



THE UNIVERSITY *of* EDINBURGH

News Release

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£20m global cities study seeks to limit risk of natural disasters

Cities of the future could be better able to withstand natural hazards such as floods, earthquakes or landslides, thanks to a £20 million initiative.

Research based in four cities around the world will aim to improve urban planning by integrating resilience against extreme events, including volcanic eruptions and cyclones.

Improved design for centres of population – with support from authorities, international agencies and other stakeholders – could break current cycles of risk. It could help billions of the world's poor avoid threats to their lives and livelihoods, scientists say.

The five-year project, led by the University of Edinburgh, will focus on four cities – Nairobi, Quito, Istanbul and Kathmandu.

It is one of three projects involving Edinburgh researchers to win support from UK Research and Innovation's Global Challenge Research Fund.

The locations to be studied were chosen for their exposure to various natural hazards and for their variation in urban layout, development status and governance.

The project, known as the UKRI GCRF Urban Disaster Risk Hub, takes place at a time when cities around the world are expanding rapidly. Developed urban space is forecast to increase by 60 per cent by the end of the next decade.

More than two billion city dwellers in low-to-middle income countries face the threat of a range of natural disasters, according to researchers.

This figure is expected to double by 2050 as cities grow and climate change increases the likelihood of extreme weather.

Incorporating disaster risk reduction measures into city planning could help meet Strategic Development Goals set out by the United Nations.

Researchers from Edinburgh will also take part in a separate £2.5 million initiative in South Asia to tackle pollution associated with nitrogen – a key pollutant from fertilisers and greenhouse gases.

Ranked among the top universities in the world

The UKRI GCRF South Asian Nitrogen Hub will target nitrogen losses from agriculture and from fossil fuel combustion, as well as sources of air and water pollution.

Scientists will seek routes towards more profitable and cleaner farming for India, Pakistan, Bangladesh, Nepal, Afghanistan, Sri Lanka, Bhutan and the Maldives.

The project, led by the Centre for Ecology and Hydrology, will involve researchers from the University's Schools of Social and Political Science, GeoSciences, Engineering, the Centre for Global Health Research, the Global Academy of Agriculture and Food Security, and The Roslin Institute.

Scientists from Edinburgh will also take part in a study of the oceans, led by the University of Strathclyde.

Researchers from the School of GeoSciences will take part in the UKRI GCRF One Ocean Hub, studying corals from the deep ocean to understand how these will respond to predicted conditions.

Their study takes place at a time when over-exploitation of resources, increased plastics and pollution, and climate change are impacting on ocean conditions.

The hubs are funded by UK Research and Innovation (UKRI) through the Global Challenges Research Fund (GCRF) – which is a key component in delivering the UK AID strategy and puts UK-led research at the heart of efforts to tackle the United Nations Sustainable Development Goals.

Chris Skidmore, Science and Universities Minister, who announced the projects, said: “The UK has a reputation for globally influential research and innovation, and is at the centre of a web of global collaboration – showing that science has no borders. We have a strong history of partnering with other countries – over 50% of UK authored research involves collaborations with international partners. The projects being announced today reinforce our commitment to enhance the UK's excellence in innovation at home and around the world, driving high-skilled jobs, economic growth and productivity as part of the modern Industrial Strategy.”

Professor John McCloskey, of the University of Edinburgh's School of GeoSciences, who will lead the Urban Disaster Risk Hub, said: “Rapid urbanisation is an opportunity to plan against natural disasters, so that cities can move towards more sustainable and fairer futures. This is a chance to bring together the world's best researchers with inspiring community and government leaders on an unprecedented scale, and could have a lasting legacy.”

For more information please contact:

Corin Campbell, Press and PR Office, Tel: 0131 650 6382; Corin.Campbell@ed.ac.uk

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