Urban Infrastructures of Well-Being 2019

List of Awards

Reference: UWB190157
PI: Dr Raya Al-Dadah, University of Birmingham
Co-Applicants: Dr Mohammad Abuhaiba, Islamic University of Gaza; Dr Mazen AbuQamar, Al-Azhar University; Dr Surindar Dhesi, University of Birmingham; Dr Irina Kuznetsova, University of Birmingham; Dr Saad Mahmoud, University of Birmingham
Value: £297,586.13
Title: *Alleviating the Impacts of Gaza's Energy Crisis on the Population's Well-Being through Sustainable Electricity Generating Technology*
Abstract: Home to nearly two million people including 1.4 million refugees, the Gaza Strip has long struggled with severe electricity shortages. According to the UN Office for Coordination of Humanitarian Affairs, this acute energy crisis is pushing the Gaza Strip to the verge of disaster with serious implications for the health, water and sanitation sectors. Currently, only 38% of Gaza's electricity needs are met, leading to people receiving less than 6 hours of electricity per day and hospitals providing minimal services supporting only critical functions such as intensive care units. This electricity crisis, coupled with the continuous conflict, causes high levels of stress that affect people's physical and mental health and well-being. This project aims to assess the impacts of electricity shortage on the general population's and refugees' health and well-being and co-develop a novel pilot plant to provide clean and affordable electricity using solar energy.

Reference: UWB190142
PI: Professor Jo Beall, London School of Economics and Political Science
Co-Applicants: Dr Saeed Ahmed, NED University of Engineering; Dr Suneela Ahmed, NED University of Engineering; Dr Syed Mansoor Ali, Loughborough University; Dr Hayal Desta, Addis Ababa University; Dr Eyob Gebremariam, London School of Economics and Political Science; Dr Julia King, London School of Economics and Political Science
Value: £299,353.00
Title: *Rubbish, Resources and Residues: Waste and Well-Being in Ethiopia and Pakistan*
Abstract: Unsustainable waste generation due to rapid urban population growth in Pakistan and Ethiopia is rendering municipal solid waste management (SWM) urgent. Uncollected waste spreads disease, threatening the health and well-being of residents, especially the poorest. Alongside technical issues in the handling of waste quantities, types and sources, this project aims to examine institutional dynamics and the role played by households and communities in integrated approaches to SWM. It seeks to explore the intersection of official systems with informal waste and recycling economies. A key focus is on policies such as decentralisation, the rise of private utilities, as well as the influx of migrants and refugees into the cities (who compete for access to waste sources and jobs) and their impact on the relatively stable but gendered and hierarchical control of waste work by micro-mafias and hereditary occupational status groups associated with dirty work.

Reference: UWB190141
PI: Dr Virginia Bond, London School of Hygiene and Tropical Medicine
Co-Applicants: Dr Graeme Hoddinott, Stellenbosch University; Professor Heinz Jacobs, Stellenbosch University; Dr Erastus Mwanaumo, University of Zambia; Professor Janet Seeley, London School of Hygiene and Tropical Medicine; Dr Vanessa Speight, University of Sheffield
Value: £299,606.85
Title: *A Method for Rapidly Assessing Context in Urban Communities to Optimise Public Health Interventions: The Case of Water Infrastructure in Sub-Saharan African Cities*
Abstract: Public health interventions need to be adapted to context. Making sense of contextual similarities and differences across urban communities is complex, including for water and sanitation infrastructure involving both formal and informal installations and shifting use over space and time. To support the tailoring of interventions, this project seeks to adapt a rapid qualitative assessment approach called 'Broad Brush Surveys' (BBS) and an associated set of meta-indicators developed by social scientists in Europe and sub-Saharan Africa. Working with water engineers, BBS will be used to assess the local context in four urban communities in Zambia and South Africa for the purpose of informing better water and sanitation infrastructure interventions.

Reference: UWB190199
PI: Dr Lee Bryant, University of Bath
Co-Applicants: Mr Kabba Bangura, University of Sierra Leone; Dr Solomon Gbanie, University of Sierra Leone; Dr Thomas Kjeldsen, University of Bath; Dr Roy Maconachie, University of Bath
Value: £299,412.00
Title: *Green Rooted Agriculture Associations: Community-Led Pairing of Urban Agriculture and Phytoremediation in Sierra Leone*
Abstract: It is estimated that urban and peri-urban agriculture (UPA) contributes up to 30% of global food production. Critically, water from streams and groundwater wells commonly used for irrigation at UPA sites is often highly contaminated by industrial wastewater and sewage. This project introduces managed planting schemes and phytoremediation (i.e. plant-based removal or immobilisation of contaminants) as a means of enhancing green infrastructure and strengthening the figurative roots of communities in Freetown, Sierra Leone. Project methodology is based on a combination of community surveying and engagement, environmental monitoring and modelling, GIS analyses, and policy development. By piloting phytoremediation at three UPA sites across Freetown, GRASS has the potential to significantly influence environmental health and community well-being of the most vulnerable sections of the urban population.

Reference: UWB190088
PI: Dr Federico Caprotti, University of Exeter
Co-Applicants: Dr Bothwell Batidzirai, University of Cape Town; Dr Catherine Butler, University of Exeter; Dr Jiska de Groot, University of Cape Town
Value: £297,751.50
Title: *Experimenting with Data-Driven Approaches to Well-Being in Off-Grid Informal Urban Settings*
Abstract: This project aims to provide detailed, qualitative and quantitative data on off-grid energy provision impacts on well-being in the poorest South African households. It brings together engineers and social scientists through the main project activity: an intervention to bring solar home systems and a mini grid to a small informal settlement in Cape Town that has not been electrified. In so doing, the project seeks to achieve real change and address the UN's Sustainable Development Goals related to sustainable and healthy communities, reducing inequalities, and improving socio-environmental conditions for households, especially women, girls and children. It is anticipated that the project will inform South African policy and private sector thinking and contribute also to addressing the challenge of well-being and energy provision in informal settlements in broader sub-Saharan Africa.

Reference: UWB190003
PI: Dr Steve Cinderby, University of York
Co-Applicants: Mrs Nancy Abira, TIMCON Associates; Professor Karen Lucas, University of Leeds; Dr Romanus Opiyo, Stockholm Environmental Institute
Value: £299,019.41
Title: *Equitable Mobility for City Health and Well-Being*
Abstract: For many East African residents, travel around cities is problematic due to poor walking and cycling infrastructure, traffic congestion leading to long travel times, and exposure to pollution and road safety hazards, all of which impact on people's health and well-being. This project works with vulnerable urban residents (including the poor, disabled, women and children) to understand how their journeys, and the daily challenges and risks they confront, affect health and well-being, both psychologically and physically. This includes novel health measurements, journey mapping and storytelling to understand different dimensions of the problem. The research team is looking to consider how informal mobility solutions adopted by these groups interact with official transport systems. It will then select particular pressing challenges and work with engineers and vulnerable users to co-design solutions to improve mobility allowing better access to work, education, healthcare and opportunities, particularly for vulnerable users.

Reference: UWB190097
PI: Dr Tracey Crosbie, Teesside University
Co-Applicants: Dr Dana Abi Ghanem, Teesside University; Professor Santanu Bandyopadhyay, Indian Institute of Technology; Dr Gobind Gopalakrishna Pillai, Teesside University; Dr Arnab Jana, Indian Institute of Technology; Professor Dorothy Newbury-Birch, Teesside University; Dr Gillian Waller, Teesside University
Value: £238,067

Title: *What is in a Meter? Working Towards Efficient, Socially Inclusive and Environmentally Sensitive Energy and Water Infrastructures in the Global South*
Abstract: Meters are gateway technologies that control access to services, such as clean drinking water and electricity, that are basic requirements for health and well-being. Metering of consumption is essential to the efficient operation and planning of electricity and water networks. However, it is often lacking or not fit for purpose in the Global South, leading national and international agencies and governments to encourage the introduction of 'smarter', more comprehensive metering in the water and electricity sectors. Using Greater Mumbai in India as a case study, this project investigates how the access to key essential services (electricity, clean drinking water and sanitation) is being re-configured within metering technologies currently planned for and implemented in the rapidly growing cities of the Global South. The goal is to inform the implementation and use of metering in ways that engender social inclusion, environmentally sensitive consumption patterns and reduce health inequalities.

Reference: UWB190128
PI: Dr Maria Soledad Garcia Ferrari, University of Edinburgh
Co-Applicants: Dr Elizabeth Arboleda Guzman, National University of Colombia; Professor Edier Aristizabal, National University of Colombia; Dr Guillermo Correa Montoya, University of Antioquia; Dr Katharina Kaesehage, University of Edinburgh; Mrs Paula Vargas Lopez, University of Antioquia
Value: £297,553.48
Title: *Exploring the Development and Implementation of Co-Produced Water Management Infrastructure Solutions to Adapt to Climate Change-Related Risk: The Intersection of Rural-Urban Areas in Medellin, Colombia*
Abstract: Increasing urbanisation along the edge of Medellin, characterised by informal growth influenced by (internal) conflict and environmentally based displacement, has produced vulnerable peri-urban areas that are exposed to risks, increasing with climate change. Understanding 'habitat' as 'socially constructed', where each individual's input forms the collective 'state of being', this project aims to develop transdisciplinary knowledge and build capacity for policy implementation, through identifying and testing water management infrastructure solutions that are at the intersection of technical, social and environmental knowledge. The project's innovative approach is rooted in the co-production of infrastructure solutions through climate-change participatory methodologies that engage local community knowledge, technical appraisals and institutional policy design and implementation. This includes identifying and scoping joint decision-making between communities and government agencies around neighbourhood planning in the rural-urban edge, aimed at reducing structural inequalities and risk as well as increasing social equity and well-being.

Reference: UWB190001
PI: Dr David Garbin, University of Kent
Co-Applicants: Dr Adolf Acquaye, University of Kent; Dr Babatunde Bolasodun, University of Lagos; Professor Simon Coleman, University of Toronto; Dr Taibat Lawanson, University of Lagos; Dr Gareth Millington, University of York
Value: £299,434.00
Title: *'Pneuma-City': Frictional Infrastructure, Road Ecologies and Valorisation of End-of-Life Tyres Towards More Sustainable Urban Economies in West African Mega-Cities*
Abstract: This interdisciplinary project, combining engineering and social sciences, addresses a global environmental challenge that is visibly dominant in African streetscapes: the ubiquity of end-of-life tyres (ELTs). Focusing on Lagos, the fastest growing city in sub-Saharan Africa, 'Pneuma-City' is the first project to explore the multifaceted impact of used tyres on road ecologies, while also promoting social and technical solutions aimed at creating more sustainable urban environments that in turn improve the well-being of workers and residents. Specifically, the project seeks to explore (1) the gendered informal cultures, livelihoods and technologies of tyre-related work; (2) the complex place of waste tyres in street/road ecologies; and (3) the circular economies of repurposing. The project bridges formal and informal infrastructures by conceptually tracing the role of tyres as 'frictional' within urban contexts where automobile transport is hegemonic, with the ambition to put ELT challenges and opportunities at the heart of a vision for a sustainable future.

Reference: UWB190123
PI: Professor Katherine Gough, Loughborough University
Co-Applicants: Dr Ebenezer Amankwaa, University of Ghana; Professor Samuel Codjoe, University of Ghana; Dr Raymond Kasei, University for Development Studies; Professor Kevin Lomas,

Loughborough University; Dr Eftychia Spentzou, Loughborough University; Professor Robert Wilby, Loughborough University
Value: £299,914.09
Title: *Reducing the Impact of Extreme Heat to Improve Well-Being in Cities*
Abstract: Cities in the Global South experience extreme weather that impacts infrastructure and disproportionately affects the well-being of the urban poor. Extreme heat is an often hidden, yet chronic threat to urban populations, exacerbating vulnerabilities and inequalities. This project aims to co-develop interventions and low-cost options for remodelling formally- and informally built spaces in culturally sensitive ways to reduce heat stress and improve well-being. The interdisciplinary research team will conduct temperature and humidity measurements, interviews, auto-photography and thermal modelling, and construct experimental buildings to explore how heat stress experienced in homes, workplaces and health facilities impacts on well-being, as well as how perceptions of well-being influence the infrastructural decisions of residents and policy makers. REFIT aims to improve the well-being of city dwellers in Ghana and provide new knowledge and insights about adaptations to extreme heat relevant across the Global South.

Reference: UWB190207
PI: Dr Ornella Iuorio, University of Leeds
Co-Applicants: Dr Susan Lopez, University of Leeds; Dr Gustavo Duran, FLACSO; Dr Michael Janoschka, University of Leeds; Professor Richard Romano, University of Leeds
Value: £251,352.63
Title: *Novel Approach for Vital Infrastructure Post Disaster*
Abstract: This project evaluates post-disaster management cases in three cities in Ecuador, to create new bottom-up community-led frameworks for infrastructures development. It utilises innovative virtual reality scenarios to capture non-technical people responses to different built environments, and evaluate their practical implementation, considering indigenous construction practices as well as social and cultural preferences. The level of acceptance of such solutions is paramount for long-term vulnerability reduction and the well-being of survivors (UN Sustainable Development Goal 3). This research seeks to transform how post-disaster infrastructure is conceived, following a multi-disciplinary approach combining social and computer sciences with architecture and materials engineering.

Reference: UWB190022
PI: Mr Graham Jeffery, University of the West of Scotland
Co-Applicants: Dr Julie Clark, University of the West of Scotland; Professor John Connolly, University of the West of Scotland; Professor Anurag Garg, Indian Institute of Technology; Professor Andrew Hursthouse, University of the West of Scotland; Dr Mary Josephine, Nirmala College for Women; Dr Benjamin Parry, Bath Spa University
Value: £299,948.00
Title: *Waste, Water and Well-Being: Lessons from the Interface of Formal/Informal Urban Systems in Dharavi, Mumbai*
Abstract: This project aims to provide an in-depth analysis of formal/informal infrastructural collisions in Mumbai. Dharavi, as one of the largest informal settlements in Asia, is a highly significant centre of employment and economic activity but is directly affected by many global challenges (e.g. poverty, plastic waste, water shortage, poor urban resilience, migration, housing and sanitation). Its recycling industry is entirely self-organised within the informal sector. Poor infrastructure creates air/groundwater pollution and significant land contamination. Reducing waste comes at the expense of human health and life. The research team seeks to examine urban development through the lens of the 'smart city from below', at the interface between the user-generated city and centralised urban planning systems. It looks to also address issues of trust, health protection, participation, ownership and ethics in the implementation of infrastructure-driven solutions, specifically at the points of collision between 'top down' development (e.g. the USD3.4bn Mumbai Metro 3) and the 'user-generated city' of the Dharavi workers colony.

Reference: UWB190208
PI: Professor Gareth Jones, London School of Economics and Political Science
Co-Applicants: Dr Andre Duarte, Insper Institute of Education and Research; Dr Mara Nogueira, London School of Economics and Political Science; Dr Vinícius Rodrigues, Insper Institute of Education and Research
Value: £286,028.00
Title: *Engineering Food: Infrastructure Exclusion and 'Last Mile' Delivery in Brazilian Favelas*

Abstract: Favelas are vibrant economic spaces, where 'mom and pop' shops (nano-stores) commonly offer a variety of products. But favelas are also putative 'food deserts' with limited availability of affordable fresh food produce. Such shortage contributes to micronutrient deficiency, an issue directly linked with public health and well-being. This limitation is related to infrastructural exclusion, i.e. ineffective and unsustainable infrastructures that prevent supply chains from closing the 'last mile'. Access to fresh food, therefore, relies on 'people as infrastructure', usually meaning purchase of small quantities at high unit prices in frequent journeys. This project combines logistics management and ethnographic methods to map the formal and informal infrastructures underpinning favela residents' access to fresh food in Brazil. It focuses on disjunctures of infrastructures, revealing everyday solutions people engineer to access food.

Reference: UWB190225
PI: Dr Juan Miguel Kanai, University of Sheffield
Co-Applicants: Ms Liliana Fabio, University of Buenos Aires; Professor Beverley Inkson, University of Sheffield; Professor Anna Jorgensen, University of Sheffield
Value: £294,156.00
Title: *Breathing Infrastructures: Green Barriers for Air Quality, Well-Being and Community Mobilisation in Buenos Aires*
Abstract: This interdisciplinary project combines expertise from the social sciences, materials engineering and landscape design. It adopts a participatory approach seeking to involve diverse communities in the planning, construction and upkeep of green barriers in city-run primary schools. The research team aims to demonstrate the efficacy of green barriers in filtering air pollution out of schoolyards to reduce environmental risks on children's health and development as well as the multiple social and ecological co-benefits that this form of urban greenery can produce when designed effectively and with multipurpose intentionality. Results from actually built green barriers in three schools will be used to produce business models and policy guidelines promoting the broader adoption of green barriers in cities of the Global South.

Reference: UWB190179
PI: Dr Dolf te Lintelo, Institute of Development Studies
Co-Applicants: Professor Meltem Gurel, Yaşar University; Professor Hanif Kara, AKT II; Professor Robert Mull, University of Brighton; Professor Ayselin Yildiz, Yaşar University
Value: £299,757.00
Title: *Well-Being, Housing and Infrastructure in Turkey*
Abstract: This project seeks to contribute to finding 'durable solutions' for housing infrastructural deficits in the context of two of the defining challenges of our times: large-scale displacement and rapid urbanisation. It uses mixed methods at residential, neighbourhood and city-scales to investigate the relations between formal/informal housing infrastructures, their governance and resulting intersectional well-being outcomes for low-income Syrian refugees and Turkish groups in Izmir, Turkey. The project aims to deliver propositional and innovative engineering and architecture solutions rooted in vulnerable groups' well-being priorities and develop new employment skills for low-income workers. It is looking to consult practitioner and policy stakeholders and build new capacities for joint research and action across civil engineering, architecture and development studies, at junior and senior levels.

Reference: UWB190190
PI: Professor Nick Malleson, University of Leeds
Co-Applicants: Dr Quang-Thanh Bui, Vietnam National University; Professor Alex Comber, University of Leeds; Dr Huu Phe Hoang, R&D Consultants; Dr Kieu Le Minh, Leeds Institute of Data Analytics; Dr Truc Nguyen Ngoc, Vietnam National University; Dr Hang Nguyen Thuy, Vietnam National University
Value: £291,663.00
Title: *Urban Transport Modelling for Sustainable Well-Being in Hanoi*
Abstract: Many cities - such as Hanoi in Vietnam - are expanding rapidly, but formal infrastructure is failing to keep pace with the burgeoning population. This is further complicated by the emergence of informal transport infrastructures that develop in areas of unplanned urban sprawl. This project employs an innovative process that interlinks new data collection, modelling and policy development. By working with policy makers at the highest levels of government, the research team aims to address questions regarding how, where and when planned policies should be implemented (if at all), what the impacts on local communities would be, whether public transport can cope, and whether there are better alternatives.

Reference: UWB190102
PI: Professor Fiona Marshall, University of Sussex
Co-Applicants: Professor Ramila Bisht, Jawaharlal Nehru University; Dr Shijun Ding, Zhongnan University of Economics and Law; Professor Ritu Priya, Jawaharlal Nehru University; Dr Novi Quadrianto, University of Sussex; Dr Jeremy Reffin, University of Sussex
Value: £244,846.00
Title: *Inclusive Green Infrastructures for Urban Well-Being*
Abstract: This project aims to promote the integration of formal and informal green infrastructure into city-region policy and planning in inclusive ways. The interdisciplinary research team is working with communities, local NGOs and policymakers to develop a user-friendly application of deep learning techniques to city-region land-use mapping and build models and scenarios of land-use change. It is looking to create a web-based tool that supports dialogue concerning the impact of current urban planning trajectories on green infrastructures, the environmental services they provide, and implications for well-being. The team is also seeking to incorporate information from the lived experiences and perspectives of poor and marginalised communities, alongside quantitative and qualitative data from other sources such as official statistics, academic literature and spatial datasets. It is anticipated that the project will open up policy dialogues over alternative urban development trajectories that build on positive interactions between formal and informal green infrastructures.

Reference: UWB190086
PI: Dr Daniel Maskell, University of Bath
Co-Applicants: Dr Juliana Calabria-Holley, University of Bath; Professor Monto Mani, Indian Institute of Science; Dr Venkatarama Reddy, Indian Institute of Science; Professor Peter Walker, University of Bath; Professor Sarah White, University of Bath
Value: £299,649.09
Title: *Well-Being Achieved from Earthen Residence*
Abstract: Urbanisation in developing countries commonly uses building materials that pollute the environment, which combined with transportation and industrial activities is leading to increasing levels of air pollution. At the same time, buildings in developing countries are increasingly reliant on active air conditioning systems to provide comfortable indoor conditions but such systems add further pollution and widen the gap between social classes. The WAFER project seeks to engineer earth building materials to deliver improved indoor environment, resulting in better occupant health and well-being. Although earthen construction has low environmental impact, and can improve indoor air quality, it remains unpopular in developing countries due to a wider aspiration for 'modern' construction materials. This project thus aims to also investigate the 'stigma' of earthen materials and how they can be developed for enhanced properties.

Reference: UWB190164
PI: Professor Henrietta Moore, University College London
Co-Applicants: Professor Howayda Al-Harithy, American University of Beirut; Dr Nadim Farajallah, American University of Beirut; Dr Nikolay Mintchev, University College London; Dr Elizabeth Saleh, American University of Beirut; Professor Nick Tyler, University College London
Value: £299,939.00
Title: *Developing Infrastructural Solutions for Lebanon's Challenges of Mass Displacement*
Abstract: Lebanese cities have a long-standing struggle with energy shortages, polluted water, housing inequalities, and lack of sufficient waste management and transport systems. The arrival of 1.5 million Syrian refugees since 2011 has exacerbated this situation by inflating the informal sector and increasing pressure on the country's infrastructure. In this context, this project brings together engineers, social scientists and Lebanese entrepreneurs to collect neighbourhood-level quantitative and qualitative data on infrastructure and well-being, and to work with communities to co-design small-scale solutions to infrastructural challenges. The research team aims to identify context-specific infrastructural challenges, as well as existing formal and informal solutions, as the basis for developing new engineering designs for more inclusive and efficient services.

Reference: UWB190032
PI: Dr Tolu Oni, University of Cambridge
Co-Applicants: Dr Felix Assah, University of Yaoundé; Dr Evangelia Chatzidiakou, University of Cambridge; Professor Roderic Jones, University of Cambridge; Professor Taibat Lawanson, University of Lagos; Dr Ebelechukwu Mogo, University of Cambridge; Dr Olalekan Popoola, University of Cambridge
Value: £297,411.95

Title: *Informal Appropriation of Public Space and Urban Infrastructure for Leisure Physical Activity in Lagos and Yaoundé*
Abstract: Africa is experiencing rapid urbanisation alongside poorly governed infrastructure development and increasing unhealthy living. These factors contribute to an increased burden of non-communicable diseases (NCDs) and premature mortality, disproportionately affecting the economically active and jeopardising development. The built environment is a critical determinant of physical activity, a risk factor for NCDs, but due to unmet need for physical activity infrastructure, public spaces in African cities are increasingly appropriated for leisure physical activity (LPA) under hazardous conditions such as toxic air pollution, another NCD risk-factor. As a result of a lack of surveillance data, the health risks of LPA in public spaces are unknown. This project focuses on Lagos and Yaoundé to investigate patterns and experiences of appropriated public space LPA, as well as the injury risk and air pollution exposures which may negate LPA benefits. Results will inform urban infrastructure development strategies for safe, equitable LPA in public spaces.

Reference: UWB190091
PI: Professor Nitya Rao, University of East Anglia
Co-Applicants: Dr Ashwin Mahalingam, Indian Institute of Technology; Mr Teja Malladi, Indian Institute for Human Settlements; Dr Betty Mntambo, Open University of Tanzania; Ms Sheetal Patil, Azim Premji University; Dr Chandni Singh, Indian Institute for Human Settlements; Dr Ombeni Swai, Ardhi University
Value: £293,226.00
Title: *Urban and Peri-Urban Agriculture as Green Infrastructure: Implications on Well-Being and Sustainability in the Global South*
Abstract: Urbanisation in the Global South is coupled with unemployment, resource degradation, growing inequality and food insecurity. This project examines the extent to which urban and peri-urban agriculture (UPA), conceptualised as 'green infrastructure', addresses these challenges and contributes to societal well-being and urban sustainability. The research focuses on four urban areas in India and Tanzania. It seeks to (1) investigate the impacts of UPA on built infrastructure, ecosystem services, land and water use, (2) explore how UPA is socially differentiated and privileges/marginalises certain people/groups with well-being outcomes, and (3) co-develop and test strategies that allow UPA to contribute to urban sustainability.

Reference: UWB190069
PI: Professor Gareth Stratton, Swansea University
Co-Applicants: Professor Sinead Brophy, Swansea University; Dr George Oweno, Kenyatta University; Professor Vincent Onywera, Kenyatta University; Professor Huw Summers, Swansea University; Dr Lucy Wachira, Kenyatta University
Value: £297,929.00
Title: *Kenya Healthy Diet and Active Lifestyle Infrastructure for the Next Generation*
Abstract: Children's physical inactivity and their low levels of fitness are the 4th biggest threat to non-communicable diseases worldwide. In Kenya, rapid urbanisation has prompted inactivity and obesity; half of Kenyan children are insufficiently active while one-fifth of children in Nairobi are obese. This project seeks to integrate social, exercise and health sciences as well as education and engineering disciplines that quantify the features and quality/quantity of physical activity in the field. Through process evaluative and co-production approaches, the research team aims to adapt tools to suit the rural and urban Kenyan school and community systems. The goal is for all children in Kenya to be sufficiently active, thus reducing the burden of NCDs caused by inactivity and their associated fiscal and social costs.

Reference: UWB190094
PI: Dr Jeff Tan, Aga Khan University
Co-Applicants: Professor Stephen Lyon, Aga Khan University; Professor Attaullah Shah, Karakoram International University
Value: £278,583.11
Title: *Scaling Up and Transferring Community-Managed Rural Water Systems to Urban Settings*
Abstract: Access to clean water and sanitation is central to health and well-being, particularly for the poor. However, capital investment in water in the Global South has been undermined by the failure to finance operations and maintenance because (poor) households often cannot, or are unwilling to, pay. The successful operation of over 400 community-managed rural water projects covering over 100,000 households in northern Pakistan by the Aga Khan Agency for Habitat (AKAH) has led to the introduction of community-managed urban water schemes. This research examines two AKAH urban

water schemes in Gilgit, Pakistan, to assess the viability of this community-managed model and if it can be scaled up and transferred to other urban settings. It brings together researchers in economics, anthropology and engineering, together with development practitioners and other experts, to identify how economic, social, cultural and technical factors affect the sustainability and impact of community-managed water systems.