



Government
Office for Science

Scientific Support for Effective Policy Development: Putting it in Practice

Sir Mark Walport

Chief Scientific Adviser to HM Government



Government Chief Scientific Adviser

- Health, wellbeing, security & resilience
- Knowledge translated to economic advantage
- The right science for emergencies
- Underpinning policy with evidence
- Advocacy and leadership for science



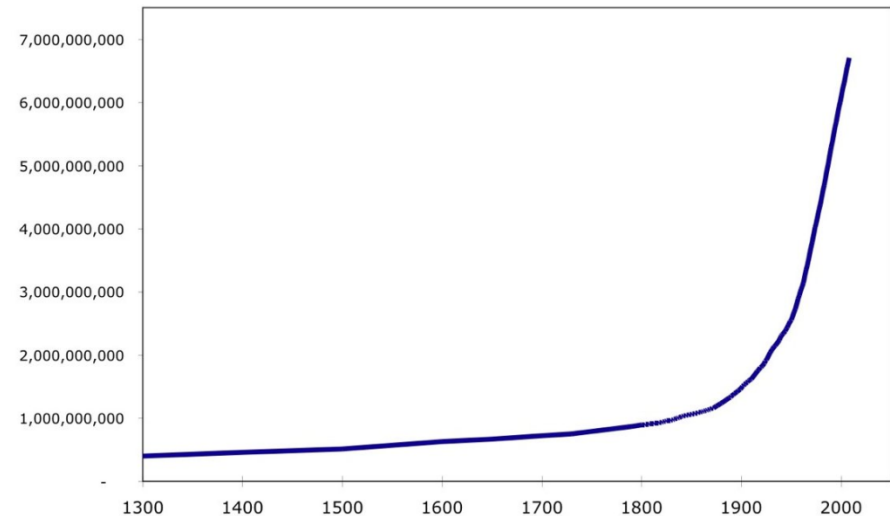


Innovation has got us where we are

- Widespread electrification
- Improvements in healthcare
- Mass production systems
- Better transport links



World Population





Innovation is needed where we are going

- Global population growth - forecast to be over 9 billion by 2050
- Climate change, extreme weather and water scarcity all threaten food security
- Over-consumption and waste exacerbate issues



69%

the increase in food calories produced needed by 2050





What might we do? Technological solutions

- Plant biotechnology (including GM organisms)
- Animal biotechnology (including cloning and artificial insemination)
- Precision agriculture
- Lab-produced meat
- Insects as protein





What might we do? Behavioural solutions

Reducing personal consumption
and impact through:

- Eating less meat
- Choosing to eat sustainably

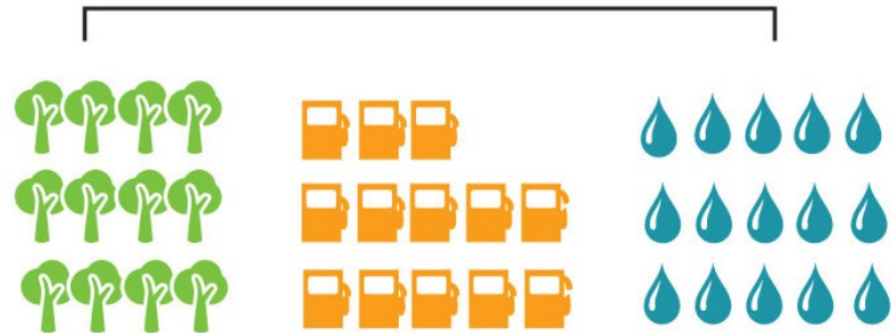
Reducing food waste through:

- Improved packaging
- Smaller pack sizes

 1 lb of **soy**



 1 lb of **meat**





GCSA risk themed annual report

- Risk is all-pervasive in work as GCSA
- Innovation is necessary to deal with global challenges
- Innovation is too often held back by poorly framed discussions about risk
- If governance of risk goes wrong, we potentially miss out on major benefits, or suffer needlessly



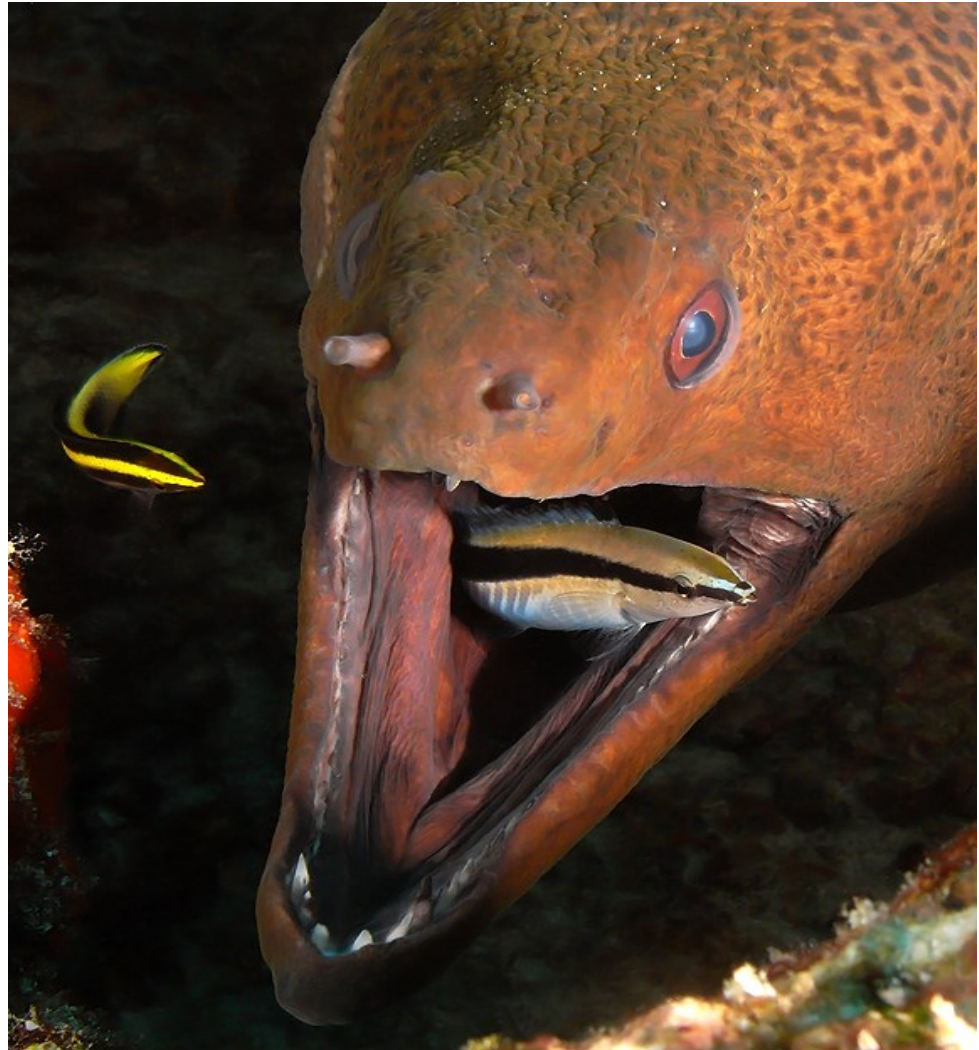


Food is inherently cultural: Science meets values





- Hazard
- Exposure
- Vulnerability
- Risk
- Uncertainty





1) High level of acceptance but who pays?




Agricultural Policy Perspectives Brief N°5* / December 2013

Overview of CAP Reform 2014-2020

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1. INTRODUCTION
2. CHALLENGES & OBJECTIVES
3. CAP BUDGET
4. EVOLUTION OF POLICY AND SPENDING
5. NEW FEATURES OF THE CAP
6. HOW THE KEY OBJECTIVES OF THE REFORM ARE ADDRESSED

NEXT STEPS

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(*amended footnote 10 and updated chart 2)

The new agreement on CAP reform reached in 2013 is the fruit of three years of reflection, discussion and intensive negotiation. While continuing on the path of reform started in the early '90's this deal is historic in many respects; for the first time the entire CAP was reviewed all at once and the European Parliament acted as co-legislator with the Council.

The new CAP maintains the two pillars, but increases the links between them, thus offering a more holistic and integrated approach to policy support. Specifically it introduces a new architecture of direct payments; better targeted, more equitable and greener, an enhanced safety net and strengthened rural development. As a result it is adapted to meet the challenges ahead by being more efficient and contributing to a more competitive and sustainable EU agriculture. This Brief gives an overview of the reform and outlines the "why and how" of the new CAP 2014-2020.



Reformed

More on Briefs:
http://ec.europa.eu/agriculture/policy-perspectives/policy-briefs/index_en.htm
This Brief does not necessarily represent the official views of the European Commission.
http://ec.europa.eu/agriculture/policy-perspectives/index_en.htm

Agri-Ann
and Rural
Development



2) Science meets values





Risk discussions require specificity

GMOs

- What organism?
- What gene?
- What purpose?
- The specific application
– not the generic technology



SARAH USMER/ROTHAMSTED RESEARCH



3) Your benefit, my risk





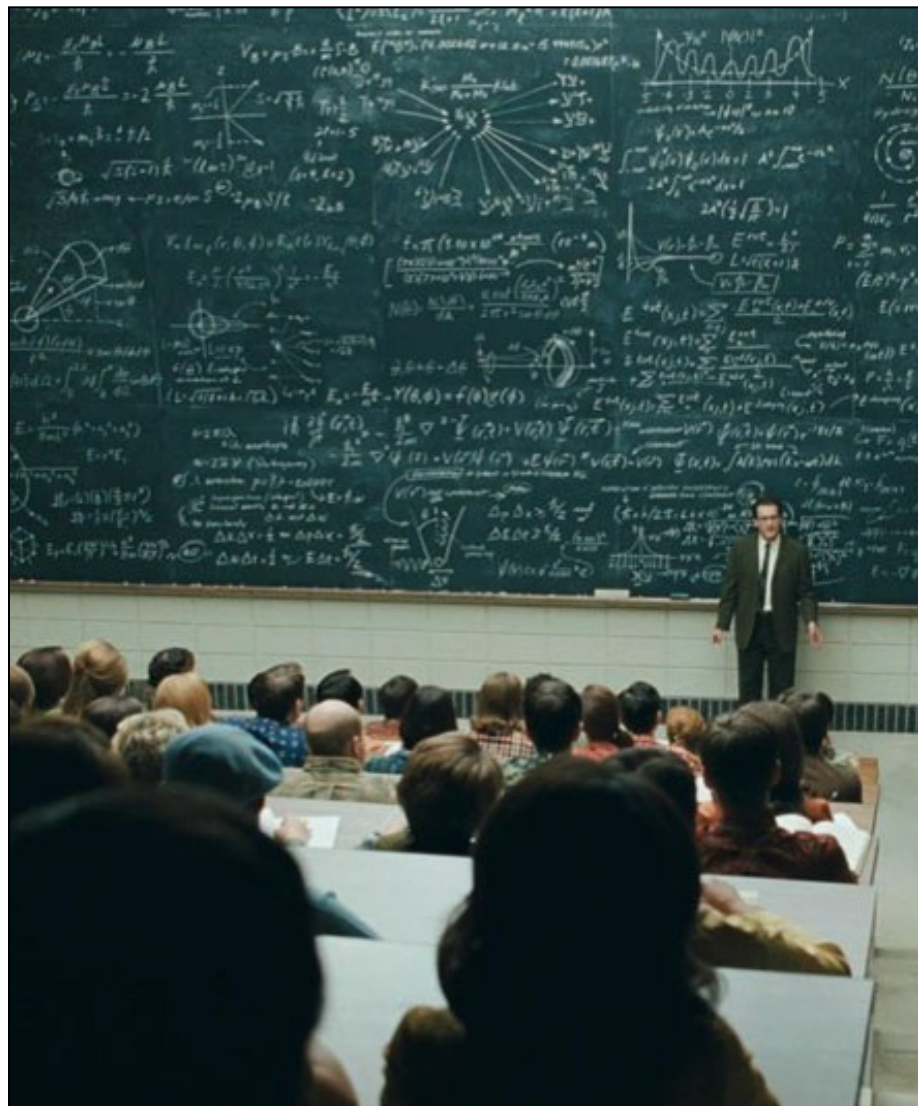
4) Unintended consequences





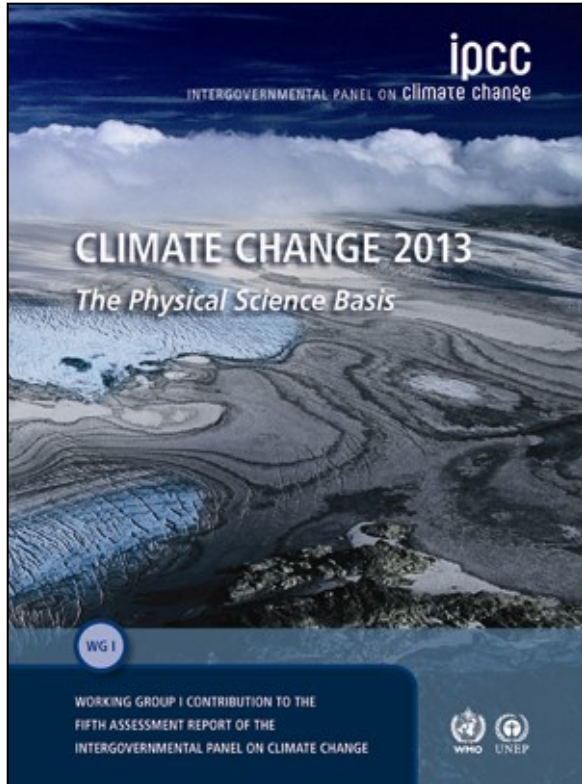
Holding a wider conversation about risk

- Risk – a societal issue
- Language
- Values and lenses
- Who benefits and who carries the risk
- Transparency
- Widening the conversation is a democratic necessity





What can science contribute?



Government Office for Science

Department for Environment Food & Rural Affairs

Animal and Plant Health in the UK: Building our science capability

Government Office for Science
Department for Environment, Food and Rural Affairs

Which?


Government Office for Science

Food System Challenges

Public Dialogue on food system challenges and possible solutions

Which? and the Government Office for Science
Research conducted by TNS BMRB

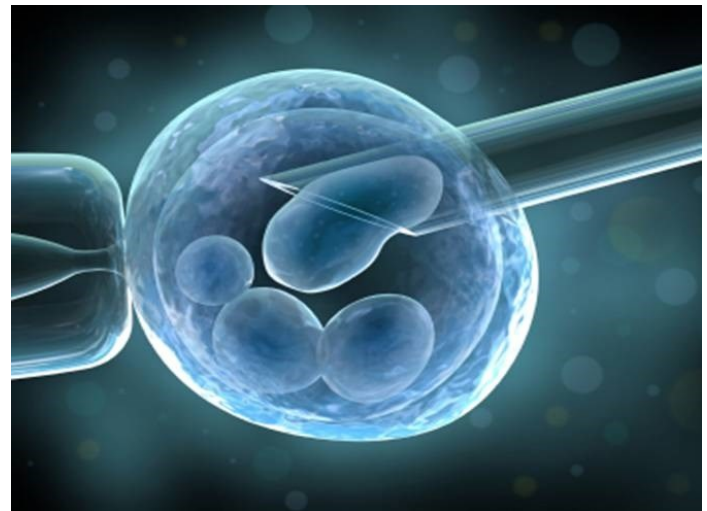
The Government Office for Science's contribution was funded by Sciencewise





Regulatory challenges

- Economic regulation – A systems approach
- Asymmetric incentives
- Encrusted regulation
- Regulation when science meets values





We all have a part to play

Widening the conversation is a democratic necessity:



Government



Scientists



Farmers



Retailers



Consumers





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