web, radio, tv and social media content has been translated into over **100 languages** and reached **210 million families in 180 countries**.
www.covid19parenting.com/#/home.



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“ As a caregiver, it has been so difficult to balance life at home with most of my 5 children under my care. I felt drained or forced to shout at them for the most part. These tips have been so timely, these are things we take for granted yet so helpful. I feel enlightened and I hope my parenting will change for the better.

Caregiver of 5 children, Malawi



African Union Development Agency (AUDA-NEPAD), South Africa
 Centre for Disease Control, US
 City of Cape Town, South Africa
 Clowns Without Borders, South Africa
 Department of Basic Education, South Africa
 Department of Planning, Monitoring & Evaluation, Republic of South Africa
 Department of Social Development, Republic of South Africa
 Government of Eswatini
 Government of Kenya
 Government of Lesotho
 Government of Mozambique
 Government of Nigeria
 Government of Sierra Leone
 Government of South Africa
 Government of Sudan
 Government of Zambia
 Imperial College, UK
 International HIV/Aids Alliance, UK
 International Planned Parenthood Federation (IPPF), UK
 Jameel Poverty Action Lab (J-PAL), US
 London School of Hygiene & Tropical Medicine, UK
 National AIDS Commission, Zambia
 New York University, US
 North-West University, South Africa

Oak Foundation, Switzerland
 Partnership for Maternal, Newborn and Child Health (PMNCH)
 Paediatric – Adolescent Treatment Africa (PATA), South Africa
 Sexual Violence Research Initiative, South Africa
 Southern African Development Community (SADC)
 State Department for Youth Affairs, Republic of Kenya
 Stellenbosch University, South Africa
 The Coalition for Children Affected by Aids, UK
 The Global Fund to Fight AIDS, Tuberculosis, and Malaria
 The National Institute for Medical Research, Tanzania
 The University of Witwatersrand School of Economics and Finance, South Africa
 UNAIDS
 UNICEF
 United Nations Population Fund, Regional office in East and Southern Africa
 United Nations Population Fund, US
 UNDP HIV and Health team, New York, US
 University College London, UK
 University of Cape Town, South Africa
 University of Oxford, UK

Partner organisations

University of Kwazulu-Natal, South Africa
 University of the Western Cape, South Africa
 United States Agency International Development (USAID), US
 Wellspring Philanthropic Fund
 World Food Programme, Headquarters, Italy
 World Food Programme, Regional offices in Johannesburg and Nairobi
 World Health Organisation (WHO), Switzerland



Accountability for Informal Urban Equity Hub



Over half the world's population live in cities, with one in three living in informal urban settlements, known as 'slums', and this number continues to grow. The conditions in many 'slums' fuel socio-economic inequities and violence, including political and gender-based violence.

The ARISE Hub brings together partners from the UK, India, Sierra Leone, Bangladesh and Kenya working to empower 'slum' dwellers to improve their health and wellbeing.

Through shared evidence gathering ARISE, partners are building accountability at all levels to drive change and transform lives for marginalised communities.

Bringing together small community groups, large federations of the urban poor, research organisations and Non-Governmental Organisations (NGOs) ARISE is working with 'slum' communities, people relocated from 'slums' and informal workers in cities to empower people to demand their rights and boost government responsiveness for a healthier, fairer, safer and more stable future.

Hub info

Lead organisation:

Liverpool School of Tropical Medicine

Geographical focus:

East Africa, West Africa, South-Central Asia

Principal investigators:

Professor Sally Theobald and Dr Rachel Tolhurst



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www.ariseconsortium.org



@ARISEHub

Making a difference

At the start of the COVID-19 pandemic, ARISE partners in Kenya joined forces with the Kenyan Ministry of Health and communities to develop public health messaging for people living in 'slums' across Nairobi.

The LVCT Health team developed 9 different messages sent via text to a network of over **11,400 Community Health Volunteers (CHVs)** on a weekly basis, providing them with up-to-date strategies to share with households across the city's 'slums' to help prevent COVID-19.

CHVs alerted LVCT Health counsellors that gender-based violence was an issue during lockdown so LVCT Health began monitoring and developed new text messages to help with strategies.



A young person from Huruma puts up COVID-19 information banner around one of the settlement's major roads. Credit: Know Your City TV

“ Working in Korogocho and Viwandani 'slums' in Nairobi in the course of implementing the ARISE project, has opened my eyes to people's daily experiences that one can only learn by interacting with people living and working in these areas. ”

Inviolata Njeri, Senior Research and Learning Officer at LVCT Health

Partner organisations

African Population and Health Research Centre (APHRC), Kenya

College of Medicine and Allied Health Sciences (COMAHS),
University of Sierra Leone

Institute of Development Studies (IDS), UK

Institute of Health and Wellbeing,
University of Glasgow, UK

James P Grant School of Public Health, BRAC University, Bangladesh

Liverpool School of Tropical Medicine (LSTM), UK

Liverpool VCT Health (LVCT Health), Kenya

Sierra Leone Urban Research Centre (SLURC), Njala University, Sierra Leone

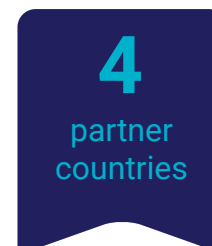
Slum/Shack Dwellers International (SDI), incorporating three organisations: Society for the Promotion of Area Resource Centres (SPARC), India; Centre of Dialogue on Human Settlement and Poverty Alleviation (CODOHSAPA) and SDI, Kenya

The George Institute for Global Health (TGI), India

The University of York, UK



Researcher talking to women and children from slum in Bangladesh about COVID-19.
Credit: James P Grant School of Public Health, BRAC University



Action Against Stunting Hub



Over 149 million children worldwide under the age of 5 are stunted, meaning their development is severely impaired. Stunted children may never reach their full potential for physical and cognitive development. Failure to eradicate this preventable condition is seeing children, their families, communities and nations suffering both immediate and long-term consequences.

The Action Against Stunting Hub is pioneering a unique 'whole-child' approach to stunting which aims to triangulate solutions within the biological, social, environmental and behavioural contexts in which stunting occurs. To this end, the approach being used is now focused on interdisciplinarity. By working with communities across India, Indonesia and Senegal alongside partners and organisations from local governments to civil society organisations, the Hub seeks to improve the way children are supported. In doing so, the hope is to implement more effective approaches to prevention and reduce child stunting by up to 10% and with long-term impact.

Hub info

Lead organisation:

London International Development Centre and London School of Hygiene & Tropical Medicine

Geographical focus:

West Africa, South Central Asia, South East Asia

Principal investigator:

Professor Claire Heffernan

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🌐 <https://actionagainststunting.org/>

🐦 @actionstunting

Making a difference

Accessible and diverse datasets are crucial in enabling child stunting to be prevented using scalable, evidence-based approaches across the world. This is why a unique, multidisciplinary All-Hub Data Repository is being developed.

Over **800,000 data points** are generated and analysed for this initiative. This comprises measurements from 790 pregnant women in India and the weights of their new-born infants as well as information on the living and eating conditions of children in Senegal, Indonesia and India.

The beta version of the data repository is nearing the testing phase and is being shared across project partners and wider international stakeholders such as WHO, UNICEF and the World Bank to enhance the impact and uptake making it a global resource.



Ingredient checks being carried out for data repository reporting

“ One of the repository's main objectives is to enable interdisciplinary analysis. The data quality is improved as a result of being saved and aggregated. Without a central repository, we would encounter problems that would make our analysis less accurate.

Mrs Assana Diop, Senegal Hub manager



Partner organisations

Birkbeck University of London, UK

Digital Green, India

Indian Council of Medical Research,
National Institute of Nutrition, India

International Livestock Research
Institute, Kenya

International Initiative for Impact
Evaluation (3ie), International

Liverpool School of Tropical
Medicine, UK

London International Development
Centre, UK

London School of Hygiene & Tropical
Medicine, UK

Public Health Foundation of India
(PHFI), India

Royal Veterinary College,
University of London, UK

Science Made Simple, UK

Sigillum Universitatis Cheikh Anta
Diop Dakarensis, Senegal

South Asian Ministers of Education
Regional Centre for Food and
Nutrition (SEAMEO), Indonesia

University of Aberdeen, UK

University of Brighton, UK

University College London,
Institute of Education, UK

University of Sheffield, UK

World Agroforestry Centre, Kenya



A monitoring, evaluation and learning test being conducted at an Early Childhood Education Centre in East Lombok, Indonesia. Credit: Winda Hapsari (Indonesia Hub)



Gender, Justice and Security Hub



The Gender, Justice and Security Hub is a research network working with local and global civil society, practitioners, governments and international organisations to advance gender justice and inclusive peace. By creating new knowledge, research methods and advocacy networks the Hub is amplifying the voices of women and marginalised groups to help motivate reforms that affect local and global policy change.

The Hub seeks to advance the delivery of Sustainable Development Goal (SDG) 5 on gender equality; SDG 16 on peace, justice and strong institutions; and the implementation of the Women, Peace and Security (WPS) agenda.

The Hub's research comprises over 30 projects, 6 themes, across 7 focus countries: Afghanistan, Colombia, Kurdistan-Iraq, Lebanon, Sierra Leone, Sri Lanka and Uganda. The Hub is working to develop an evidence-base around gender, justice and inclusive security in conflict-affected societies and translating insights into ongoing actions to improve lives, especially for women and marginalised peoples.

Hub info

Lead organisation:

London School of Economics and Political Science

Geographical focus:

South America, West Africa, East Africa, Middle East, South Central Asia, South Asia

Principal investigators:

Professor Christine Chinkin and Dr Kirsten Ainley

✉ j.xavier-stier@lse.ac.uk

🌐 <https://thegenderhub.com/>

🐦 @TheGenderHub

Making a difference

Ever since the guns went silent in Northern Uganda, the region has seen multiple government programmes focused on reconstruction and reparation, but post-war challenges remain, including gender inequalities, land conflicts and constrained livelihoods across the Acholi region.

The Gender, Justice and Security Hub has found these inequalities to have been exacerbated by the COVID-19 pandemic. Drawing on qualitative conversations and mapping of social media to analyse the post-conflict communities' response to the pandemic, the Hub's research found the pandemic had stripped communities of social capital central to their efforts towards social cohesion such as village savings, loan schemes meetings and community gardening.

This research highlights that rediscovering social connectedness, cultural heritage and a sense of identity in the Acholi community might be core to enabling post COVID-19 recovery, as well as facilitating long-term social cohesion.

“ Reconstruction efforts have largely been focused on physical infrastructure and social cohesion remains an elusive agenda. There are bouts of conflicts and crises, including civil killings and suicide, gender-based violence and floating populations wrongly labelled as criminals. Enter COVID-19 pandemic, the lid was off and the inherent cracks in the society were aggravated, calling for long term investment in a social cohesion agenda. ”

Dr Josephine Ahikire, Makerere University, Kampala, Uganda

Partner organisations

Al Hayat Consultancy for Development Research
 Amani Institute
 American University of Iraq Sulaimani (KRI)
 Association of War-Affected Women
 Australian National University, Australia
 City University of New York, US
 Committee on the Administration of Justice
 De la Salle University, Philippines
 Dejusticia, Colombia
 Gulu University, Uganda
 International Centre for Ethnic Studies (ICES), Sri Lanka
 Kadir Has University, Turkey
 King's College London, UK
 Laajverd
 Legal Aid for Victims of Rape and Sexual Harassment in Custody
 London School of Economics and Political Science
 London School of Hygiene and Tropical Medicine, UK
 Makerere University, Uganda
 Middlesex University, UK
 MOSAIC, Lebanon
 New York University, US
 Paiman
 People's Development Organisation, Iraq



Focus group discussion in Gula, Northern Uganda. Credit: Dancan Muhanguzi

Queen Mary University London, UK
 Queen's University Belfast, UK
 TIMAP for Justice
 University of Arkansas Little Rock, US
 University of Cambridge, UK
 University College London, UK
 University of Denver, US
 University of Sydney, Australia
 University of Toronto, Canada
 Ulster University, UK
 Universidad de los Andes, Colombia
 Warvin Foundation for Women's Issues, Iraq
 Women for Peace and Participation

Women's Legal Aid, Iraq
 Yakjah
 York University, Canada



7
 partner
 countries

39
 partner
 organisations

Living Deltas Hub



Globally, over 500 million people are living in delta regions which are under threat from climate change, rising sea levels, industrial farming techniques, and pollutants. Deltas are integral to global food supplies, fish stocks, water supply, industry, trade and culture.

The Living Delta's Hub is researching ways to mitigate and adapt to the effects of climate change by understanding what sustainable delta livelihoods look like. This is being achieved through equitable partnerships and knowledge co-production with delta dwellers and researchers around the world.

By focusing on coastal resilience, biodiversity, youth futures and intergenerational learning, the international Hub team is working in gender-sensitive ways to safeguard delta futures through more resilient communities and sustainable development.

Hub info

Lead organisation:

Newcastle University

Geographical focus:

South and South-East Asia

Principal investigator:

Professor Andrew Large

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🌐 <https://livingdeltas.org/>

🐦 @livingdeltas

Making a difference

A new inexpensive and accessible hydrodynamic sensor, the 'Mini Buoy', has been developed by the Living Deltas Hub to help restore mangrove forests globally.

Mangroves provide a range of benefits including long-term carbon storage, natural protection from storms and food security for communities. But mangroves are being lost to climate change and deforestation. To reverse this loss, restoration is vital.

Up to 90% of mangrove restoration projects fail in the long-term because the wrong species are being planted in the wrong locations. Monitoring currents, waves and tides are key in predicting the success of restoration, yet conventional equipment is expensive, difficult to transport and complicated to use.

The Hub is showcasing how data gathered by Mini Buoys and analysed using a bespoke online tool can provide practical guidance to stakeholders for restoring mangrove forests and the services they provide.



Credit: Sumana Banerjee

“ Our recent work in India was timely, given that coastal afforestation is a priority for the West Bengal government and local communities.

By identifying which areas of the coast are suitable for restoration planting to support forest department officials' and local communities' needs, we are finding pathways towards sustainable delta futures.

”
Ms Sumana Banerjee (School of Oceanographic Studies, Jadavpur University, India) and Dr Cai Ladd (School of Geographical and Earth Sciences, University of Glasgow, UK)

Asian Institute of Technology,
Thailand

Bangladesh Environmental Lawyers
Association (BELA), Bangladesh

Bangladesh University of Engineering
and Technology (BUET), Bangladesh

Can Tho University, Vietnam

Center for Environmental and
Geographic Information Services
(CEGIS), Bangladesh

Center for Participatory Research and
Development (CPRD), Bangladesh

Climate Change Institute, An Giang
University (AGU), Vietnam

Curtin University, Malaysia

Directorate of Local Government
Engineering (LGED), Bangladesh

Durham University, UK

Dwip Unnayan Songstha (Island
Development Corporation) (DUS),
Bangladesh

Indian Institute of Engineering
Science and Technology, Shibpur
(IIST), India

Institute of Policy and Strategy for
Agriculture and Rural Development
(IPSARD), Vietnam International

International Centre for Diarrhoeal
Disease Research (ICDDR, B),
Bangladesh

International Council
of Museums, UK

Jadavpur University, India

Lancaster University, UK

Loughborough University, UK

Manab Mukti Sangstha (Human
Liberation Organisation) (MMS),
Bangladesh

National University of Singapore
(NUS), Singapore

Nature Conservation Management
(NACOM), Bangladesh

Natural Resources Conservation and
Sustainable Development Joint Stock
Company (NARECO), Vietnam

Netherlands Institute of Ecology
(NIOO-KNAW), The Netherlands

Newcastle University, UK

Northumbria University, UK

Oral Testimony Works, UK

People's Oriented Program
Implementation (POPI), Bangladesh

Proyas Manobik Unnayan Society
(Prayas Human Development
Society), Bangladesh

Shushilan (Endeavours for a better
future), Bangladesh

Stockholm Environment Institute
(SEI Asia), Bangkok

The Nature Conservancy, US

Union for Conservation of Nature
and Natural Resources (IUCN),
Switzerland

United Nations University (UNU),
Institute for Environment and Human
Security, Germany

University of California Irvine, US

University of Glasgow, UK

Partner organisations

University of Nottingham, UK

Uttaran (Transition), Bangladesh

Vietnam Academy of Science
Technology (VAST), Vietnam

Vietnam Atomic Energy Institute
(VINATOM), Vietnam

Vietnam Environment Protection
Fund (VEPF), Vietnam

Vietnam National University, Central
Institute for Natural Resources,
Vietnam

Vietnamese Women's Museum,
Vietnam

Wetlands International,
The Netherlands

York University, Canada



One Health Poultry Hub



Fuelled by population growth and urbanisation, poultry production has doubled globally in the past 20 years.

Today more than 1 trillion eggs and 100 million tonnes of poultry meat, mainly chicken, are consumed annually.

Poultry contribute to good nutrition and economic development in low and middle-income countries. But rapid intensification of poultry farming can come with public health threats, including the risk of diseases spilling over from birds to people. Spillover threats include food poisoning and avian influenza which has pandemic potential, and spread of antimicrobial resistance, the 'silent pandemic'.

The One Health Poultry Hub is working to help meet Asia's demand for chicken meat and eggs while minimising risk to local and global public health. Working in Bangladesh, India, Sri Lanka and Vietnam, it takes an interdisciplinary and intersectoral 'One Health' approach to explore health risks linked to rapid expansion of poultry production and to help develop safer poultry systems.

Hub info

Lead organisation:

Royal Veterinary College

Geographical focus:

South-Central Asia and South-East Asia

Principal investigator:

Professor Fiona Tomley

 info@onehealthpoultry.org

 <https://www.onehealthpoultry.org/>

 @PoultryHub

Making a difference

Avian influenza devastates poultry farms, threatens livelihoods and disrupts food supplies. It can cause spill-over infections in people who have close contact with infected flocks and there is an ever-present threat that new strains may emerge that have epidemic or pandemic potential of the virus.

Attempts to control avian influenza within farms and markets in low- and middle-income countries often fail as policies do not recognise the everyday realities of those involved in raising and trading chickens.

The policy gap is being addressed by bringing poultry producers, researchers and policymakers together to explore findings from our research into the beliefs, understandings and behaviours of people in the production network. In Bangladesh, this has led to inclusion in the third National Avian and Pandemic Influenza Preparedness and Response Plan of measures that address biosecurity by increasing access to reliable credit systems for farmers after research showed that the two are linked.

“ COVID-19 illustrated the global nature of disease spread, no matter where it emerges.

Our research is in Asia but aims to benefit everyone, everywhere, by resulting in safer more sustainable poultry production systems. Further, as a One Health project we understand that the only way of ensuring we achieve this objective is by considering the health of animals and environment at the same time as we seek to promote the health of humans.

Professor Dr Nitish Debnath, One Health Poultry Hub co-investigator; Team Leader, Fleming Fund Country Grant to Bangladesh; One Health High-Level Expert Panel member



Anand Agricultural University, India
Animal and Plant Health Agency, UK
Bangladesh Livestock Research
Institute

Centre de Coopération Internationale
en Recherche Agronomique pour
le Développement (CIRAD), France

Chatham House, UK

Chattogram Veterinary and Animal
Sciences University, Bangladesh

Christian Medical College Vellore,
India

City University, Hong Kong

Department of Animal Health,
Ministry of Agriculture and Rural
Development, Vietnam

Department of Animal Production
and Health, Sri Lanka

Department of Livestock Services,
Bangladesh

Gujarat Biotechnology Research
Centre, India

Institute of Development Studies, UK

Institute of Epidemiology, Disease
Control and Research, Bangladesh

Jawaharlal Nehru University, India

London School of Hygiene and
Tropical Medicine, UK

Nanyang Technological University,
Singapore

National Institute of Animal Sciences,
Vietnam

National Institute of Hygiene and
Epidemiology, Vietnam

National Institute of Veterinary
Research, Vietnam

Royal Veterinary College, UK

Tamil Nadu Veterinary and Animal
Sciences University, India

The Pirbright Institute, UK

The University of Queensland,
Australia

Université Libre de Bruxelles, Brussels

University of Oxford, UK

University of Peradeniya, Sri Lanka

Vietnam National University
of Agriculture

Partner organisations



Biological sampling of chickens near a live bird
market in Hanoi. Credit: Hoang Thi Thuy



10
partner
countries

28
partner
organisations

One Ocean Hub

The ocean produces over half of the world's oxygen, absorbs carbon dioxide, provides us with food, and supports the livelihoods cultures and wellbeing of millions of people.

The One Ocean Hub is an international programme of research for sustainable development that promotes fair and inclusive decision-making for a healthy ocean whereby people and the planet flourish. The Hub is striving to empower communities who are most reliant on the ocean, especially small-scale fishers, women and children, to inform decisions on ocean conservation and its sustainable use.

The Hub has piloted fair partnerships for research and change that connects human rights, marine and social sciences and the arts. This integration amplifies the voices of coastal communities at different scales and brings communities, researchers, decision-makers, civil society and international organisations together to collaboratively inform decisions and practices towards shaping the future of the ocean for equity and sustainability.



Making a difference

In South Africa, the Hub used theatre-based research to identify ocean-related injustices and increase participation in ocean governance. A play developed with communities along the KwaZulu-Natal coast 'Lalela uLwandle,' "Listen to the Sea" has offered decision-makers and stakeholders a facilitated discussion on ocean governance and collected testimonies on people's concerns and hopes for the ocean. Some of these testimonies were used by civil society partners in judicial proceedings against oil and gas seismic surveys, resulting in decisions on the protection of cultural and participation rights, as well as environmental protection. The play was performed at the Climate COP27, Sharm El Sheikh, Egypt (November 2022) and at the Food and Agriculture Organization of the United Nations in Rome, Italy (March 2023).



Lalela uLwandle performance and discussion with school children in Mbazwana 2019. Credit: Kelly Daniels

“ Lalela uLwandle was something new and exciting for SDCEA. One of the main issues was that the public participation process was completely flawed. Coastal communities and the people who will be most affected by this development like the fishers were not able to tell their stories of how important the ocean is to them. The research developed for Lalela uLwandle from the affected people ensured that their stories were heard in a powerful and persuasive way.”

South Durban Community Environmental Alliance (SDCEA)

Hub info

Lead organisation:

University of Strathclyde

Geographical focus:

West Africa, Southern Africa, South Pacific, Caribbean

Principal investigator:

Professor Elisa Morgera

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🌐 <https://oneoceanhub.org/>

🐦 @OneOceanHub

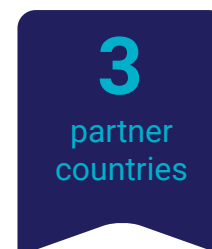
Birdlife International, UK
 Centre for Environment, Fisheries and Aquaculture Science (CEFAS), UK
 Convention on Migratory Species (CMS), International
 Durban University of Technology (DUT), South Africa
 French National Institute of Health and Medical Research (INSERM), France
 Glasgow School of Art, UK
 Hen Mpoano, Ghana
 Heriot Watt University, UK
 International Institute for Environment and Development (IIED), UK
 Mongabay Organisation, USA
 National Research Foundation (NRF), South Africa
 Nelson Mandela University, South Africa
 Office of the Pacific Ocean Commissioner (OPOC) Fiji
 Rhodes University, South Africa
 Scottish Association for Marine Science (SAMS), UK
 South African Environmental Observation Network (SAEON), South Africa

South African National Biodiversity Institute (SANBI), South Africa
 South Atlantic Environmental Research Institute, Falkland Islands
 The Commonwealth Secretariat, UK
 United Nations Development Programme, International
 United Nations Division for Ocean Affairs and the Law of the Sea, International
 United Nations Educational, Scientific and Cultural Organisation (UNESCO), International
 United Nations Environment Programme, International
 United Nations Institute for Training and Research (UNITAR), International
 University of Cape Town, South Africa
 University of Edinburgh, UK
 University of Namibia, Namibia
 University of Plymouth, UK
 University of Seychelles, Seychelles
 University of Strathclyde, Glasgow, UK
 University of the South Pacific, Fiji
 University of the West Indies, Barbados
 Worldwide Fund for Nature (WWF), UK

Partner organisations



Mpume Mtombeni (*Empatheatre* specialist/ Actor/writer) performing as Nowandle
 Credit: Val Adams



South Asian Nitrogen Hub



Humans have massively altered nitrogen flows on our planet, leading to both benefits for food production as well as creating multiple threats to the environment.

There are very few places on Earth more affected than South Asia, with levels of nitrogen pollution rapidly increasing.

Nitrogen pollution comes in many forms, with multiple impacts on human health from poor air quality to impacts on terrestrial, freshwater and marine biodiversity. Nitrogen also contributes to global climate change and depletion of the ozone layer.

The South Asian Nitrogen Hub is tackling the nitrogen challenge by bringing together experts from leading research organisations across South Asia. The Hub's research includes how to improve nitrogen management in agriculture and investigating how nitrogen is impacting ecosystems.

The Hub is working with governments across South Asia to develop strategies for cleaner and more profitable farming, as well as industrial recycling of nitrogen, fostering a cleaner circular economy for nitrogen and supporting progress towards meeting SDGs.

Hub info

Lead organisation:

UK Centre For Ecology & Hydrology

Geographical focus:

South Asia, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka

Principal investigator:

Professor Mark Sutton

✉ sanh-office@ceh.ac.uk

🌐 <https://sanh.inms.international/>

🐦 @GCRFNitrogenHub

Making a difference

Increasing understanding of the nitrogen cycle and the web of interlinked problems caused by nitrogen pollution is a vital part of improving nitrogen management. This is why the South Asian Nitrogen Hub has launched a free online educational resource, called 'Nitrogen: A Global Challenge' Massive Open Online Courses (MOOCs). The new training portal allows people across the world to learn more about sustainable nitrogen management. The courses cover a variety of topics including nitrogen uses, the impacts of pollution on air, land and water as well as some of the solutions for better managing the nitrogen challenge around the world.

The online courses are available in Hindi (India), Sinhalese (Sri Lanka), Urdu (Pakistan), Bengali (Bangladesh), Nepali (Nepal) and Dari (Afghanistan) with Dhivehi (Maldives) and Dzongkha (Bhutan) to come. New courses are being developed including around nitrogen-related field measurements, techniques, analysis and calculations as well as social science research techniques. So far more than **5,000 students** from over **130 countries** have taken the course in English.



Nitrogen addition crop trials in Afghanistan. Credit: Z Safi

“ So, the course is over and I really had a lot of fun. I learned quite a bit, and I hope the others were as enthusiastic about it as I was! ”

Course student

Aligarh Muslim University, India
 Bangabandhu Sheikh Mujibur
 Rahman Agricultural University,
 Bangladesh
 Bangladesh Rice Research Institute,
 Bangladesh
 COMSATS University Islamabad,
 Pakistan
 Cool Farm Alliance, UK
 Guru Gobind Singh Indraprastha
 University, India
 ICAR-Indian Agricultural Research
 Institute, India
 ICAR-National Rice Research
 Institute, India
 Indian Institute of Rice Research,
 India
 Indian Institute of Technology
 Bombay, India
 International Union for Conservation
 of Nature and Natural Resources,
 Sri Lanka
 Jawaharlal Nehru University, India
 Kalinga Institute of Industrial
 Technology Bhubaneswar University,
 India
 Kathmandu University, Nepal
 London School of Hygiene and
 Tropical Medicine, UK
 Maldives Resilient Reefs, Maldives
 Moredun Research Institute, UK

National Centre for Sustainable
 Coastal Management, India
 National Oceanography Centre, UK
 National Physical Laboratory, India
 Natural History Museum, UK
 Nourish Scotland, UK
 Plymouth Marine Laboratory, UK
 Rothamsted Research, UK
 Royal Botanic Garden Edinburgh, UK
 Royal University of Bhutan, Bhutan
 Scotland's Rural College, UK
 South Asia Co-Operative Environment
 Programme, Sri Lanka
 Sustainable India Trust, India
 TERI SAS, India
 The Maldives National University,
 Maldives
 Tribhuvan University, Nepal
 UK Centre for Ecology & Hydrology, UK
 University of Aberdeen, UK
 University of Agriculture Faisalabad,
 Pakistan
 University of Bristol, UK
 University of Edinburgh, UK
 University of Kabul, Afghanistan
 University of Peradeniya, Sri Lanka
 University of Rajshahi, Bangladesh

Partner organisations



Coral reef nitrogen enrichment experiments, Maldives. Credit: J Arnall



South-South Migration, Inequality and Development Hub



Migration between the countries of the Global South accounts for over a third of all international migration, up to 70% in some places. South-South migration has the potential to reduce poverty and inequality and create opportunities for work, in turn contributing to the delivery of the Sustainable Development Goals.

The MIDEQ Hub is unpacking the complex and multi-dimensional relationships between migration, inequality and development in the context of the Global South by working across a network of 12 countries, organised into 6 migration 'corridors'.

The Hub aims to move the production of knowledge about migration and its consequences away from the Global North towards those countries where most migration takes place and to translate this new knowledge into concrete policies and practices which will improve the lives of migrants, their families and the communities in which they live in.

Hub info

Lead organisation:

Coventry University

Geographical focus:

South America, Caribbean, Africa, Middle East and East, Southeast and South-Central Asia

Principal investigator:

Professor Heaven Crawley

✉ heaven.crawley@coventry.ac.uk

🌐 <https://www.mideq.org/en/about-us/>

🐦 @MIDEQHub

Making a difference

Research on migration in the Global South is invariably conducted and disseminated in English and occasionally in French, Spanish or Portuguese.

This linguistic inequality is exacerbated for migrants. Linguistic sensitivity in participatory research and in constructing linguistically equitable partnerships is a difficult task. Whilst moderately suitable translation tools are now available for use online indigenous languages and migrant languages are rarely represented. The digital divide also means that many groups do not have access to such tools.

A key strand for the MIDEQ Hub is developing the field of multilingual researching to ensure it is embedded as a central ethical and equity consideration. To date the Hub has pioneered innovative, interdisciplinary and practical approaches to translation by bringing multilingual perspectives front and centre in decision making and policy forums, conducting meetings in different languages and publishing blogs in any language appropriate to the research context.



MIDEQ researchers in action in Nairobi, 2019
Credit: the MIDEQ hub

China Agricultural University, China

Coventry University, UK

Higher Institute of Population
Sciences (ISSP), Burkina Faso

Institute for Governance,
Development and Prospects (IGDP),
Côte d'Ivoire

Instituto Maria e Joao Aleizo
(IMJA), Brazil

International Labour Organisation
(ILO)

International Organization for
Migration (IOM)

Migrant Justice Initiative, Australia

Monash University, Malaysia

Nepal Institute for Social and
Environmental Research (NISER),
Nepal

ODI, UK

Office of the United Nations High
Commissioner for Human Rights
(OHCHR)

Organisation for Economic Co-
operation and Development (OECD)

Peace and Development Centre,
Ethiopia

PositiveNegatives

Queen Mary University of London, UK

Royal Holloway,
University of London, UK

SOAS, University of London, UK

The Information and Research Center
- King Hussein Foundation, Jordan

The Interuniversity Institute for
Research and Development
(INURED), Haiti

The London School of Hygiene and
Tropical Medicine (LSHTM), UK

The University of Manchester, UK

United Nations Research Institute for
Social Development (UNRISD)

United Nations University Centre for
Policy Research (UNU-CPR)

University of Cape Town, South Africa

University of Ghana, Ghana

University of Glasgow, UK

Partner organisations



MIDEQ researchers at the Interuniversity
Institute for Research and Development
(INURED), in Haiti, engaging with women-led
cooperative groups.
Credit: INURED CCBY-NC-4.0



12
partner
countries

27
partner
organisations

Trade, Development and the Environment Hub



World leading experts have predicted that millions of species are threatened with extinction, with 'habitat destruction' and 'direct exploitation of organisms' being the two largest causes of wildlife loss globally.

While trade in natural and agricultural goods has long contributed to economic growth, loss of habitat and species is driving climate change, pushing species towards extinction and reducing opportunities for sustainable harvest of wild species for rural people.

Many rural communities depend on a diverse natural world and trade needs to become more sustainable to improve their lives. The TRADE Hub investigates the trends and impacts of trade in deforestation-linked agricultural commodities, wildlife and wild meat. It looks at policy and business rules and seeks to promote a change to more sustainable production and consumption that is in line with international and national agreements, business commitments and ensures that people are permanently lifted out of poverty.

Hub info

Lead organisation: UN Environment Programme
World Conservation Monitoring Centre (UNEP-WCMC)

Geographical focus:
South America, Central Africa, East and
West Africa and East and South East Asia

Principal investigator:
Professor Neil Burgess

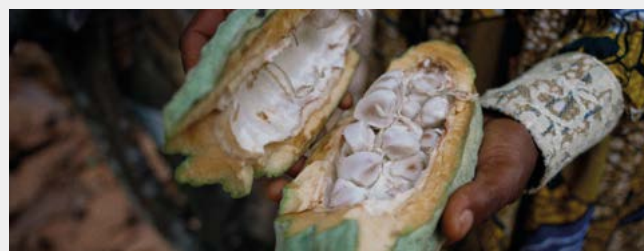
✉ neil.burgess@unep-wmc.org

🌐 <https://tradedhub.earth>

🐦 @GCRF_TRADE_Hub

Making a difference

For the first time, Indonesia holds the G20 Presidency for 2022, giving it a global platform to take the lead on issues including agriculture and environment and climate sustainability. To seize this valuable opportunity, the TRADE Hub held a series of public policy dialogues aimed at allowing governments, the private sector, civil society and the international community to share perspectives on positioning sustainable and equitable palm oil trade in global green deals, as well as to explore opportunities around Indonesia's G20 Presidency agenda to advance sustainable and equitable palm oil. The first event was also a chance for TRADE Hub partner, the Centre for International Forestry Research (CIFOR), to outline key research activities on sustainable palm oil. The event was attended by 205 participants. The second dialogue was held in August 2022, near the summit and brought together a variety of perspectives on the sustainable trade efforts of key stakeholders towards various global issues that were discussed during G20; these issues were food, energy and climate crises.



Female small holder farmer holding an opened cocoa pod in her palms. Credit: What Took You So Long

“ Our main message will be maintaining a sustainability road map of palm oil though facing multiple crises. ”

Herry Purnomo, Project Leader and
Sonya Dyah, Research Officer

Asian Institute of Technology,
Thailand

Beijing Normal University, China

Bogor Agricultural University,
Indonesia

Brazilian Center of Analysis and
Planning, Brazil

Centre for International Forestry
Research (CIFOR), Democratic
Republic of the Congo

Centre for International Forestry
Research (CIFOR), Indonesia

Chatham House, UK

Centre for Mountain Futures, China

Fundação de Estudos Agrários Luiz
de Queiroz, Brazil

Instituto de Manejo e Certificação
Florestal e Agrícola, Brazil

International Institute for Applied
Systems Analysis, Australia

International Institute for
Sustainability, Brazil

International Institute of Tropical
Agriculture (IITA), Congo Basin
Institute (CBI), Cameroon

International Network for Bamboo
and Rattan, China

L'Ecole Régionale Postuniversitaire
d'Aménagement et de Gestion
intégrés des Forêts et Territoires
tropicaux, Democratic Republic of
Congo

London School of Economics and
Political Science, UK

Luc Hoffmann Institute, Switzerland

Research Center for Climate Change,
University of Indonesia, Indonesia

Royal Botanic Garden Edinburgh, UK

Sokoine University of Agriculture,
Tanzania

Tropical Ecology Research Institute,
Gabon

United Nations Environment
Programme World Conservation
Monitoring Centre (UNEP-WCMC), UK

United Nations Environment Trade
Hub, Kenya

University College London, UK

University of California, Irvine, US

University of Cambridge, CISL, UK

University of Cambridge, Zoology, UK

University of Kent, UK

University of Oxford, UK

University of Reading, UK

University of Southampton, UK

University of Stirling, UK

University of York, UK

Wageningen University, Netherlands

WCMC Beijing, China

Wildlife Conservation Society, US

World Wide Fund for Nature, Brazil

World Wide Fund for Nature, UK

Partner organisations



Female small holder farmer holding handful
of oil palms. Credit: What Took You So Long



Urban Disaster Risk Hub



More than two billion people living in cities of low-to-middle income countries are exposed to floods, earthquakes and landslides that threaten their lives and livelihoods. Unprecedented urban expansion will drive this past four billion by 2050. Climate change makes disaster risk worse. Without action to embed disaster risk management into urban planning, disasters will continue to blight the lives of hundreds of millions. At the same time, this rapid urbanisation presents a time-limited opportunity to reduce disaster risk for a quarter of the world's population.

Working currently across 7 cities, increasing up to 10 in the next year, the Hub is working to catalyse a transition from crisis management to socially inclusive, risk-sensitive decision-making and planning. Through interdisciplinary research and working with international agencies, the Hub is bringing disaster risk management to the centre of global urban policy and impact.

Hub info

Lead organisation:

University of Edinburgh

Geographical focus:

South America, East Africa, Middle East and South-Central Asia

Principal investigator:

Professor John McCloskey

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🌐 www.tomorrowscities.org

🐦 @UrbanRiskHub

Planning low-risk future development

Working with community groups, municipal and national actors and global agencies, Tomorrow's Cities have developed a structured Decision Support Environment that lays out a pathway to mitigate the complex processes driving disaster risk. From visioning possible urban futures, through complex virtual models of these futures, high-fidelity disaster simulations, Tomorrow's Cities helps stakeholders understand the potential consequences of today's decisions on tomorrow's risk. In the Special Planning Areas of Kibera and Mukuru, Kenya, planned expansion of Istanbul, Turkey, the integration of informal settlements in Quito, Ecuador, and ensuring low-risk, culturally appropriate development in Kathmandu, Nepal, modified policies and plans are reducing the impact of the next century of floods earthquakes and landslides for more than 1 million people.



95% of buildings damaged in Khokana, Kathmandu in the 2015 Gorkha earthquake. Credit: Tomorrow's Cities Project

“ The Tomorrow's Cities team in Kathmandu has developed an approach to understanding risk for the city, which does not focus on existing buildings but looks forward so that we can understand the complex origins of disaster risk while still at the planning stage. We are fully engaged and look forward to using it in the formulation of the Integrated Urban Development Plan and for future policies for urban risk management in Kathmandu and Nepal more widely. ”

Padma K. Mainalee, Joint Secretary, Ministry of Urban Development, Nepal

African Centre for Technology Studies (ACTS), Kenya

Africa Research and Impact Network (ARIN), Kenya

Akiba Mashinani Trust, Kenya

Asian Disaster Preparedness Center (ADPC), Thailand

Disaster and Emergency Management Presidency (AFAD), Turkey

Escuela Politecnica Nacional (EPN), Ecuador

FLACSO, Ecuador

Global Network of Civil Society Organisations for Disaster Reduction (GNDR), UK

Institute of Development Studies, UK

International Institute for Environment and Development (IIED), UK

Kandilli Observatory and Earthquake Research Institute (KOERI), Turkey

Kenya Red Cross, Kenya

King's College London, UK

Kounkuey Design Initiative (KDI), Kenya

Leeds Beckett University, UK

Lumanti, Nepal

National Disaster Risk Reduction Centre (NDRC), Nepal

National Society for Earthquake Technology-Nepal (NSET), Nepal

Nepal Development Research Institute (NDRI), Nepal

Met Office, UK

Middle East Technical University (METU), Turkey

NERC British Geological Survey, UK

Northumbria University, UK

Nottingham University, UK

Overseas Development Institute (ODI), UK

Oxford Brookes University, UK

Practical Action, UK

Royal Scientific Society (RSS), Jordan

Slum Dwellers International (SDI), Kenya

Southasia Institute of Advanced Studies (SIAS), Nepal

TED University, Turkey

Tribhuvan University, Nepal

UNESCO, France

Universidad San Francisco de Quito (USFQ), Ecuador

University of Bristol, UK

University of Cambridge, UK

University College London, UK

University of East Anglia, UK

University of Edinburgh, UK

University of Glasgow, UK

University of Leeds, UK

University of Nairobi, Kenya

University of Plymouth, UK

University of Reading, UK

University of York, UK

Partner organisations



*Hub researchers in Istanbul engage with women to understand priorities and visions for the risk sensitive development of their communities.
Credit: Tomorrow's Cities Project*



Water Security and Sustainable Development Hub



A sustainable and adequate quantity and quality of water is essential to human life, food and energy security, health and well-being and economic prosperity. Yet nearly 80% of the world's population live in areas where water security is thwarted by pressures like climate change, conflict, ecosystem damage, extreme weather, gender inequalities, land degradation, over-abstraction, pollution, poor governance and uncontrolled urbanisation.

Tackling water security requires an integrated approach to a wide range of activities, including water supply, wastewater treatment, flood management, sanitation, catchment management, pollution, maintenance, funding and finance. The Hub brings together an international, multidisciplinary team to address threats and contribute to achieving Sustainable Development Goal 6: Clean Water and Sanitation. The Hub's transformative, interdisciplinary systems approach recognises the complexity, interactions and interdependencies between people, institutions, natural environment and infrastructure involved in water security.

Hub info

Lead organisation:

Newcastle University

Geographical focus:

South America, East Africa,
South-Central Asia, Southeast Asia

Principal investigator:

Professor Richard Dawson

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🌐 <https://www.watersecurityhub.org>

🐦 @GCRFWaterHub

Making a difference

The Hub has developed a portable 'lab in a suitcase', regarded as a world first, which allows researchers to go to any location and screen potentially hazardous water for pathogens. The innovative technology makes it easier, cheaper and faster, to assess water quality, enabling public health officials to better monitor and manage local hazards, with the potential to help provide millions of people access to safer water and save lives. The technology has enabled researchers to measure water quality in Ethiopia, Tanzania, Brazil and Thailand and the team are now looking to establish relationships with organisations across low-and middle-income countries in the Association of Southeast Asian Nations (ASEAN) with the aim to teach basic microbiology and water quality monitoring skills to scientists in other countries that have limited resources, equipment, and skills.



Water quality monitoring using miniSASS in Ethiopia.
© Bitew Kassaw, WLRC

“ Water is everything,
and everything is water. ”

Dr Choong Weng Wai,
Universiti Teknologi Malaysia

Abbay Basin Authority, Ethiopia
 Aquacol, Colombia
 Arup, UK
 Awash River Basin Authority, Ethiopia
 BAKAJ, Johor Water Regulatory Body, Malaysia
 Binary Asylum, UK
 Central Water Commission, India
 CODEPARH, Colombia
 Commission for Recovery of the Cauca River Basin, Colombia
 Delhi Development Authority, India
 Delhi Jal Board, India
 Department of Irrigation and Drainage, Malaysia
 EcoKnights, Malaysia
 Emcali, Colombia
 Envirowatch Ltd, UK
 Global Flood Partnership
 Green Earth Society, Malaysia
 Green Shakti Foundation, India
 Indah Water Konsortium, Malaysia
 India Meteorological Department, India
 Indian Council for Research on International Economic Relations, India
 Indian Institute of Technology Delhi, India
 International Centre for Biosaline Agriculture, Dubai

International Commission on Irrigation and Drainage, India
 International Society for Photogrammetry and Remote Sensing, Germany
 International Water Management Institute, Sri Lanka
 INTRAC, UK
 Janya Collective, India
 Matrix Development Consultants, Kenya
 Ministry of Agriculture and Natural Resources, Ethiopia
 Ministry of Health, Malaysia
 Ministry of Water, Irrigation and Electricity, Ethiopia
 National Capital Region Planning Board, India
 National Spatial Data Infrastructure, India
 National Water Services Commission, Malaysia
 Newcastle University, UK
 Newcastle University Medicine, Malaysia
 Oxfam Great Britain
 Ranhill SAJ, Malaysia
 Rift Valley Lakes Basin Authority, Ethiopia
 School of Planning and Architecture, New Delhi, India
 The Flow Partnership

Partner organisations

The World Bank, US
 Uesvalle, Colombia
 Universidad del Cauca, Colombia
 Universidad del Valle, Colombia
 Universiti Teknologi Malaysia
 University of Leeds, UK
 University of Oxford, UK
 Water Land and Resource Centre, Ethiopia
 Waterlat-Gobacit, Brazil
 World Health Organization, Switzerland
 WWF, South Africa





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