When universities collide with global grand challenges

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How can we define Grand Challenges?
What’s this got to do with Universities and international education?
Can Universities develop coherent responses?
A question for you
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What is a *Global Grand Challenge*?

Some definitions that might answer this question.
The Millennium Development Goals (MDGs) are eight international development goals that all 193 United Nations member states have agreed to achieve by the year 2015.
The Millennium Project think tank founded by the United Nations University, Smithsonian Institution and others in 1996
UK Chief Scientist Sir John Beddington

Stresses that food, water, energy and biodiversity all linked – big issue across government and the medical and science community in general– need for joined up action, both nationally and internationally!
a complex interrelation between food, energy and water security in the context of climate change

Sir John asks whether this is a perfect storm that could lead to civil unrest and conflict.
In a complex world with short attention spans. **Are they fit for purpose?**

I’d say yes - in various ways helpful in focusing attention on the issues for today and the future in relation to the **health, wellbeing and progress for people and planet**.

Diagram of interrelationships and networks around climate change in Afghanistan demonstrates the exceptional complexity of these issues.

I my view Complexity is a key defining measure of a global grand challenge.

Moving on....
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?

Respond to this question thought practical examples
Driven by a recognition that global challenges in Health, Development, Environment & Society need trans-disciplinary responses

Story of strategic ambition meets academic community drive

Always been about supporting the academic community in making a positive global impact

Each has strong locus. Yet great inter-relationships
THE UNIVERSITY of EDINBURGH  
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 make life better
  – participate and lead in the creation of global networks and partnerships

MSc in Global Challenges
A major new online distance learning programme
Harnessing all three Global Academies
Enabling students to understand Global Challenges and act towards their resolution

Research examples
ESRC funded programme to combat neglected infectious diseases that combines forces of basic scientists with social scientists.
Is this approach unique?

University of Melbourne – Research Institutes
Princetown – Grand Challenges in Energy, Development & Health
John Hokins University Systems Institute
De Montford University – Grand Challenges of Modern Research
Coventry University – 6 Challenge to Change the World
Rice University - Smalley Institute Grand Challenges (application of nano-technology)
Essex’s Global Challenges
Columbia University – Committee on Global Thought
University of Oxford – Martin School – tackling 21st Century Challenges

We can also see global challenges filtering into funding agendas
Research Councils UK – Cross Council Research Programmes

And you would see the same in the
Gates Foundation & Wellcome Trust to name a few.
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

Each unique – fitting with the rubric of institution and the position that they aspire to project

With common themes
Cut n paste from websites on previous websites

Bring faculty together
Across disciplinary and organisation boundaries
Create a focus around global challenges
Impact on current issues, rather than curiosity driven
Create open environments in which innovation flourishes
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

Extrapolating from the examples to some broader rules of thumb

Not all problems have interdisciplinary solutions. Some problems need focused narrow enquiry –
Tropical disease, controlled thought interdisciplinary measures (public health, geography, sociology); wiped out by a single discipline (XX) vaccine. Add Maizel’s lab ref.
What happens when universities collide with global grand challenges?

My question for the conference

Are universities well placed to contribute to the resolution of global grand challenges?
Or should they stick to what they’ve always done?
This is my question to the conference