A team of researchers are harnessing the power of social media to help residents in cities affected by flooding. PETAJakarta, developed by SMART Infrastructure Facility researchers Dr Tomas Holderness and Dr Etienne Turpin, focuses on the megacity of Jakarta, which is at constant risk of inundation from the neighbouring Ciliwung River. With a population of more than 28 million people, Jakarta has one of the fastest growing rates of urbanisation in the world.

The UOW project uses Twitter to collect, display, and analyse data relating to flooding in Jakarta, helping residents to navigate their neighbourhood in times of disaster and providing information to emergency services. Twitter has given PETAJakarta a Data Grant to aid its research, one of only six institutions in the world to gain inaugural access to historical and current data from the social media network.

According to Chief Investigator Dr Etienne Turpin, environmental risks, exacerbated by the onset of climate change, and the increasing density of city living, have created the perfect storm in Jakarta. “Land subsidence, extreme pollution, changing weather patterns, intensity of precipitation and storm systems, rising populations, the incredible trajectory of urbanisation in the region - all of these things combine to produce a single question: how do we allow the coastal megacities of South-East Asia to survive the 21st century?” Dr Turpin said.

PETAJakarta is a collaboration between SMART Infrastructure Facility and the Global Challenges Program and uses open source software CogniCity to track the information on Twitter. Dr Holderness says the team plans to upscale PetaJakarta to other global cities including Ho Chi Minh City, Phnom Penh and Bangkok. The project will then go on to examine the resilience of urban centres in the face of natural disasters.

“It will radically change real-time data collection and feedback for flood monitoring in one of the most precarious delta cities of South-East Asia,” Dr Holderness said.

>>Follow PETAJakarta on Twitter https://twitter.com/PETAJakarta
>>Read more about the project http://bit.ly/1rFKkRZ

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The Global Challenges PhD Scholars Program is designed to attract the best and brightest Higher Degree Research students to work on these challenges. The funding program is open to PhD candidates commencing in 2015 whose research corresponds to the three Global Challenges – Living Well, Longer; Sustaining Coastal and Marine Zones; and Manufacturing Innovation, or the overarching theme of Transforming Lives and Regions. Successful applicants will be awarded a $10,000 p.a. top-up to their competitive scholarship and $5,000 p.a. will also be made available for research and travel support. Up to six top-up scholarships will be awarded. The inaugural Global Challenges PhD Scholars Program attracted a strong response with 11 students receiving scholarships. Their research captures the diversity of the Global Challenges Program, with students studying a fascinating variety of subjects, including motor neurone disease, schizophrenia, spatial audio, coastal issues on the NSW South Coast, and global shipping.

The funding has allowed a number of PhD students to attend overseas conferences, conduct fieldwork, and even spend time studying at universities around the world. Recipient Anand Abhijith is set to spend a year studying at McGill University in Montreal, Canada. Rachael Bartlett will also head overseas with the help of her Global Challenges top-up scholarship, spending six months in Vancouver for her research into motor neurone disease.

>>Check out further information and conditions on the Global Challenges website: globalchallenges.uow.edu.au

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