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When universities collide with global grand challenges

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www.ed.ac.uk/edinburgh-global

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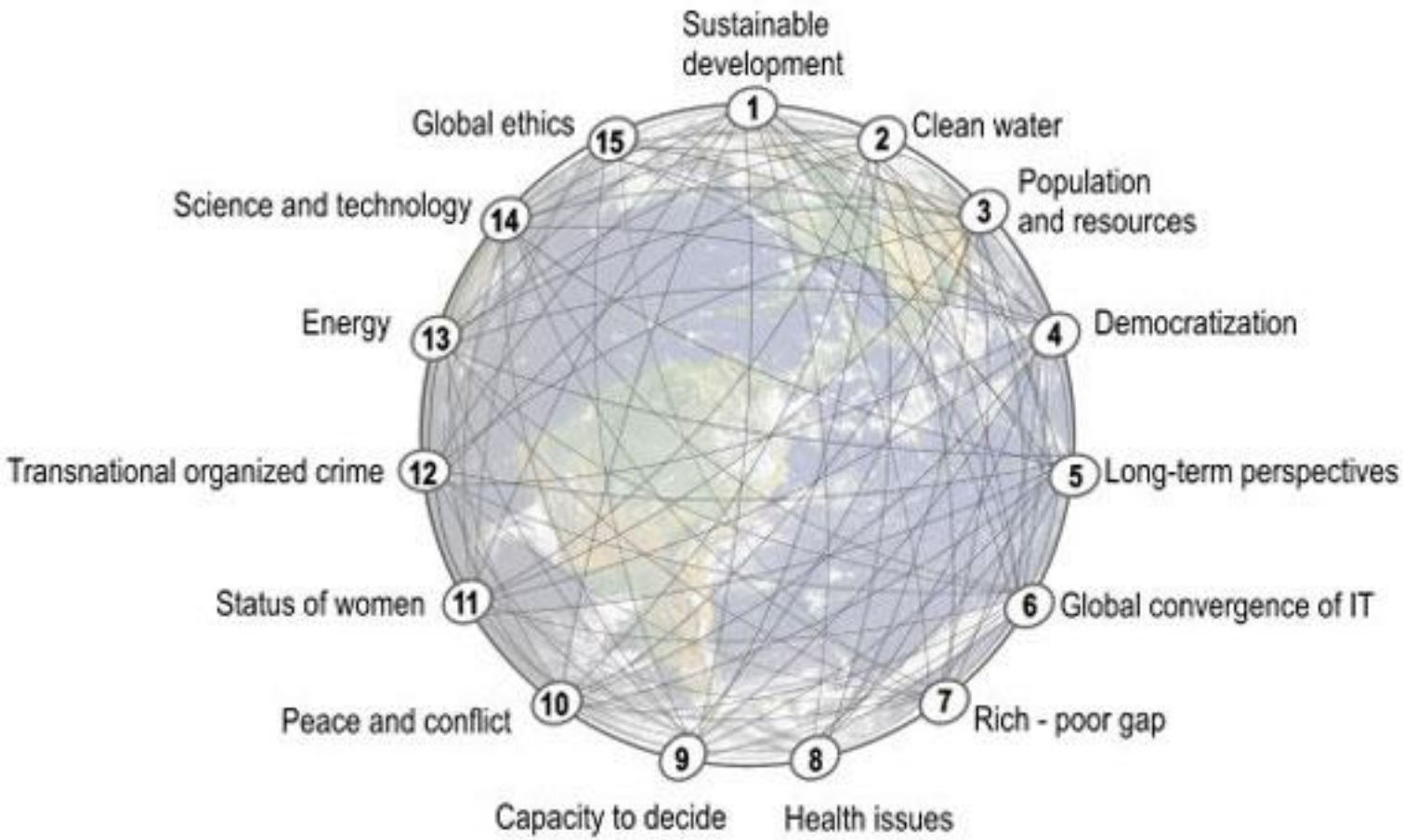
What is a *Global Grand Challenge?*

UN Millennium Development Goals
Eight Goals for 2015

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Source: United Nations Development Programme

The Millennium Project
15 Global Challenges facing humanity



Source: The Millennium Project

UK Chief Scientist – 9 Global Challenges

⇑ Urbanisation

⇑ Population

Alleviating poverty

⇑ Energy demand

Climate Change

⇑ Water demand

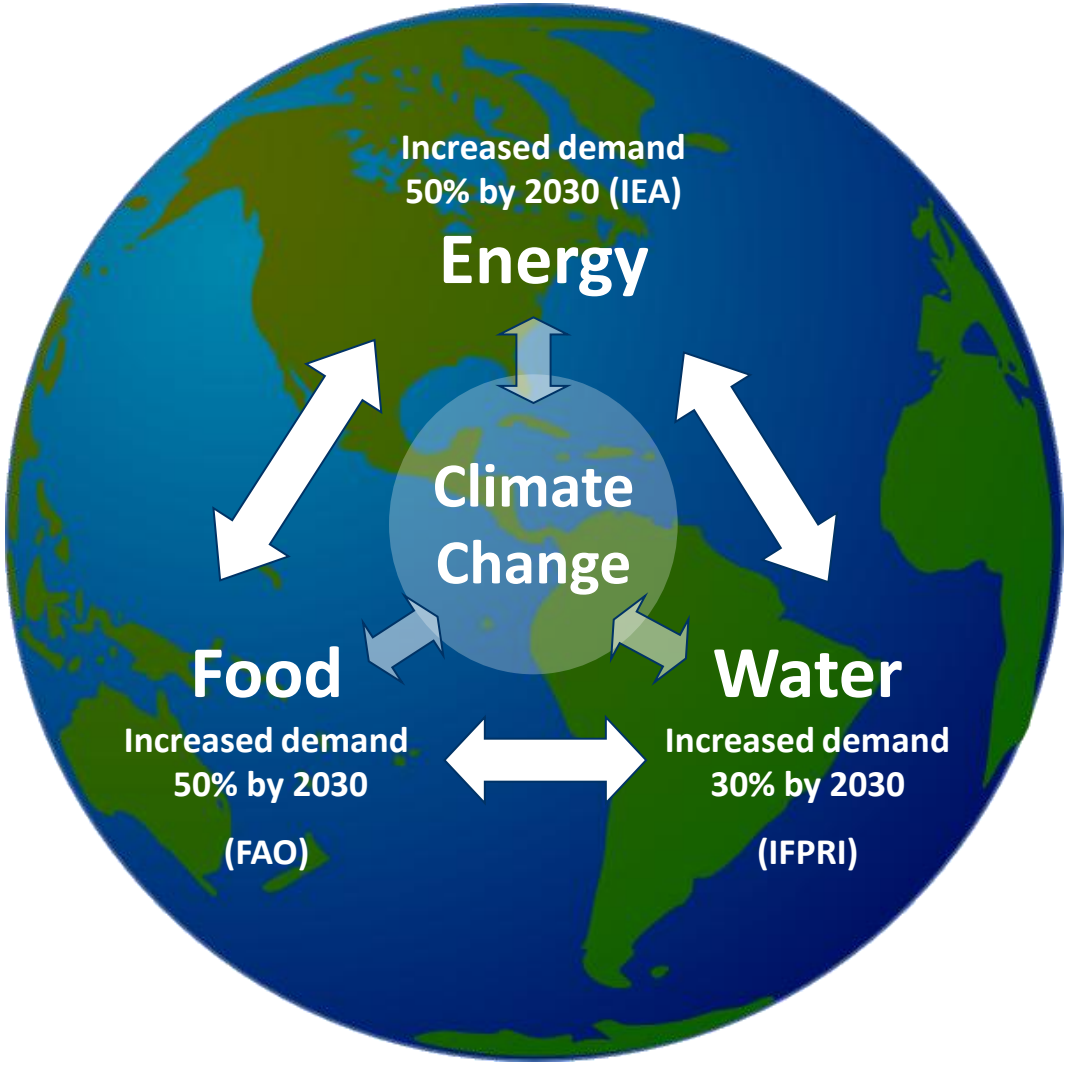
⇑ Food demand

Biodiversity

Infectious diseases

Slide: © John Beddington, UK Government Office for Science

Sir John Beddington - Perfect Storm



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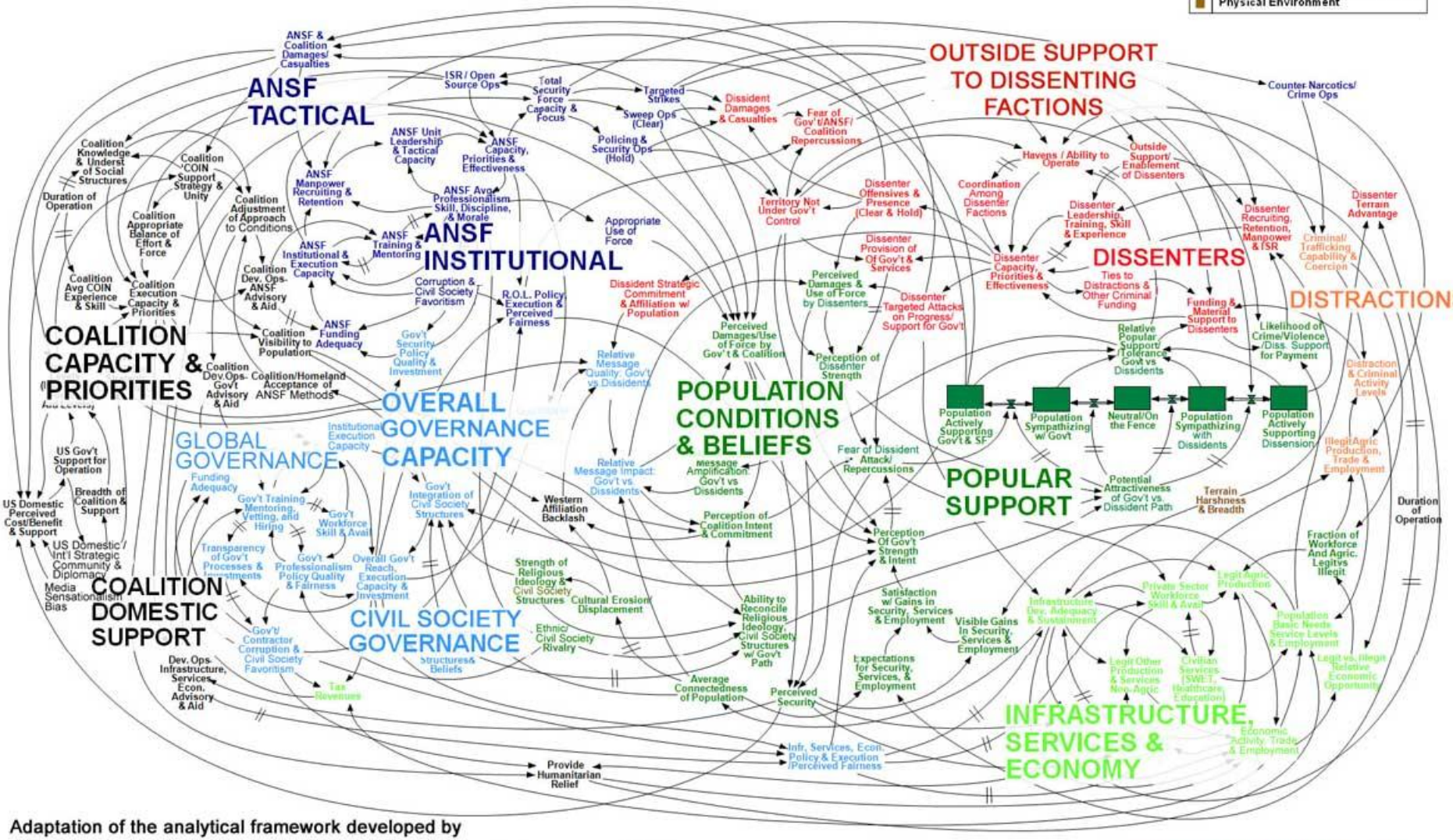
CLIMATE-CHANGE ORGANIZATION: INTERRELATIONSHIPS & NETWORKS (COIN)

Analysis of "Copenhagen Dynamic" (based on analysis of Afghanistan strategic initiative)

Assumes a degree of ismorphism between dynamic global strategic systems



Adaptation of the analytical framework developed by

PA Knowledge Limited with respect to Afghanistan Counterinsurgency (COIN)

Afghanistan Stability / Coin Dynamics (2009, draft) as presented in

Dion Nissenbaum, Graphic Shows Complexity of US Counterinsurgency in Afghanistan, The Huffington Post, 22 December 2009

WORKING DRAFT – V3

What has this got to do with International Higher Education?

- Global problems in need of global partnerships
- Global problems in need of a highly skilled workforce
- Real world focus with demonstrable (REF-able) pathway to impact
- Increasing funding from traditional and non-traditional sources

Can Universities develop coherent responses to global grand challenges?

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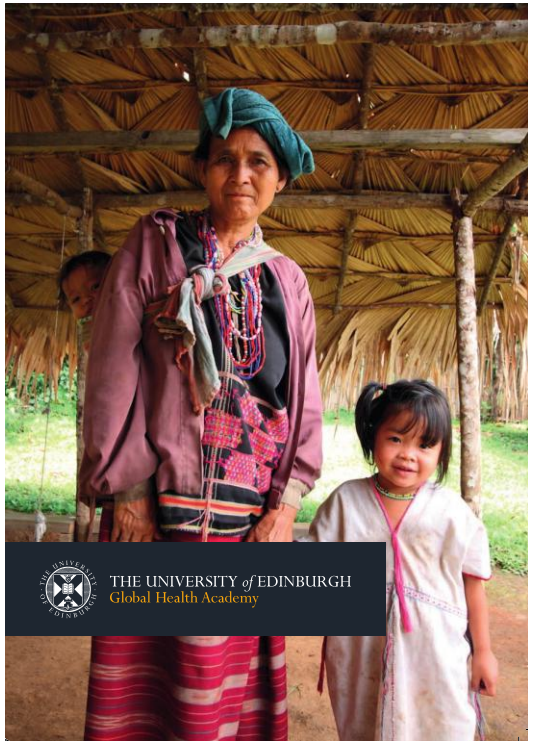
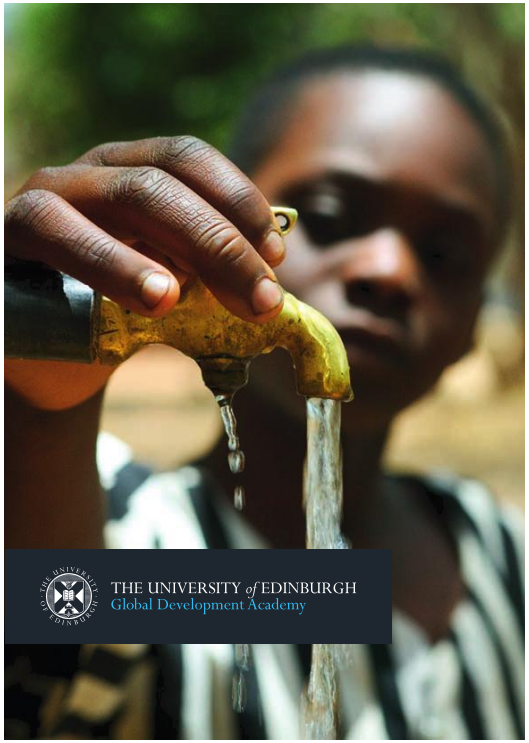
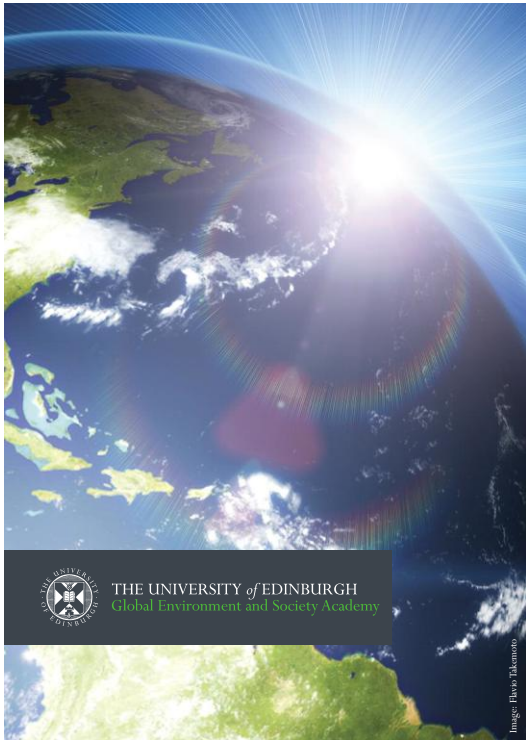
Global Academies



Global Health



Global Development



Global Environment & Society

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Global Academies

- Driven by a recognition that global challenges in Health, Development, Environment & Society need trans-disciplinary responses. Global Academy key objectives are to:
  - offer world leading interdisciplinary postgraduate degrees to help combat global challenges
  - engage in global collaborative research to m better
  - participate and lead in the creatio ks and partnerships

MSc Global Challenges
September 2012

Is this approach unique?

Cross-Council Research Prog

www.rcuk.ac.uk/kei/ktportal/Pages/xrcProgrammes.aspx

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Home > Knowledge Exchange and Impact > Knowledge Transfer Portal > Cross-Council Research Programmes

Cross-Council Research Programmes

RCUK's Cross Council Research Programmes are multi-disciplinary programmes of research that aim to solve many of the big research challenges over the next 10 to 20 years. Current themes are in areas such as environmental change, lifelong health and wellbeing, energy, and dealing with global uncertainties in a changing world. RCUK coordinates the priority themes to accelerate the delivery of benefits and economic impact.

Sustainable energy systems	EPSRC, ESRC, RCUK
Living with environmental change (LWEC)	ESRC, NERC, RCUK
Global uncertainties: security for all in a changing world	ESRC, RCUK
Ageing: Lifelong health and wellbeing	MRC, RCUK
Digital economy	EPSRC, RCUK
Nanoscience through engineering to application	EPSRC, RCUK
Food security	BBSRC, RCUK

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This website

All Research Councils

Diverse approaches & common themes

...brings together researchers from across the University to form new teams to tackle big, complex issues… …the mechanism through which **concentrations of specialist expertise** across UCL and beyond can be brought together **to address aspects of the world's key problems… ...**provides an environment in which researchers are encouraged to think about how their work can **intersect with and impact upon global issues**… …ambitious and **broadly inclusive initiative** … …This multidisciplinary Program offers **faculty, students, and researchers** opportunities to tackle some of the world's most pressing environmental issues… … in order to **provide solutions to real life problems**… …enable the University to **work more closely with external partners**… …**enhance the student experience**, build its reputation for high quality research and, most importantly, address grand challenges on a global scale… …explores global modernity from an **innovative, interdisciplinary perspective**, and is designed to reconceptualize the theories and methodologies required to **confront the challenges stemming from globalization**

What *can't* universities do?

- Build interdisciplinary strengths without disciplinary foundations
- Force interdisciplinary action top-down
- Do it alone
  - International peers (South & North)
  - Communities
  - Governments
  - Commerce
  - Civil Society

What happens when universities collide with global grand challenges?

My question for the conference