

# Pracademic:

bridging the gap between science and practice for disaster management and climate change adaptation

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# Content

- Introduction to 'Pracademic'
- Myths and legends
- Bridging roles
- Future directions....New research group at UoE?



# What is a Pracademic?

- One who seeks synergy between theory and practice
- Academic-practitioner connection
- Straddle both worlds and have legitimacy in both communities



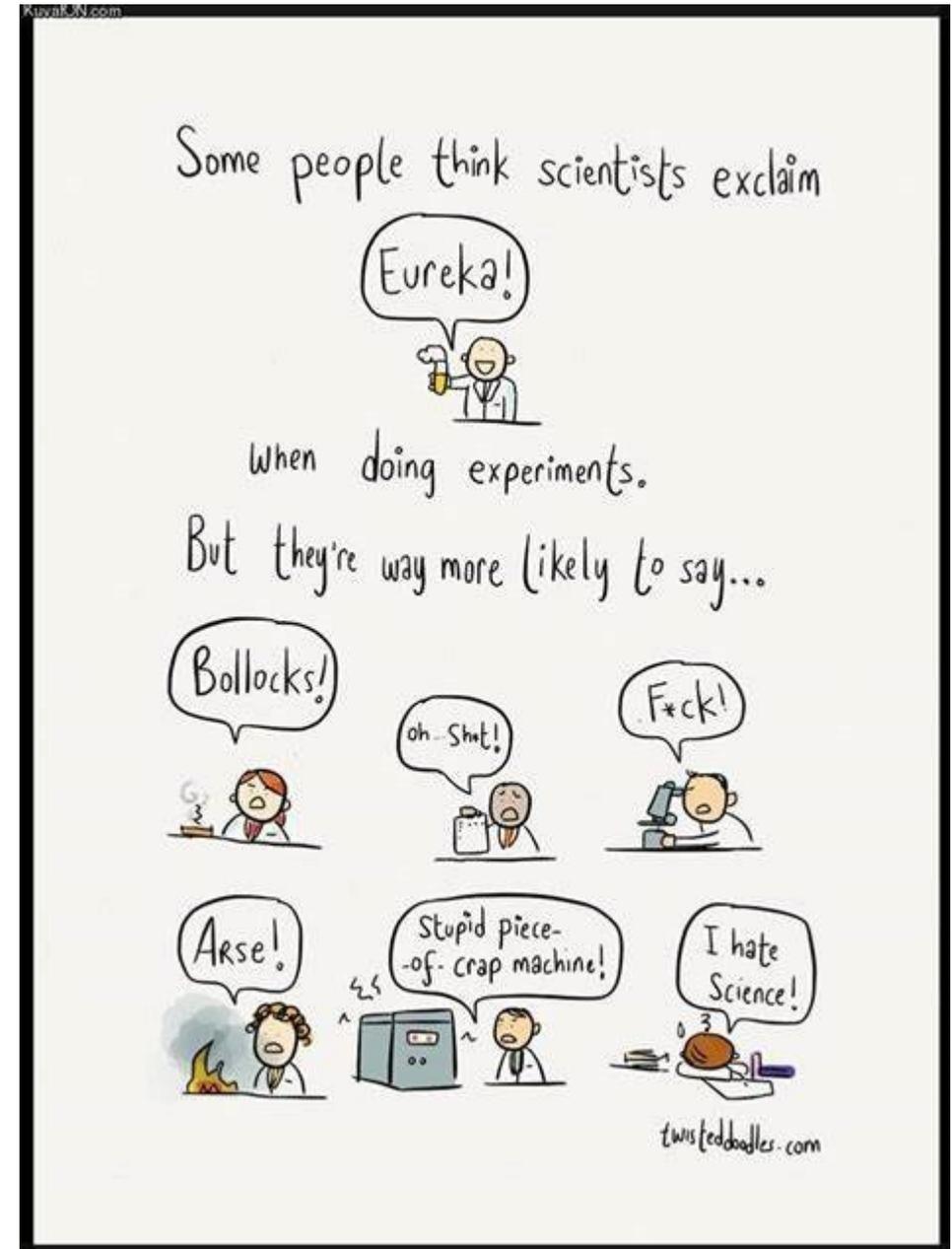
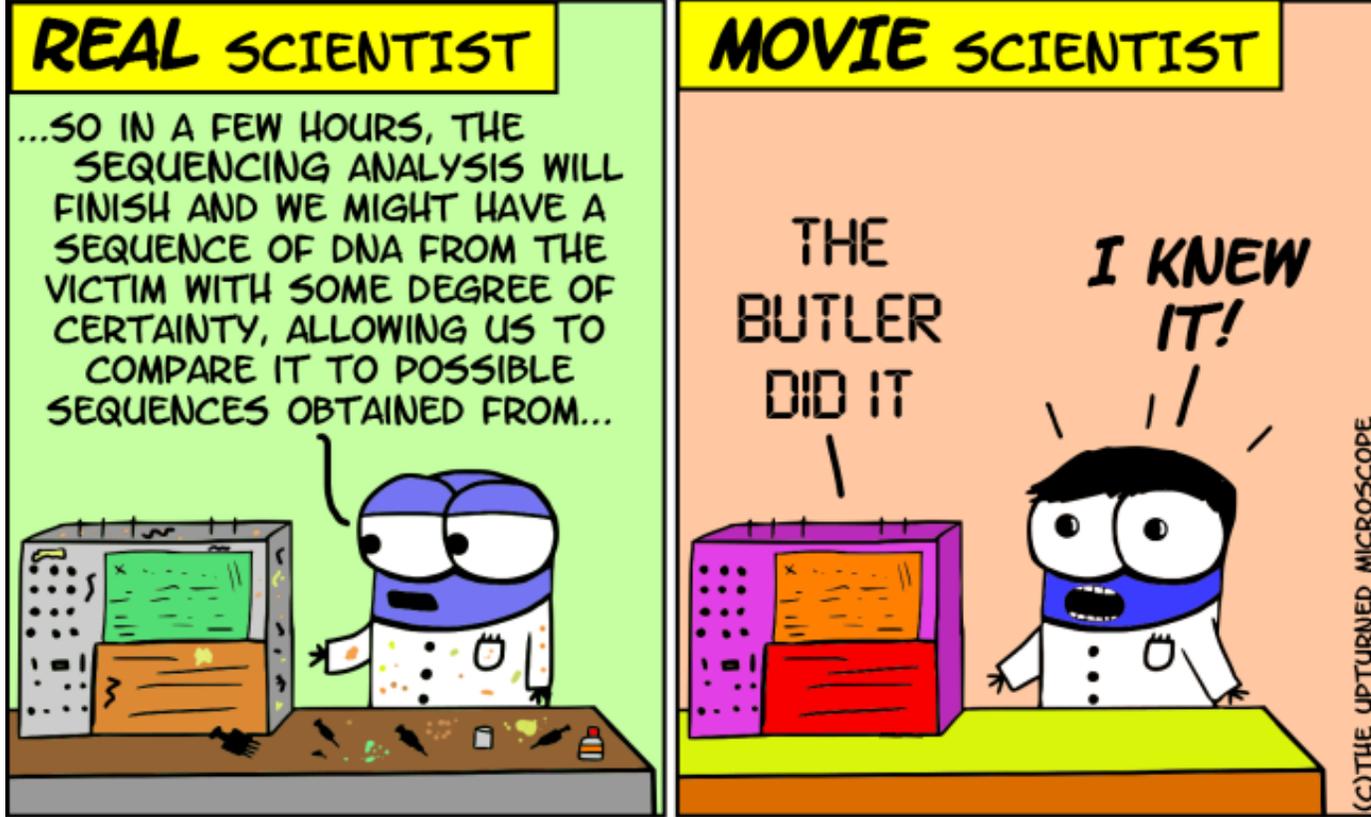
# What is a Pracademic?

“World of practice serves as a centre point of the academic compass for most professional programmes” - Posner 2009

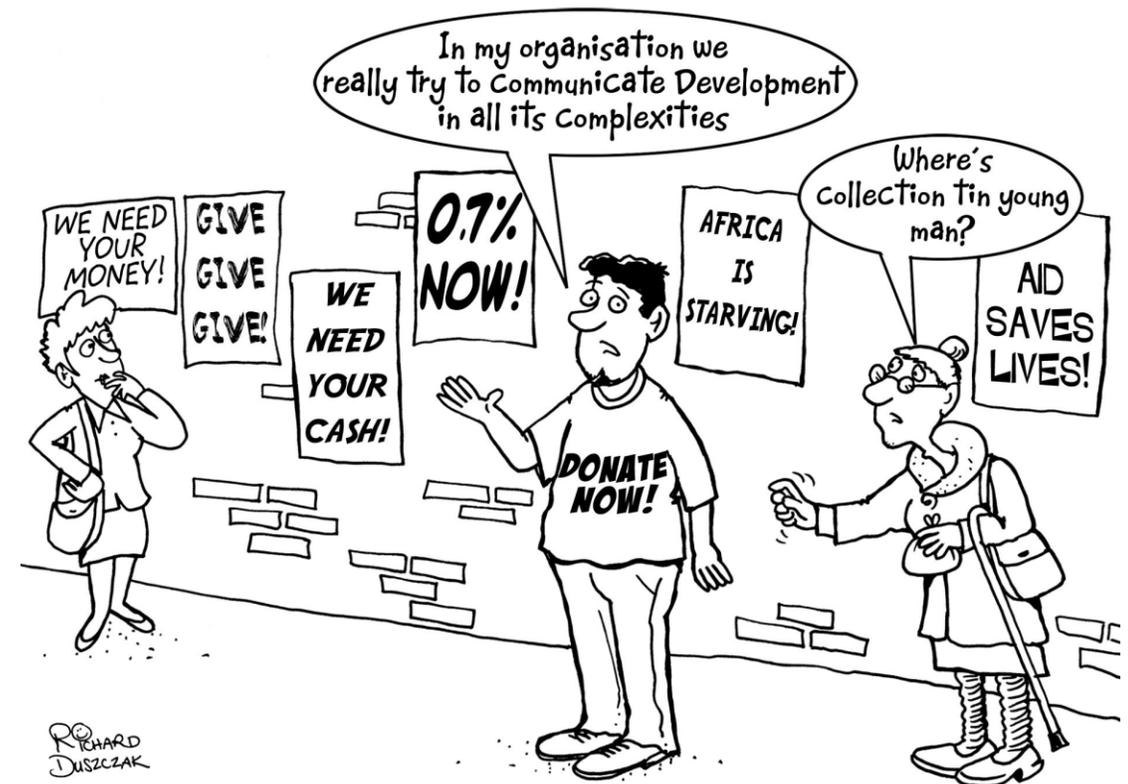


# Myths and legends

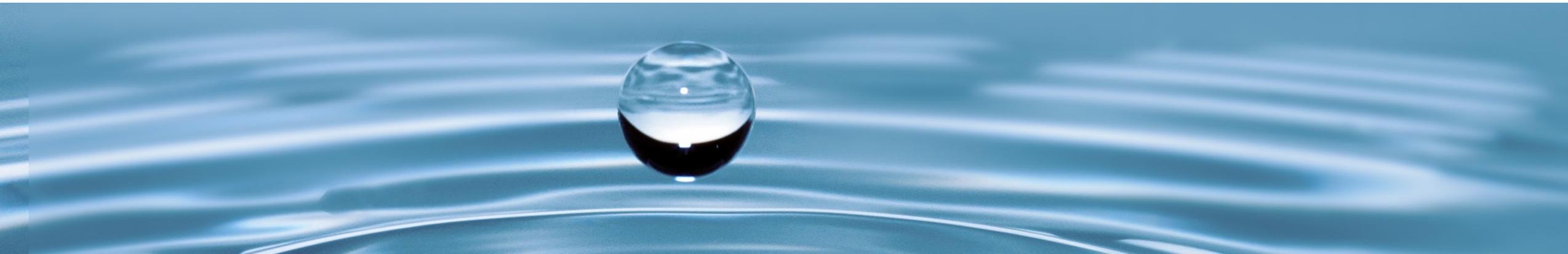
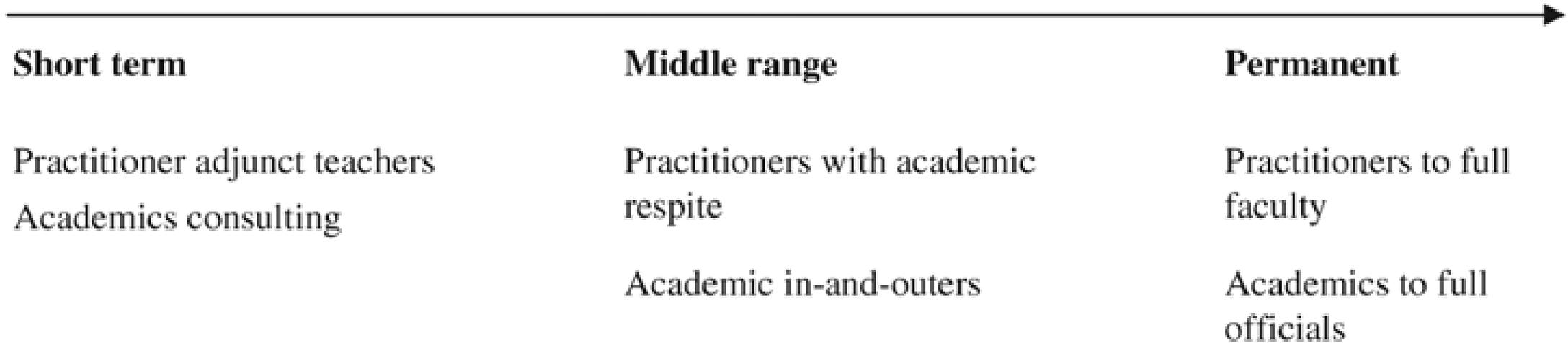
## Real vs Movie Scientist



# Myths and legends



# Is it possible to be a Pracademic?



# Research interests

## Risk framework - data and analysis

- hazard, exposure, vulnerability and capacity analysis
- evaluation of resilience, coping and adaptive capacity
- indigenous knowledge and culture
- uncertainty

## Risk management –

- risk and impact tools
- risk-informed decision making
- citizen science and participation
- emergency management and humanitarian response



# Climate change adaptation & disaster risk reduction

- Interdisciplinary by nature
- Practice at the centre
- Sendai Framework for Action – international policy heavy on science integration
  - Understanding Risk



# Risk Science Research Journey



**Data** - Methods for capturing the elements of risk assessment



**Information** –Co-production of risk assessment and impact models



**Knowledge** - Developing tools and knowledge exchange for decision making

# Shift in practice and policy

- Sendai – focussed efforts on risk informed decision making and local-national knowledge transfer
- Co-production of dynamic risk assessment method at scale
- Applications for humanitarian response?



# INGO – University partnership

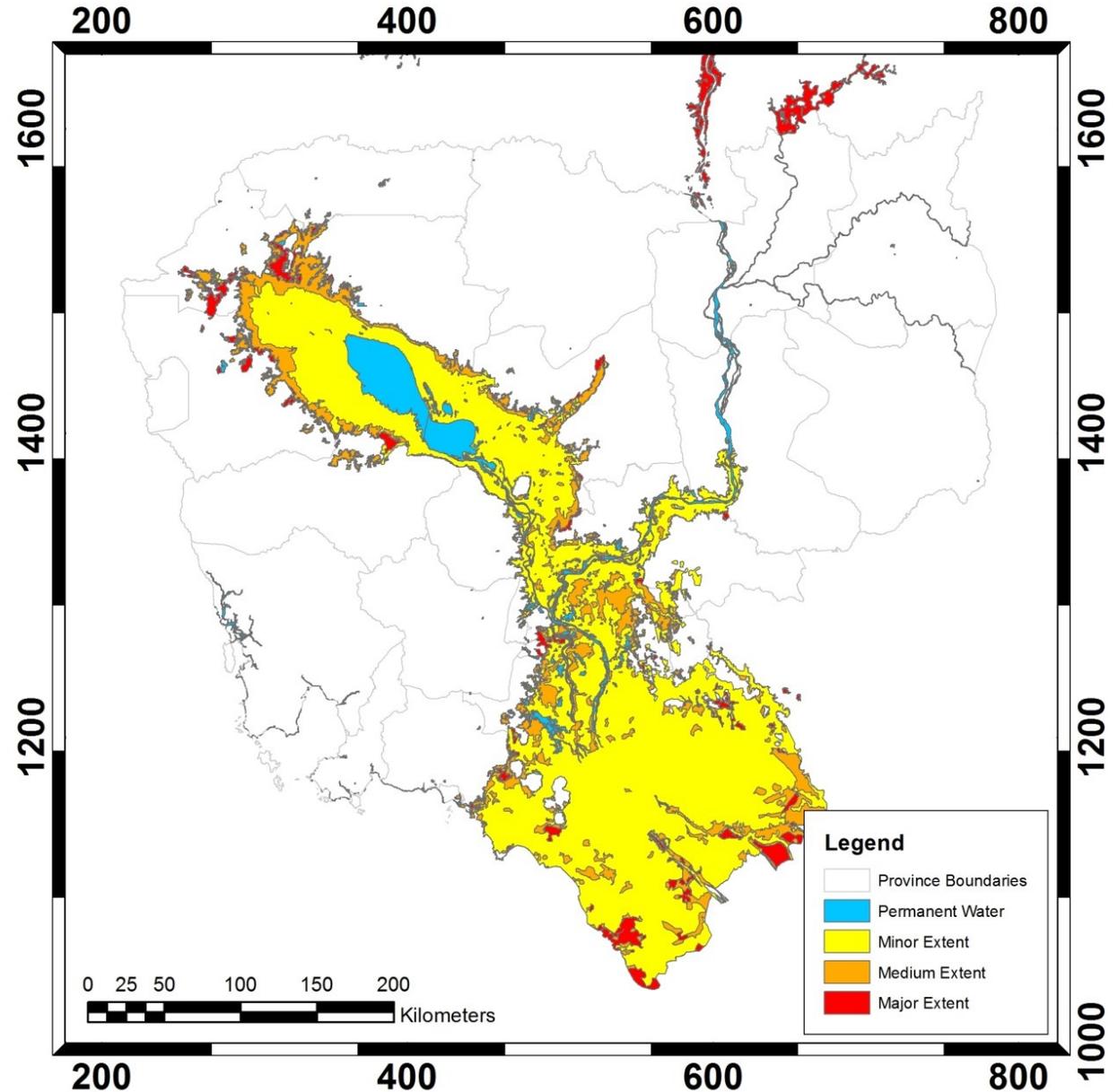
- CAFOD and UCL
- Long term relationship
- Collaborative funding opportunities
- Direct opportunity to work with CSOs and partners
- Shared teaching and supervision
- BOND DRR working group – opening up to academic members



## Risk visualization: Pilot UCL & CAFOD, NERC PURE grant

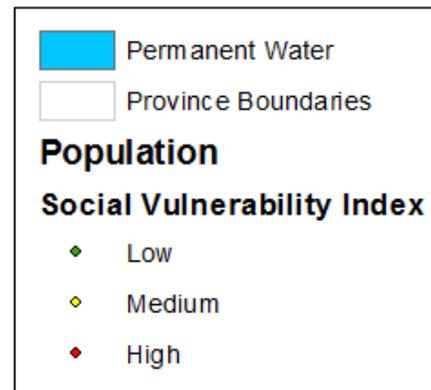
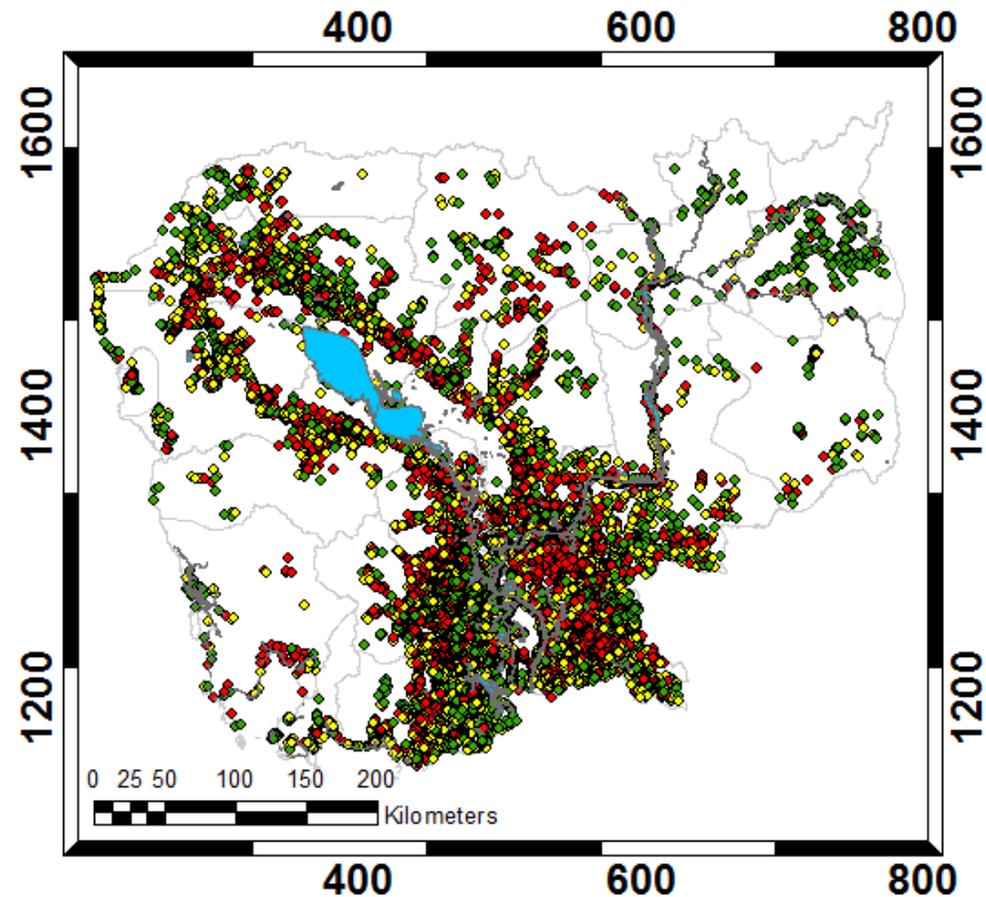
- To investigate how Participatory Vulnerability and Capacity Assessments (PVCAs) can be integrated into an existing tool to inform risk management decisions
- Pilot Cambodia

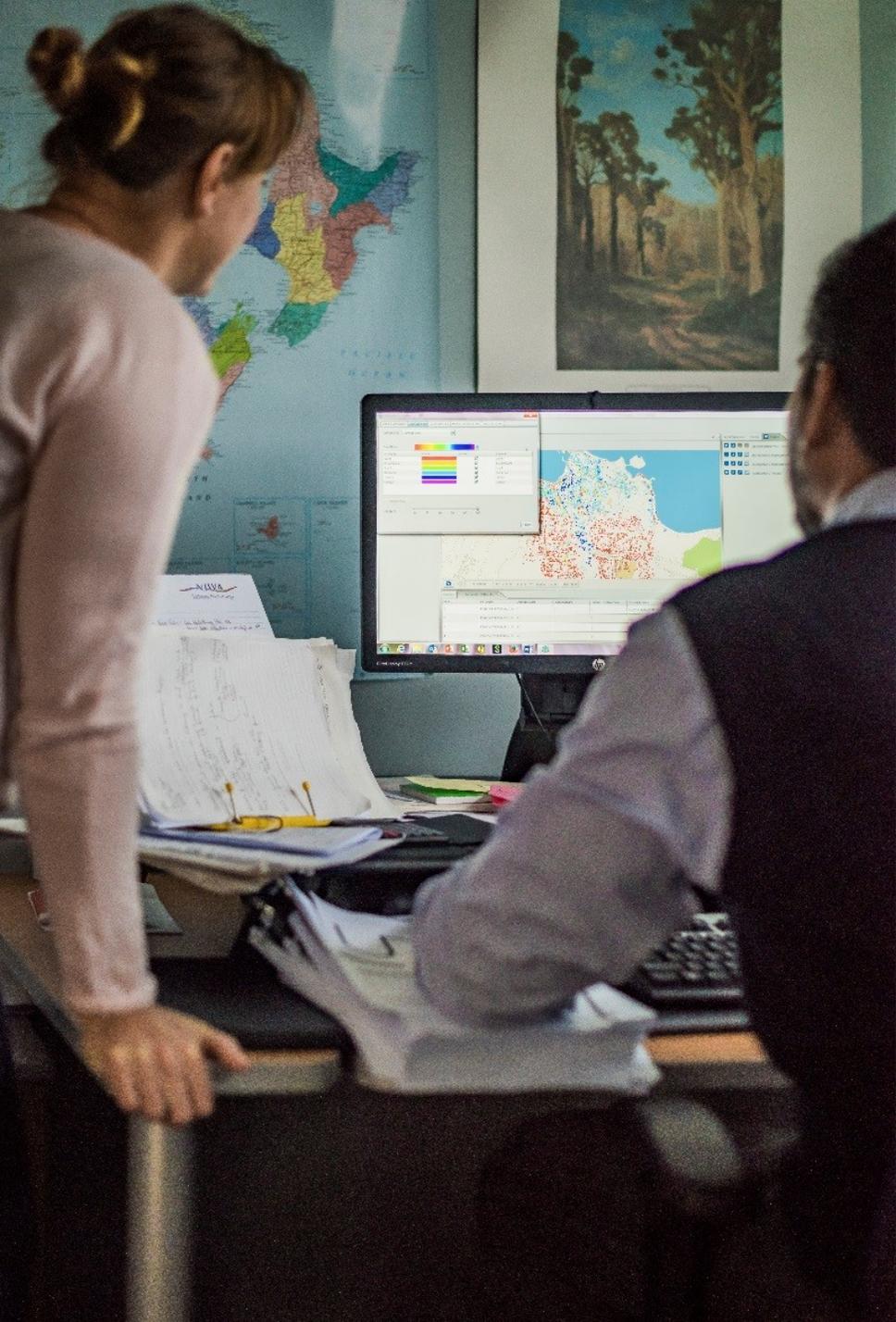
Collaborative team: Richard Wall, UCL,  
Stephen Edwards, UCL Kate Crowley,  
CAFOD Brad Weir, Aon Benfield



## Integrated vulnerability index

- Future work: how visualisations can be used within PVCAs, to prepare for and respond to flood crises?
- Is it possible to develop methods that capture change over time – hazard and social change?





# Risk and Impact Modelling Tools: RiskScape

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- Software that helps people understand and visualize the impact from hazard events.
- Designed to perform a complex calculation simply and quickly without needing specialist modelling knowledge.

Ref: Crawford, Crowley, Potter, Saunders, and Johnston (2018)





# Risk Modelling in New Zealand

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- Developing a useable, useful and used Risk Modelling Tool for decision makers
- Developing socio-economic and physical damage models (vulnerability models)
- Low uptake and lack of data feeding the tool
- Lack of community and government ownership

# Fundamentals: Applied Modelling 'Eco-system'

Demand

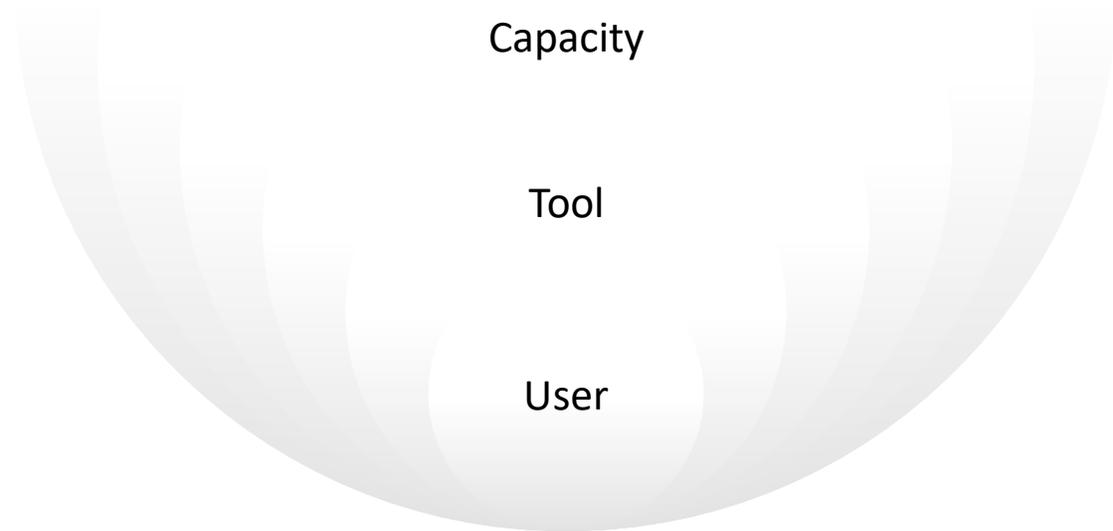
Data

Partnerships

Capacity

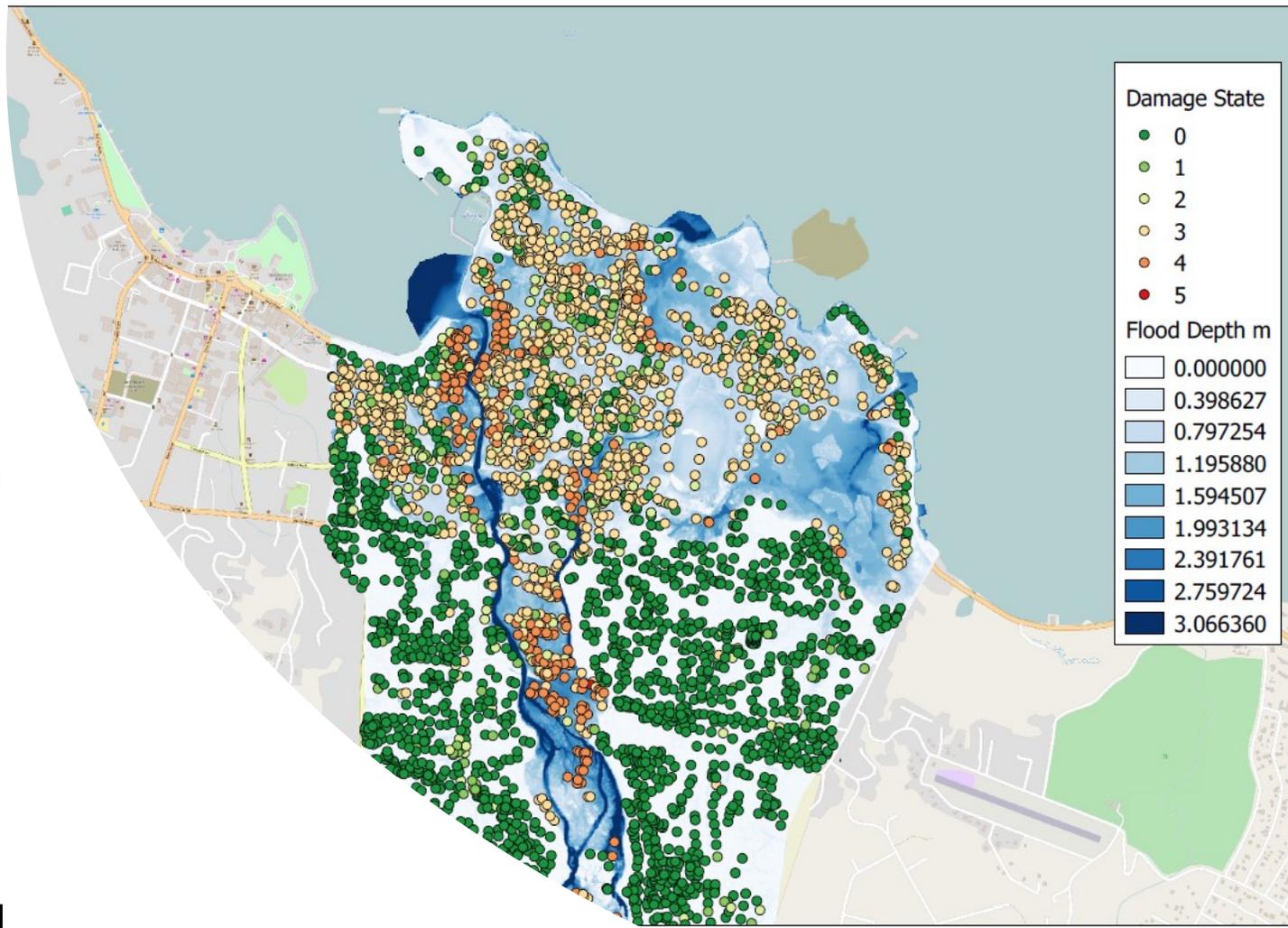
Tool

User



# PARTneR: Pacific Risk Tool for Resilience

- A user centric approach
  - ‘New’ damage and impacts and ‘new’ hazards
  - Forecast – early warning early action
  - Method for designing context specific and dynamic vulnerability models e.g. forecasts - crop impact for food security monitoring
- Complete data management system – dynamic and sustainable
- Capacity building - transparency and ownership



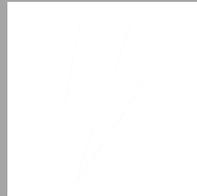
Ref: Crowley, Williams, Horspool *et al.* (2016)



# Future research – Climate Risk Modelling



**Data - Exposure and Assets,  
Vulnerability and Capacity**



**Information – Multi-hazards  
and impact forecasting**



**Knowledge - Risk tools,  
methods and capacity building**

# Global challenges

- Risk tool **users** and their **requirements** should be defined
- Data requirements - mapped and gaps identified.
- **Leadership** - responsible for collecting and managing data
- Centralized **databases and standards**
- Users should be adequately **trained**
- Integration of socio-economic vulnerabilities in predicting human and economic **losses and impacts**
- A matrix of physical and socio-economic vulnerability drivers **for each hazard type**



**SOLVING THE PUZZLE**

Innovating to Reduce to Risk

# Funding



COLLABORATE

- Newton Fund for:
  - partnership and design workshop
  - partnerships and capacity building (e.g. Weather and Climate Science for Service Partnership Programme)
- Global Challenges Research Fund
- GFDRR – The World Bank Challenge Funds
- NERC - Knowledge exchange fellow
- INGO partnerships – joint proposal bids
- DFID e.g. The Agri-Tech Catalyst
- International Geoscience Programme (IGCP)  
UNESCO

# Tomorrow's CITIES

Urban Risk in Transition

## Overview

Dave Bell

*Communications & Knowledge Exchange Specialist*

[tomorrowscities.org](http://tomorrowscities.org) @UrbanRiskHub



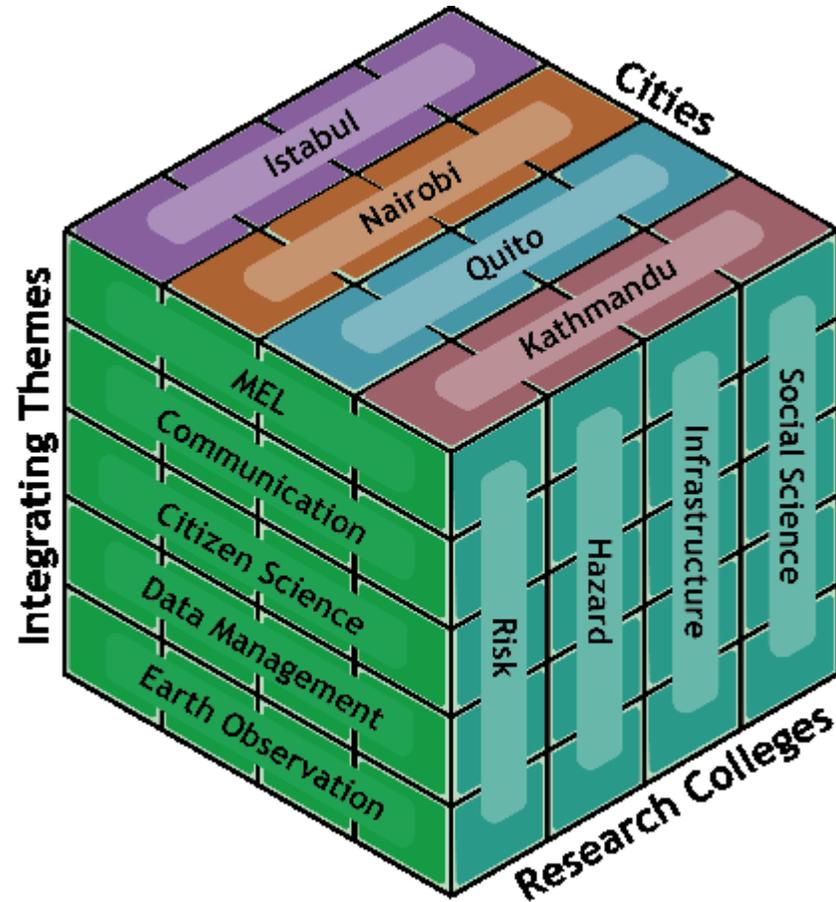
UK Research  
and Innovation



*“Our mission is to reduce disaster risk for the poor in tomorrow’s cities”*



# Research Integration



- Challenges...
- Shared understanding
- Capacity
- Emergent practice



# Can we encourage partnership?

- Interdisciplinary courses
- Knowledge exchange and communication skills
- Collaborative projects
- Good practice guidelines...



## Integrating science into humanitarian and development planning and practice to enhance community resilience

### Full guidelines

Lead Author: Melanie Duncan (UCL)

Co-authors: Kate Crowley (CAFOD), Ros Cornforth (AfClix), Stephen Edwards (UCL), Richard Ewbank (Christian Aid), Parisa Karbassi (CAFOD), Charlie McLaren (UKCDS), Jose Luis Penya (Christian Aid), Alice Obrecht (HFP), Susanne Sargeant (BGS), Emma Visman (HFP)

January 2014

# Lessons

- Timeframes
- Budget
- Sustainability
- Organisation to organisation – MoU
- Strategy – MoU or ToR or Letter of Expectation
- Internships
- Trust and relationships



# What can be done to open up the Pracademic space?

- Academic promotion based on wider contributions
- Universities enhancing opportunities for practitioners
- Practitioner in residence programmes
- Professional journals expand their coverage, participation on editorial boards
- Conference agendas planned around practitioner interests and participation
- Agencies seek to encourage closer working with academic partners
- Radical makeover of each sector is neither necessary nor appropriate