

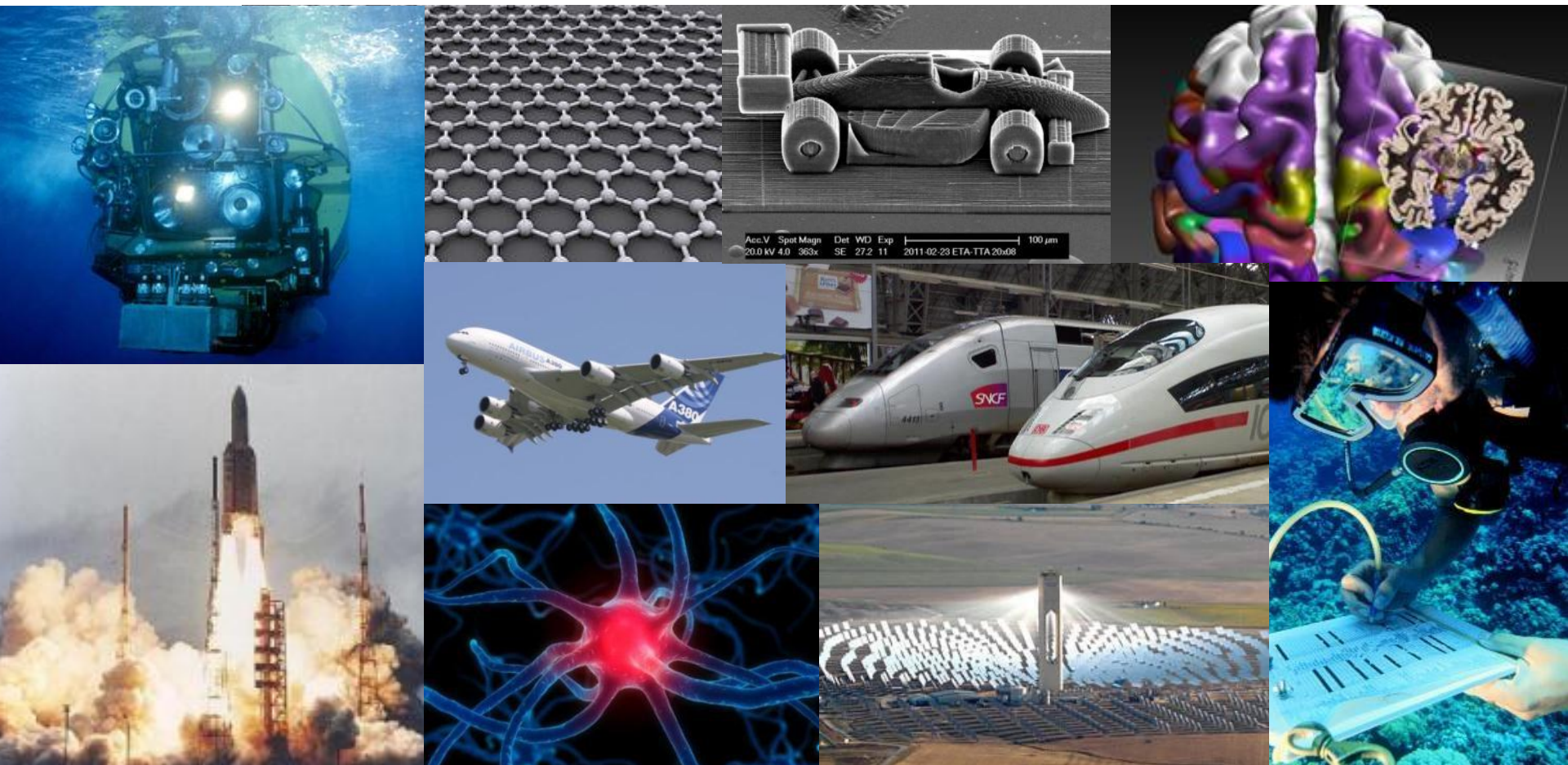
# The role of science in policymaking – experiences from the European Commission

*Professor Dame Anne Glover CBE  
Vice Principal for External Affairs and Dean for  
Europe  
University of Aberdeen*

# Let's start with a simple fact: EUROPEAN SCIENCE AND ENGINEERING IS FANTASTIC

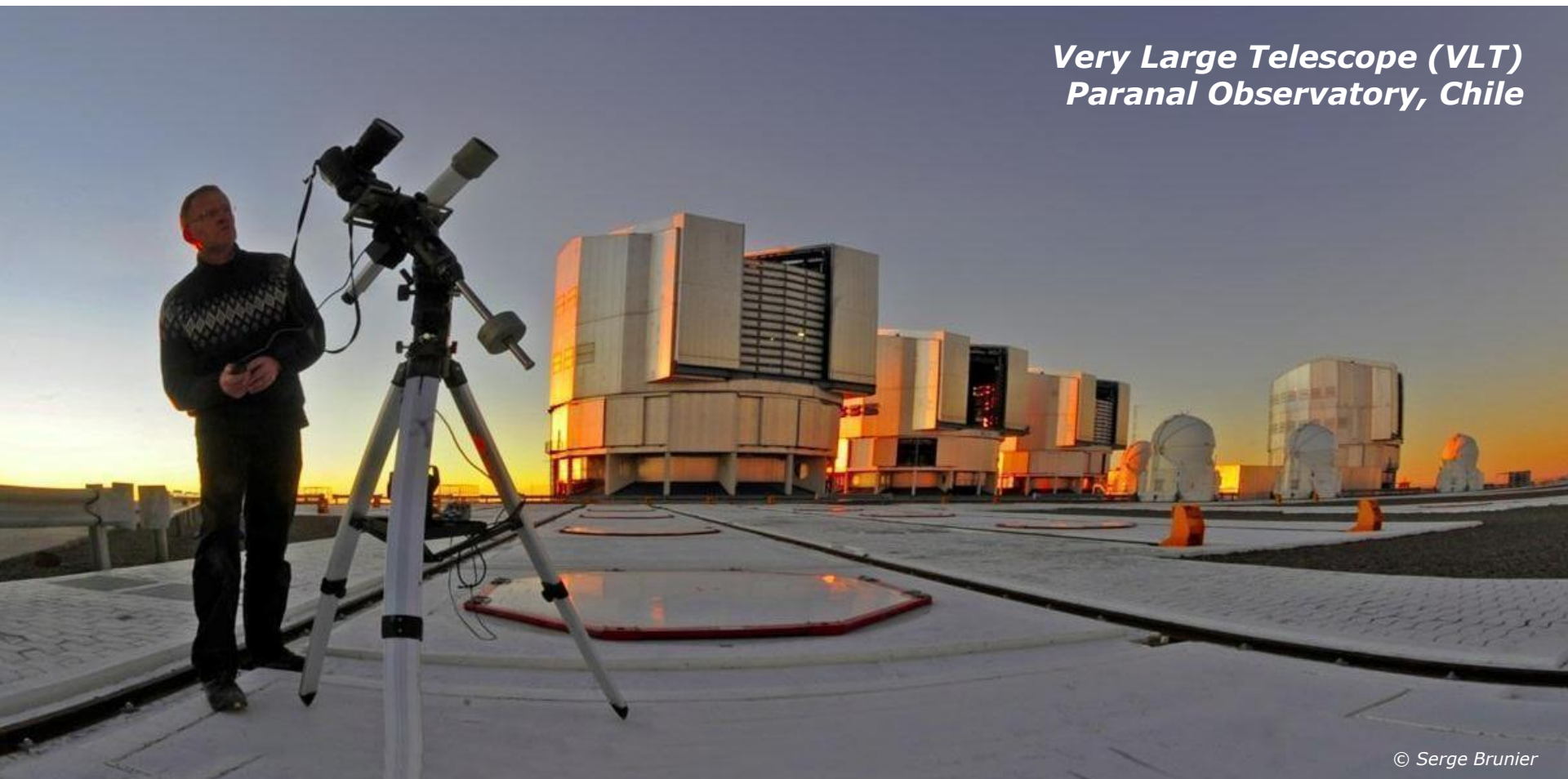


# European excellence spans scientific disciplines



# Europe owns globally unique research infrastructures

*Very Large Telescope (VLT)  
Paranal Observatory, Chile*





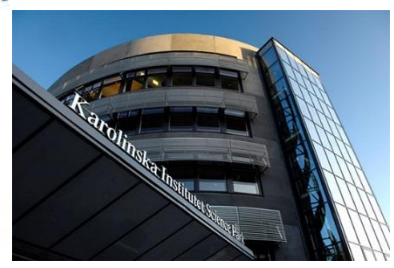
# European science and engineering tackle global challenges



# European science and engineering create jobs and innovative products



# European science and engineering boosts the local and regional economy

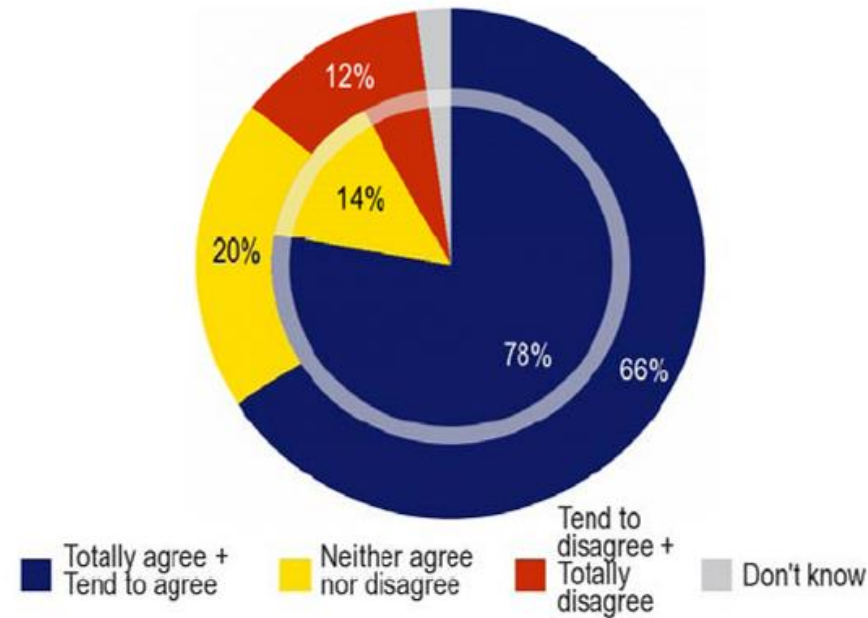


# But: Do we trust scientific evidence?



# Public support for science and technology is decreasing

(ASK ONLY TO SPLIT A) Science and technology make our lives healthier, easier and more comfortable



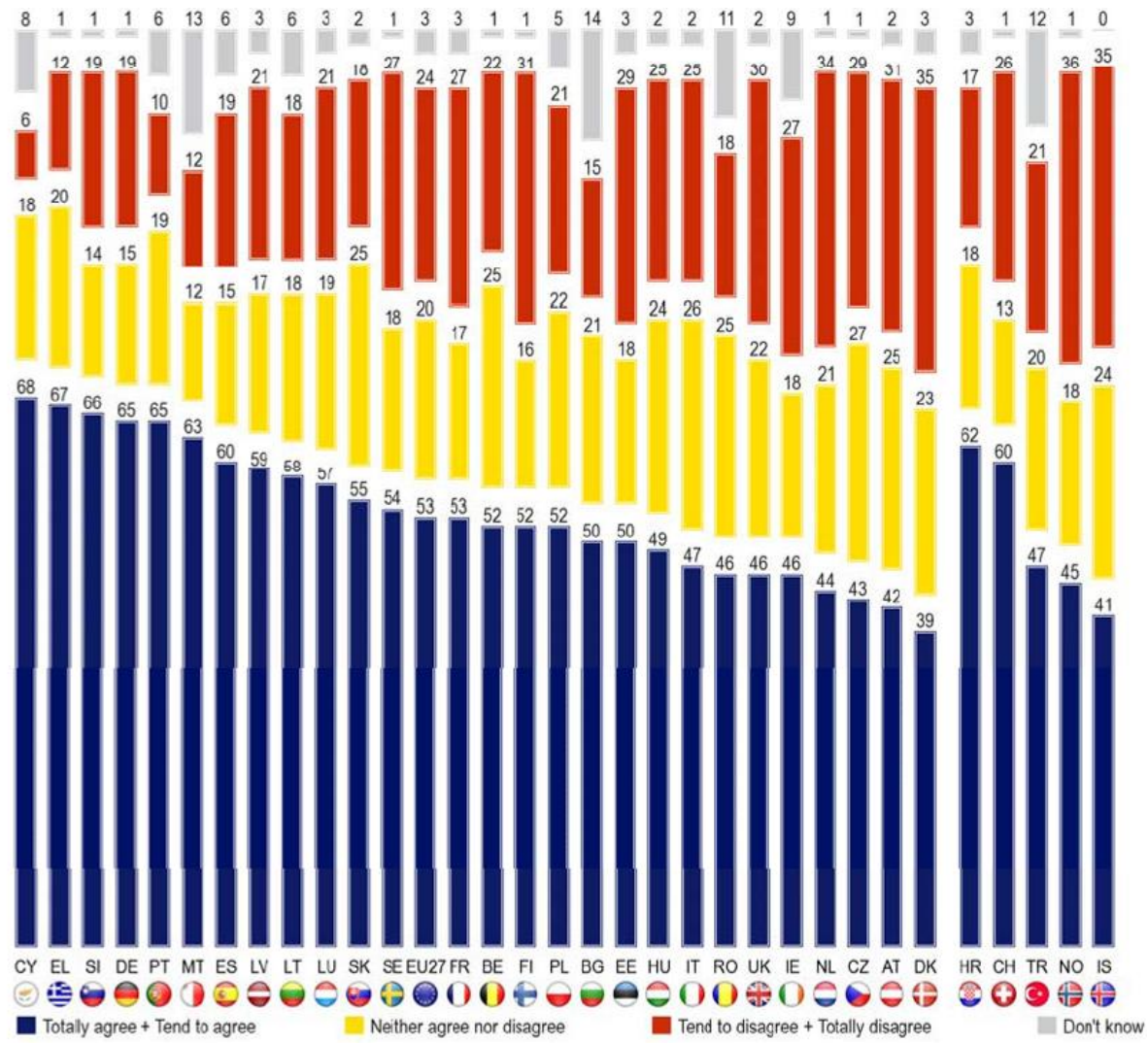
Inner pie : EB63.1, 01-02/2005  
Outer pie : EB73.1, 01-02/2010



Source: Eurobarometer, Special Edition 340 "Science and Technology" (2010)



"Because of their knowledge, scientists have a power that makes them dangerous"



Source: Eurobarometer, Special Edition 340 "Science and Technology" (2010)



# Societal debate is not always rational

**Daily Mail**  
 As Jade makes a fortune and the University Challenge winner is vilified for being bright...  
**WHY IS IT CLEVER TO BE DUMB?**  
 Top neuroscientist's warning to parents  
**SOCIAL WEBSITES 'HARM A CHILD'S BRAIN'**  
 Moment for the girl a slumdog snack

**DAILY EXPRESS**  
 How the world fell for Adele  
 Scandal as MPs get 5 in just five  
**TSUNAMI NUCLEAR FALLOUT HITS UK**  
 But angry fans say she is far too glamorous...

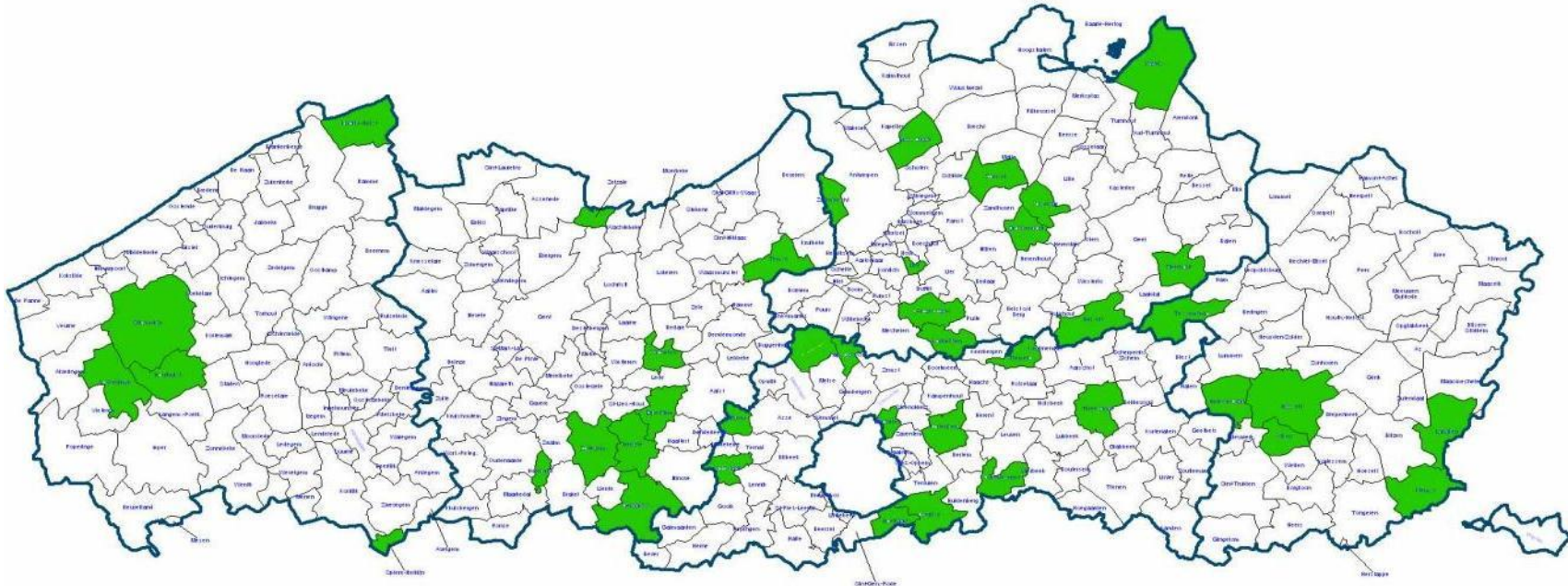
**DAILY EXPRESS**  
 Gadgets to fight the flab  
 Davina: Why too much TV is bad for my children  
**SNOW CHAOS**  
 And they still claim it's global warming  
 Slimming splits up EastEnders couple

**DAILY EXPRESS**  
 HOW LOW CAN THEY GET? Despicable thieves steal plaques off war memorial  
 New dog dye craze slammed  
**CANCER ALERT IN HOUSE CLEANERS**  
 Using polish can double risk of breast tumours  
 How loud music has landed Madonna with an official warning

**EXCLUSIVE: DEPRESSION CLUE TO BRIGGEND DEATH RIDDLE**  
**SUICIDES 'LINKED TO MOBILE PHONE MASTS'**  
 But angry fans say she is far too glamorous...



# "GMO-free" municipalities in Flanders, Belgium

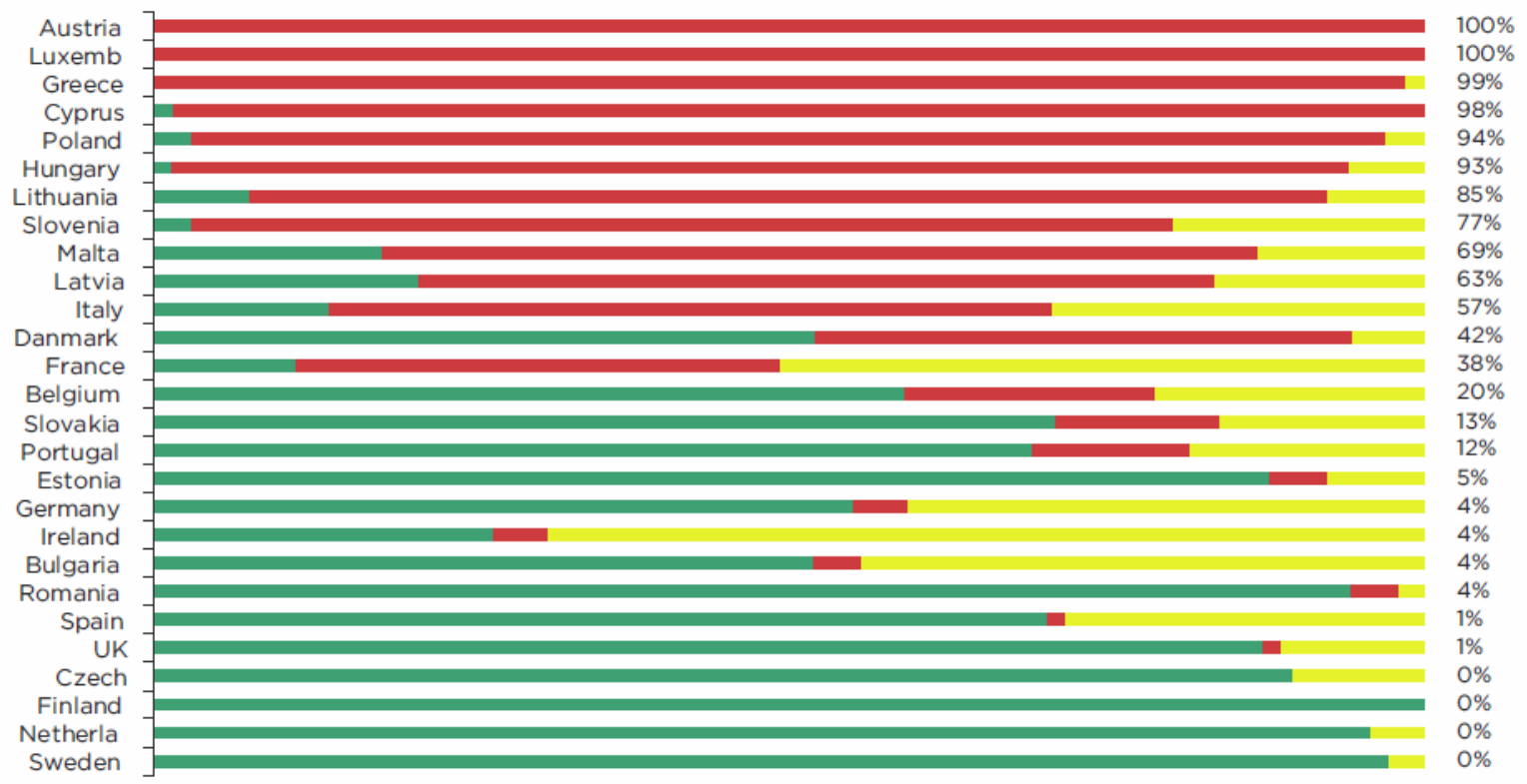


Source: Guy van den Eede, JRC

# GMO approval: The acceptance of evidence differs across the EU

Member States voting on EFSA scientific opinion

% negative votes

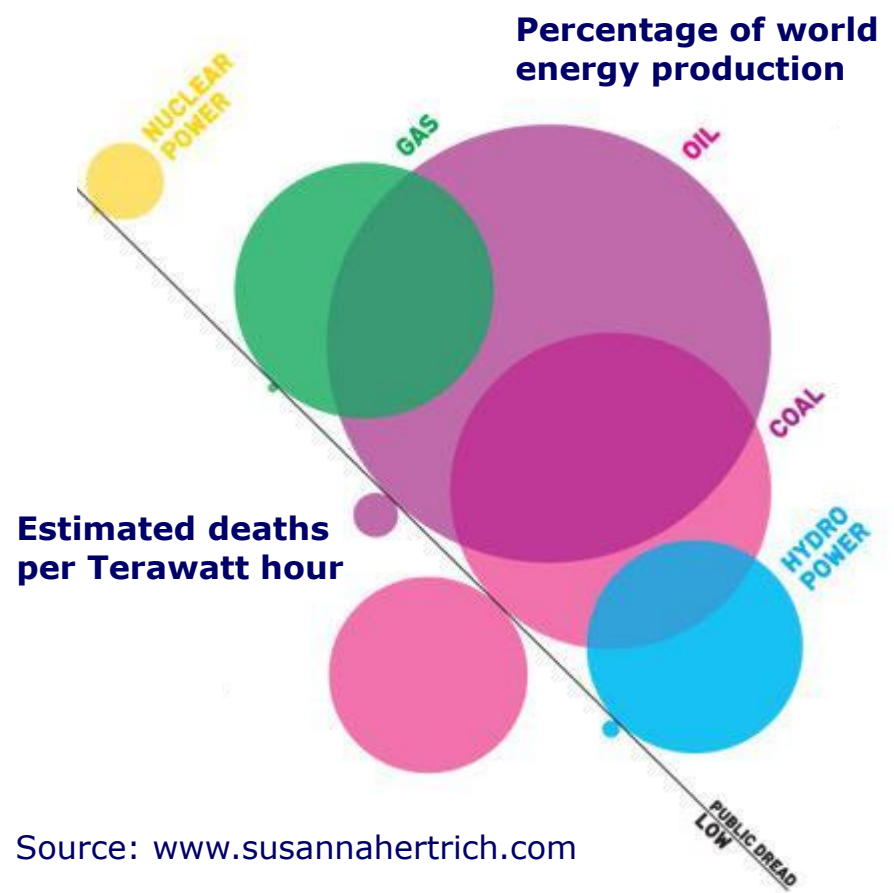
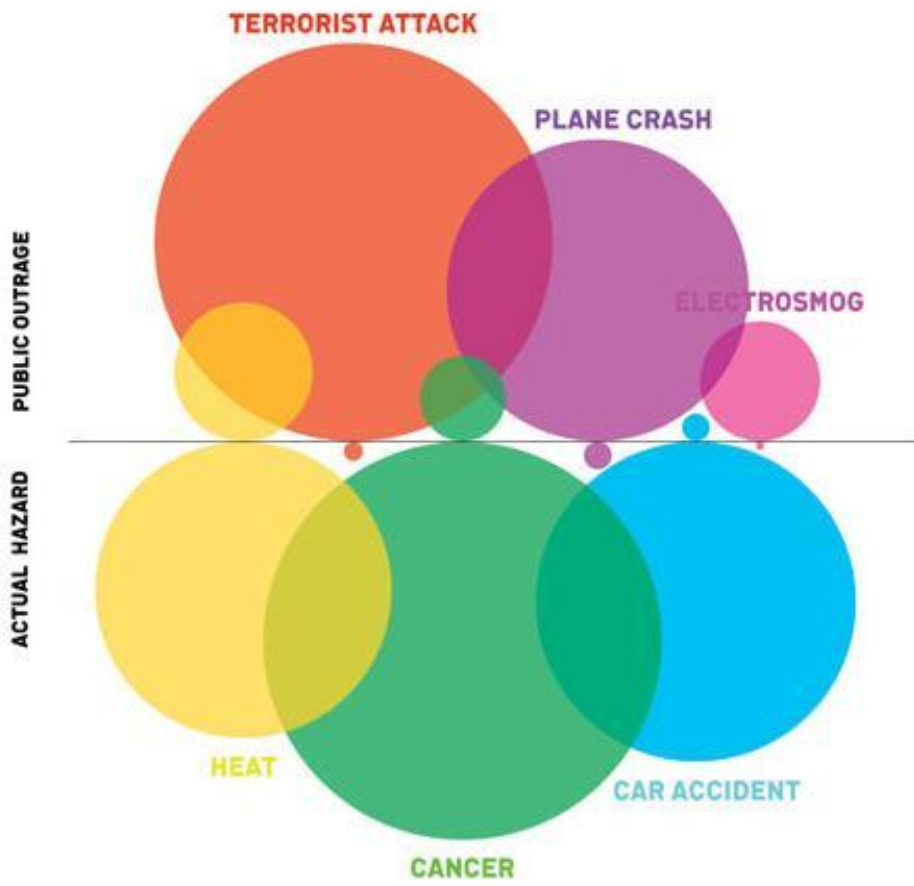


■ Yes ■ No ■ Abstain

Source: EuropaBio, Approvals of GMOs in the European Union, Oct. 2011



# Risk and risk perception are two different issues



Source: [www.susannahertrich.com](http://www.susannahertrich.com)

**The best way to combat  
"gut feelings" is using  
scientific evidence.**

**Scientific evidence is sound  
and peer-reviewed.**

**It evolves over time, but it  
doesn't change from one  
government to the next.**



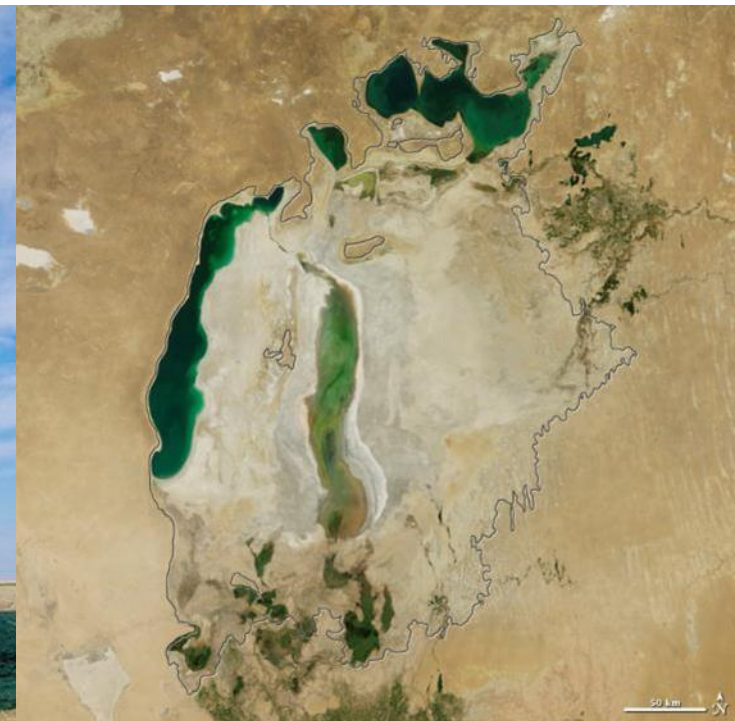
# Policies which are based on facts are more sustainable than those which are based on fiction



Aral Sea, 2000



Picture credits: NASA, Elena Senao



Aral Sea, 2012



# Many political decisions in the EU depend on science and engineering

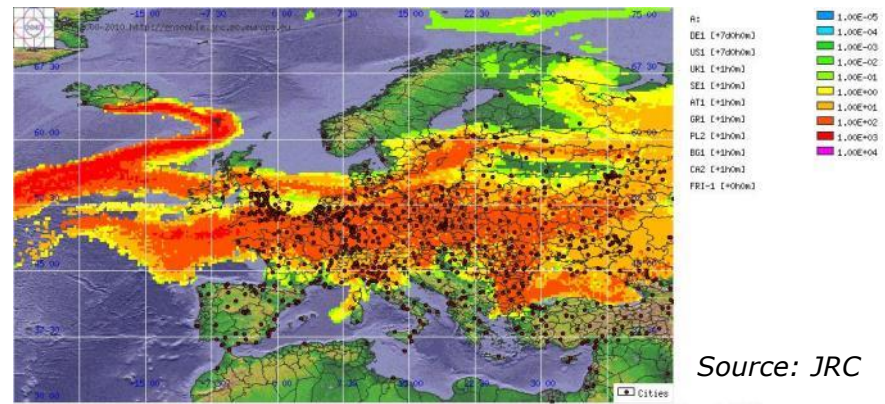
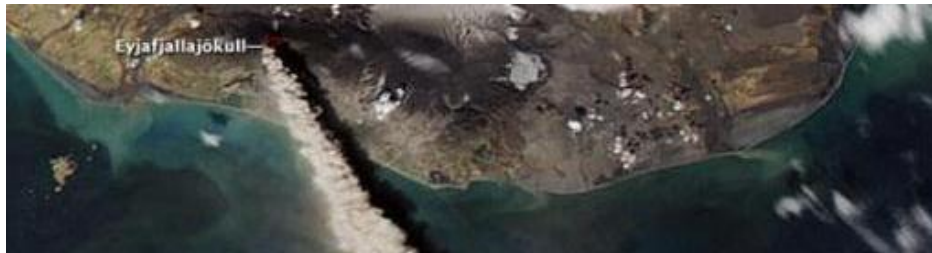


A Single Sky in Europe  
 Developing common rules for European aviation

# Science and engineering provide the evidence that underpins policy action



Image credit: Paul Souders



Source: JRC

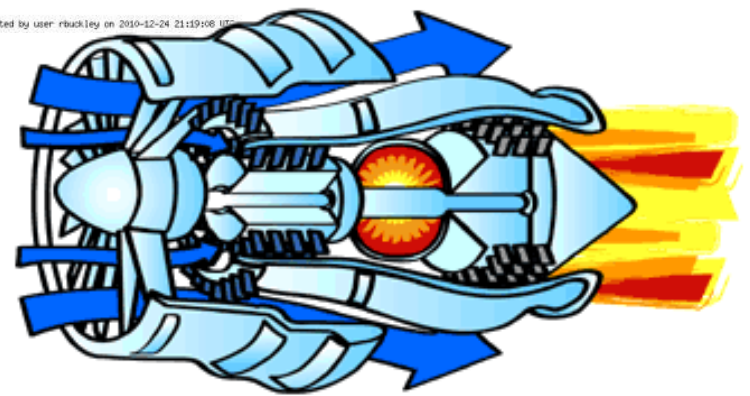
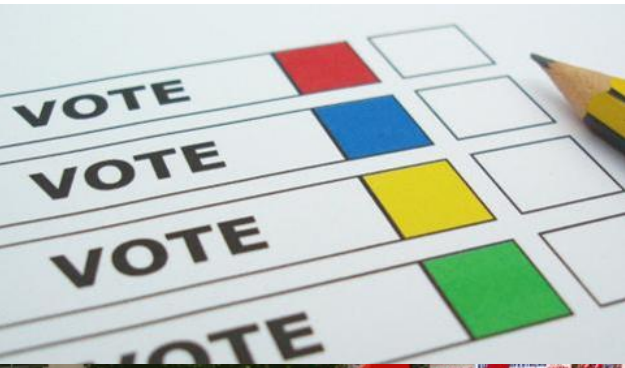


Image credit: inventors.about.com

**However, politicians often ignore science because of other imperatives – without being transparent about it**

**Ethics**  
Ethics in business  
**moral principles**  
rules and regula  
of right conduct  
values that gui

JOB MARKET



# **So how can scientists support evidence-based policymaking?**

- 1) Speak up**
- 2) Stand up**
- 3) Gang up**

# 1) Speak up



# We need to speak clearly and often about what we do



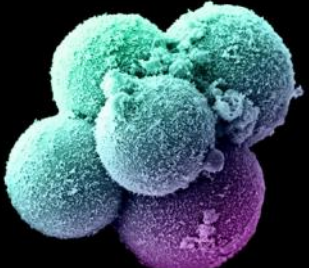
## Press Release

### My microbes

Our gut bacteria's collection of genomes is unique, and remains stable over time

Heidelberg, 5 December 2012 – We all have *E.coli* bacteria in our gut but each of us carries a version that is genetically slightly different. The same can be said of most gut microbes:

or variants: mapping each DNA fragment of the metagenome to its right place, in the right bacterial genome, is extremely complex. To achieve this breakthrough and carry the analysis



welcome to the Science Media Centre  
*an independent press office helping to ensure that the public have access to the best scientific evidence and expertise through the news media when science hits the headlines*

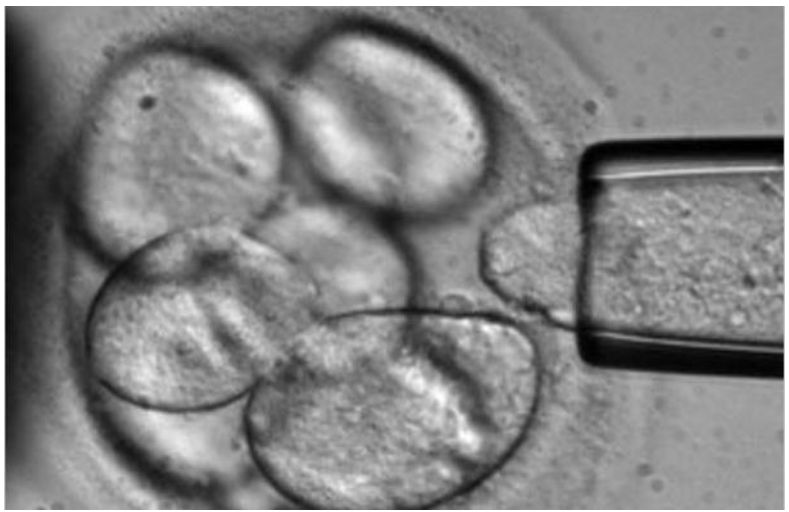
[find out more](#)

# Be honest about the facts you have and those you don't have!

"I am taking a  
shot in the dark  
here"

"I am almost certain,  
but there are still a  
few remaining doubts  
to clear up"





**Show empathy  
for public  
concerns!**

# Offer options for action rather than claiming to have the ultimate solution

## Option A



## Option B



## Option C



## 2) Stand up

**Demand that politicians listen  
to the scientific evidence:  
"Science makes you look good"**



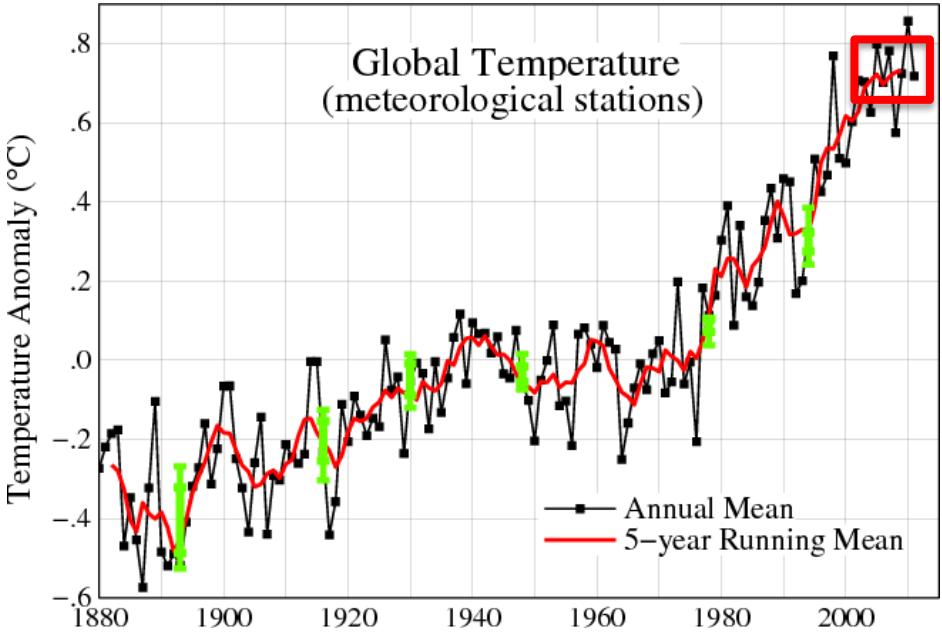
# Raise your voice when science is being misused

## Global warming stopped 16 years ago, Met Office report reveals

Graph showing tenths of a degree above and below 14C world average

1997 0.5°C 2012 0.5°C

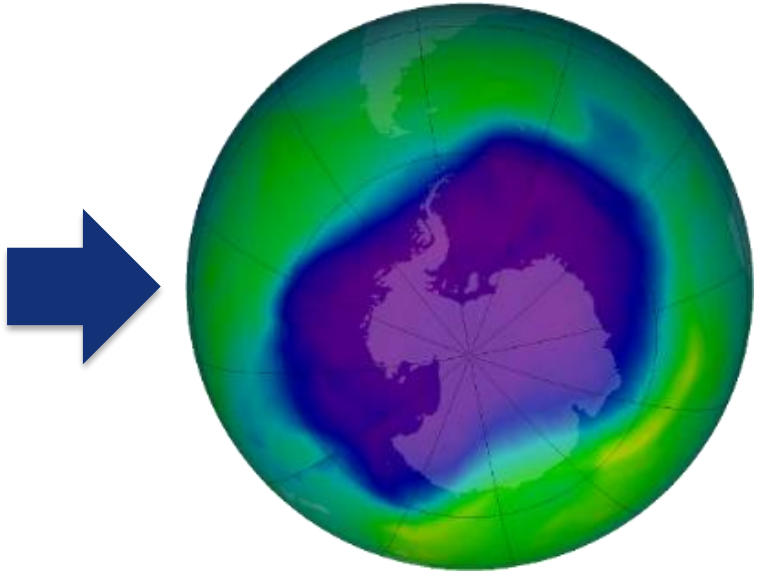
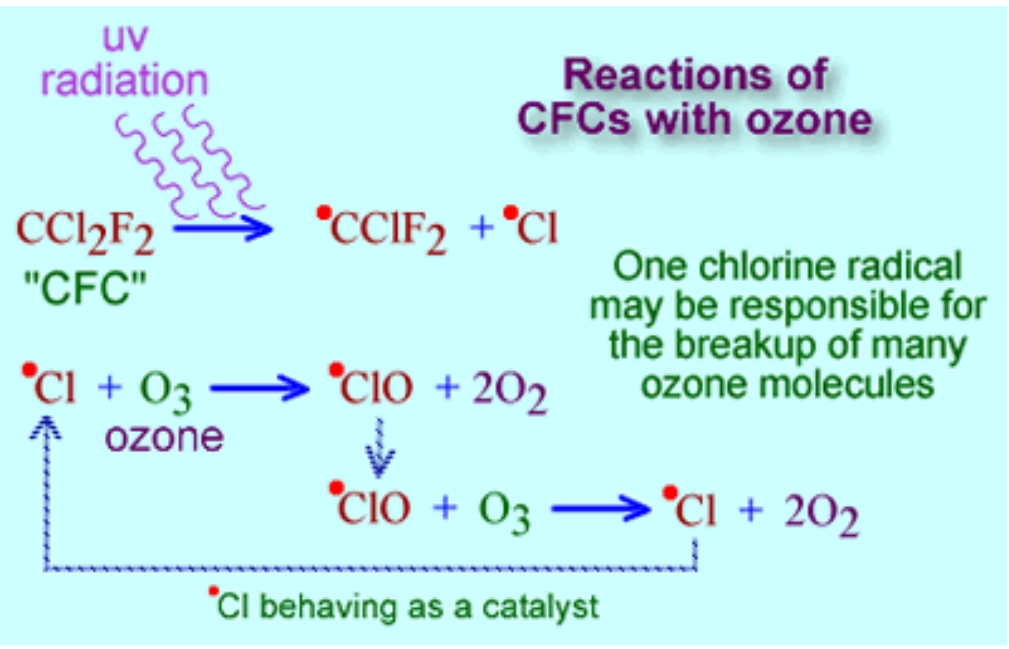
Daily Mail, 13 Oct 2012



Source: Goddard Institute for Space Studies



# Talk about scientific consensus: it's boring for a scientist, but it's a powerful tool!



greener-industry.org.uk

# 3) Gang up

# Together we can send a strong message

## SCIENTIFIC EVIDENCE

Academies and  
Learned Societies

Chief Scientific  
Adviser/Science  
Advice Mechanism

Joint Research  
Centre (JRC)

Scientific  
Committees and  
Expert Groups  
PSTAC

European science  
associations (e.g.  
EASAC, Euro-CASE,  
ALLEA)

National  
research-performing  
organisations and  
universities

European research  
organisations  
(e.g. ESA, EMBL...)

Industrial R&D

EU Agencies (e.g.  
EFSA, EMA, ECDC)

Citizen science

# EC Science Advice Mechanism



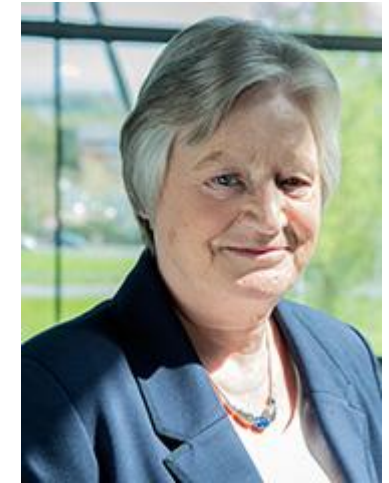
**Janusz Bujnicki**  
Poland



**Elvira Fortunato**  
Portugal



**Pearl Dykstra**  
Netherlands



**Julia Slingo**  
UK



**Rolf Heuer**  
Germany



**Cedric Villani**  
France



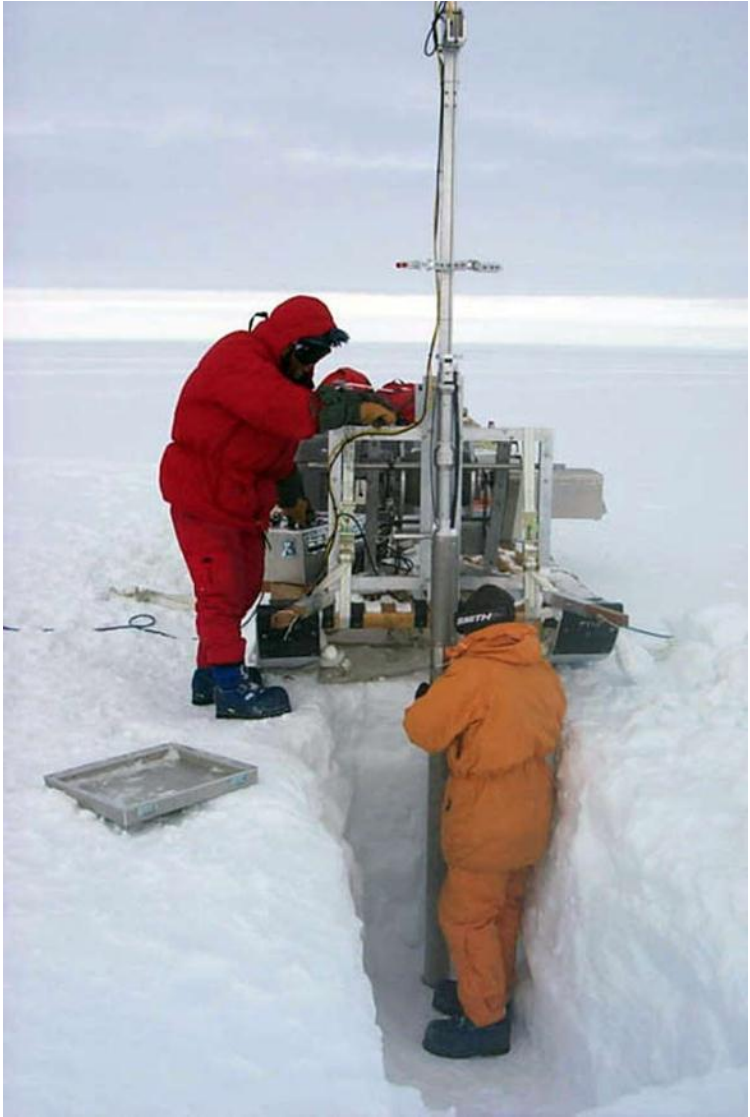
**Henrik C. Wegener**  
Denmark



**It takes a lot of efforts to generate scientific evidence.**

**We should make the best use of it.**

**Science should be at the heart of Government.**



<http://www.ediblegeography.com/glacial-terroir>

**Thank you for your  
attention!**

**E-mail: [l.a.glover@abdn.ac.uk](mailto:l.a.glover@abdn.ac.uk)  
Twitter: [AnneGlover\\_EU](#)**