



Project team 'CRUNCH' wins funding of Euro 1.6 million

The research project “CRUNCH: Climate Resilient Urban Nexus CHOICES: operationalising the Food-Water-Energy Nexus” was selected for funding in a 2-stage process as part of the joint call ‘Sustainable Urbanisation Global Initiative (SUGI), organised by Urban Europe JPI and the Belmont Forum, with support from the European Commission.

The international project, led by Professor Steffen Lehmann, Director of the Cluster for Sustainable Cities in the CCI Faculty at the University of Portsmouth, will officially commence on 1st April 2018. The interdisciplinary 3-year project involves 19 partners from 6 countries and is funded with Euro 1.6 million from 8 different funding agencies. In the UK, the project is funded by the ESRC, the AHRC and Innovate UK.

Key researchers from the University of Portsmouth include Professor Steffen Lehmann, Professor Djamila Ouelhadj, Dr Julia Brown and Dr Alessandro Melis.

The urban Food-Water-Energy Nexus generally describes an approach to complex urban systems that focus on the intersections, hidden efficiencies and potential synergies between sectors and fields that are commonly viewed separately. The CRUNCH Food-Water-Energy Nexus approach provides a unique collaboration framework for technical and social scientists, small and large businesses, cities, non-governmental organisations and local stakeholders to tackle the current urban challenges and inefficiencies of the food, water and energy sectors.

From a pool of 79 applications, 15 projects were finally selected in a tough 2-stage competition to develop and test innovative approaches within the urban ecosystems of the participating cities. CRUNCH will involve 40 researchers from the 19 project partners, including: the University of Portsmouth (Project Lead), National Taiwan University, KnowNow Information Ltd, Eindhoven University of Technology, Experior Micro Technologies Ltd., Florida International University FIU, Uppsala University, Glasgow City Council, Gdansk University of Technology, AECOM Ltd, Soil Association, Southend on Sea Borough Council and the Ecological Sequestration Trust. The 6 participating municipalities are: Southend-on-Sea (UK), Eindhoven (NL), Gdansk (Poland), Uppsala (Sweden, Miami (USA) and Taipei (Taiwan/Chinese Taipei).

Increasing demands for food, water and energy often exceed the capabilities of any one region, and combined with population growth and the expansion of cities, an interconnected world makes such collaboration necessary. The CRUNCH nexus approach focuses on

intersections and potential synergies between sectors and fields commonly seen apart in business, policy and research. CRUNCH will investigate food, water and energy as one complex system and lead to a knowledge platform and discoveries that cannot emerge when investigated separately in 'silos'. It will combine the advanced tool for an innovative and integrated Decision Support System and visualisation models with expert knowledge in waste, food, material flows, water and energy management and urban planning, architecture and urban governance.

Prof Steffen Lehmann said: "This is a very prestigious initiative and we are very happy to be funded for the next three years to tackle the challenge of urban transitions to develop international connections and collaborations worldwide on the F-W-E nexus approach. The CRUNCH consortium brings together a breadth of expertise and diversity of technical, social and business disciplines to develop a new knowledge platform, support better decision making and work on the common challenges. We are aiming for ground-breaking outcomes that are truly transdisciplinary, working closely with local stakeholders at every step of the project."

More information on the project is here:

<https://ipi-urbaneurope.eu/news/the-15-projects-that-will-take-on-the-food-water-energy-nexus/>

Diagram of the Food-Water-Energy Nexus concept:

