

# UK and Brazil: Opportunities and Partnerships

Sir David King

Chief Scientific Adviser to UK Government

UK-Brazil Year of Science & Innovation



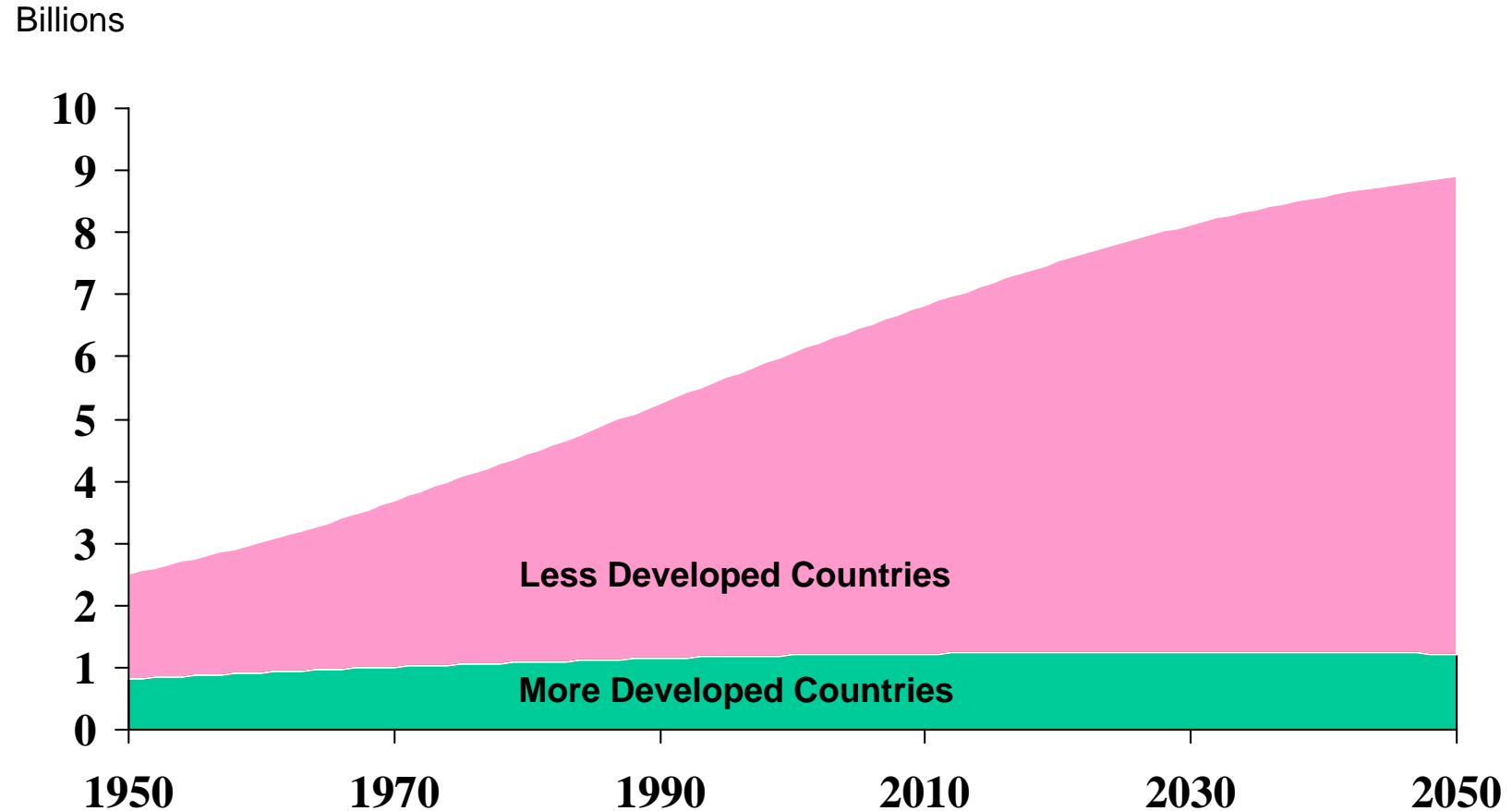
UK-Brazil Year of  
**SCIENCE & INNOVATION**

São Paulo, 30 March 2007



Ano Brasileiro-Britânico da  
**CIÊNCIA & INOVAÇÃO**

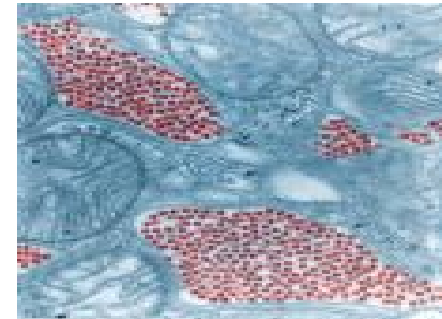
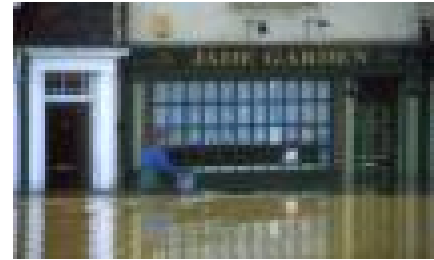
# Population Growth: Growth in More, Less Developed Countries



Source: United Nations, *World Population Prospects: The 2002 Revision* (medium scenario), 2003. Downloaded from [www.prb.org](http://www.prb.org)

# 21st Century Challenges

- Population growth
- Resources
- Environment
- Infectious diseases
- Climate Change

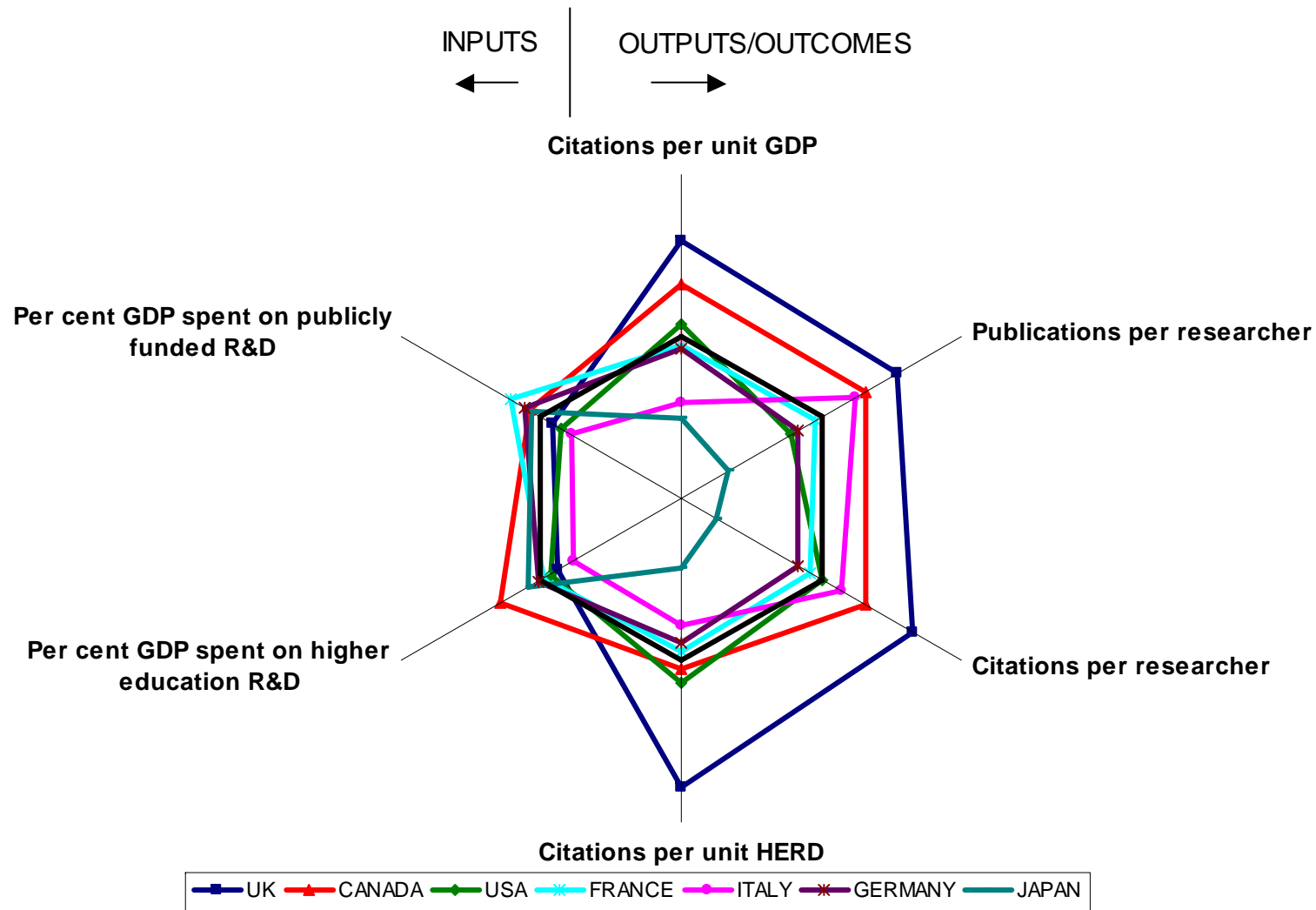


# World Science Citations

Country	% share of world publications	% share of world citations	Rank order
USA	34.9 ↓	49.4 ↓	1
EU15	37.1 ↑	39.3 ↑	
UK	9.4 ↑	11.4 ↑	2
JAPAN	9.3 ↑	8.4 ↑	4
CANADA	4.6 ↓	5.3 ↓	6
CHINA	3.2 ↑	1.6 ↑	18
INDIA	2.1 ↓	0.9 ↑	21
BRAZIL	1.2 ↑	0.7 ↑	22
SOUTH AFRICA	0.5	0.3	25
IRAN	0.13 ↑	0.06 ↑	26

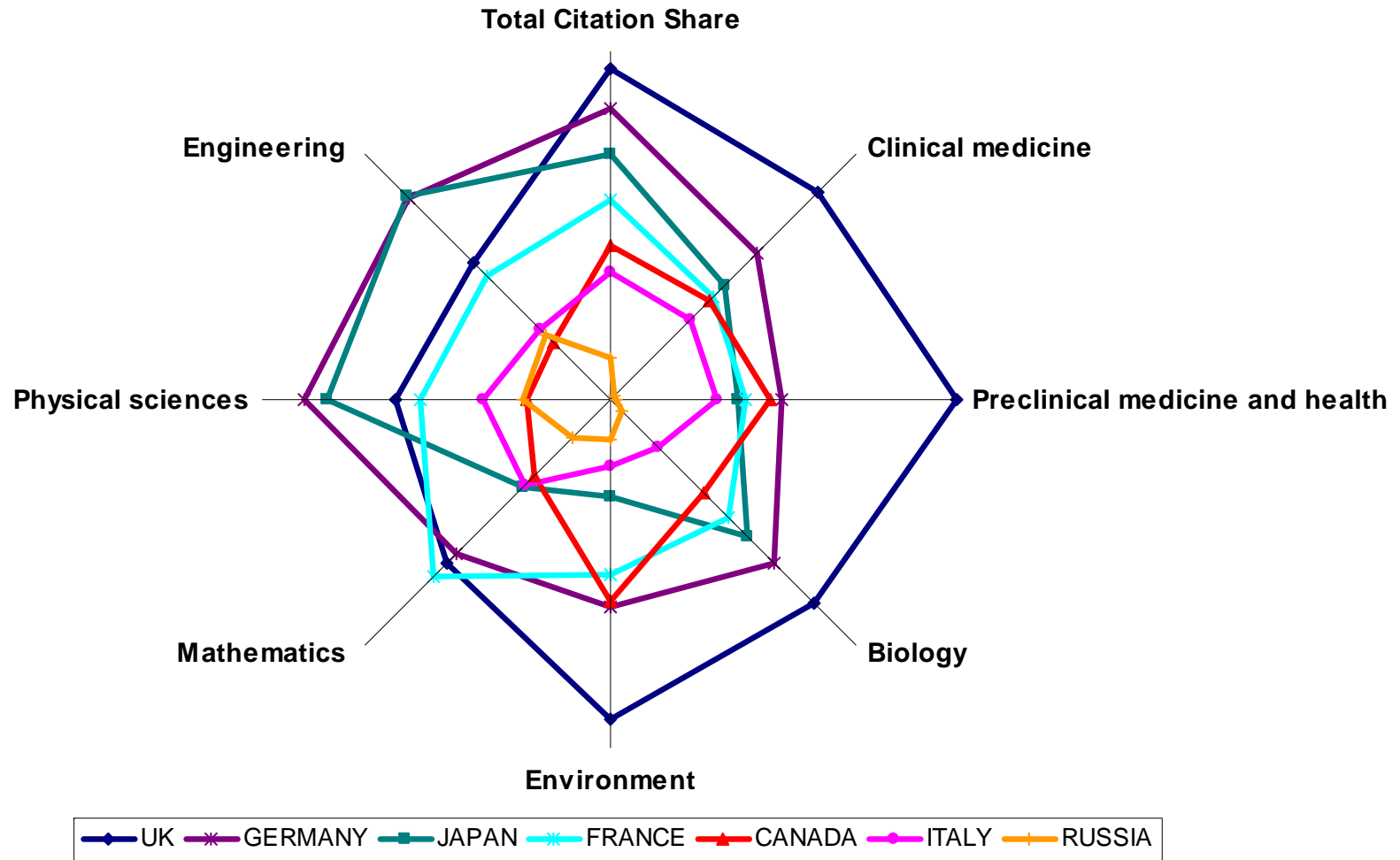
Source: Adapted from D A King, Nature **430** (2004)

# Comparing inputs and outputs/ outcomes



Source: D A King, Nature **430** (2004) 311 (15 July 2004)

# National strengths in different disciplines (1997-2001)

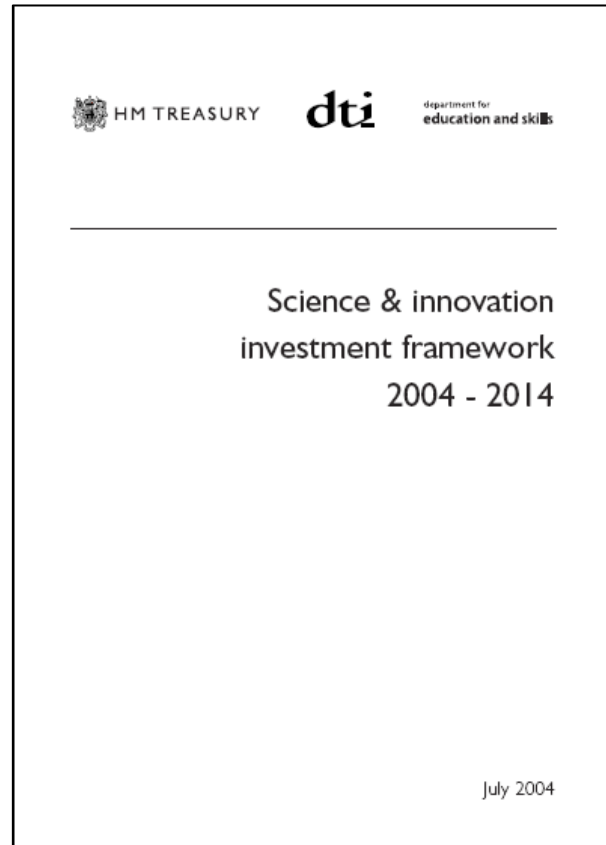


Source: D A King, Nature **430** (2004) 311 (15 July 2004)

# Vision for UK science

- Best location globally for R&D and innovation
- New strategic interdisciplinary activities
  - Energy
  - Biomedical engineering
- Engage British industry in R&D opportunities
- North-South capacity building
  - Poverty eradication
  - Population growth
  - Global warming

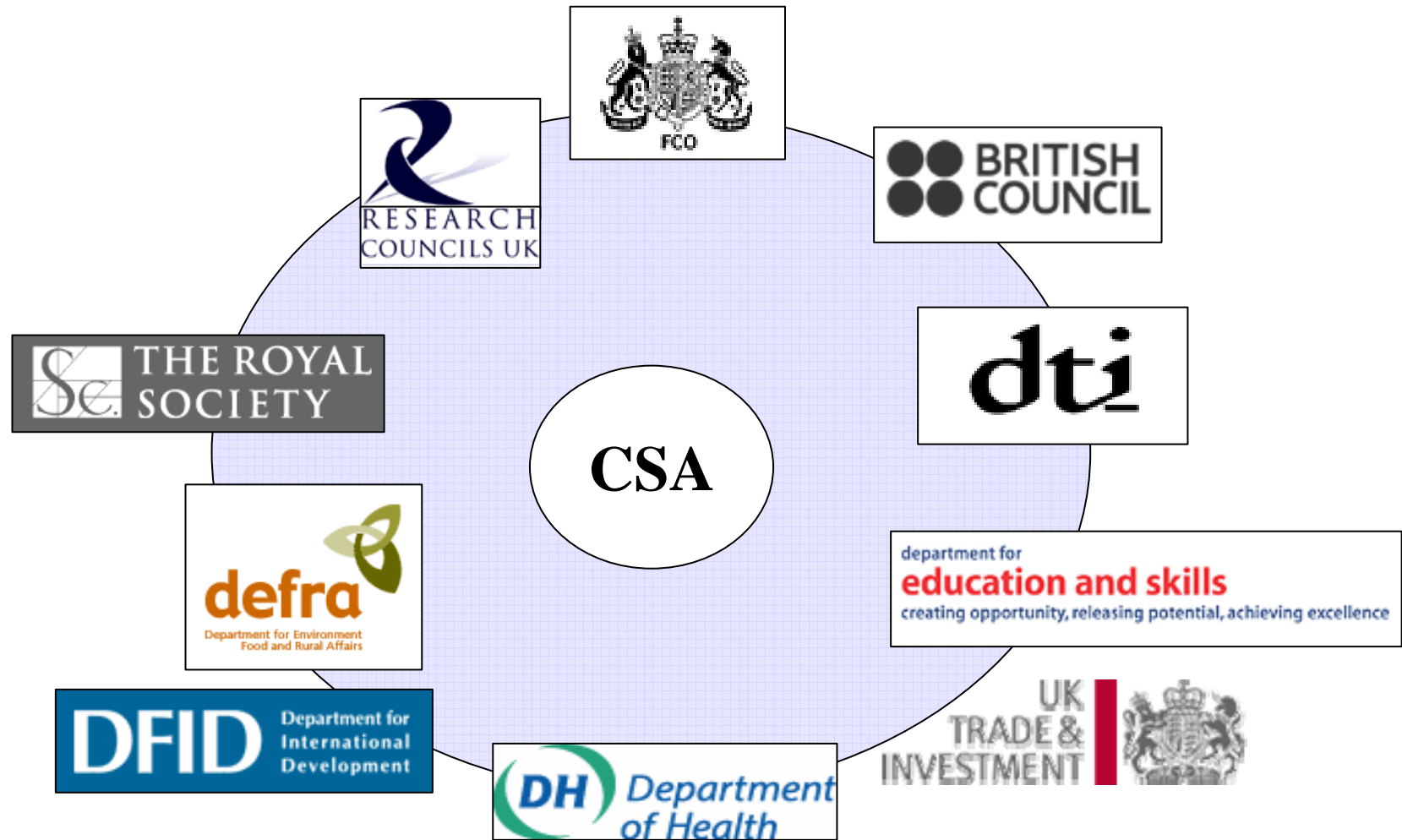
# At the beginning.....



“The Government recognises the need for an overarching national strategy for international engagement in R&D and access to large facilities, to bring together the main UK players in international R&D, including Government departments, the FCO network of S&T attachés, scientific societies and the Research Councils....

A cross-government group – the Global Science and Innovation Forum – led by the Government’s Chief Scientific Adviser, will develop this strategy.”

# Global Science and Innovation Forum



# Key elements and objectives of GSIF Strategy

The GSIF strategy is based on four distinct axes with associated objectives, that the UK should:

- be excellent in research
- be excellent in innovation
- use research and innovation to leverage global influence
- use research and innovation to meet international development goals

# Science in Brazil

<b>Year</b>	<b>% of world publications</b>
1990	0.62
1995	0.80
2000	1.30
2004	1.80

<b>Year</b>	<b>Total R&amp;D Budget, % GNP</b>
2000	0.99
2001	1.02
2002	0.98
2003	0.95
2004	0.93

Source: Adapted from Leta, J et al., Scientometrics, 2005

# Brazil – priority partner country for the UK

- Brazil has world class excellence in key areas
  - e.g. bioethanol, agricultural research
- Brazil's leadership within the +5 at G8 Summits
- Brazil has an important role to play in South-South capacity building
- President Lula is an influential leader in driving the Millennium Development Goals and poverty reduction

# UK-Brazil Year of Science & Innovation (1)

- to promote mutual awareness of excellence in science and innovation
- to strengthen and increase collaboration
- to share best practice in science-based policy-making
- to facilitate high-tech trade and investment links

# UK-Brazil Year of Science & Innovation (2): the four pillars

- Planet Earth
- Human Life
- Reaching Beyond
- Creativity

# UK S&T interaction with Brazil (1)

- UK/Brazil Joint Plan of Action on Science, Technology and Innovation, 2006
- R&D opportunities in clean/alternative energy technologies
- Various MOUs and currently being developed by UK-Brazil organisations

# UK S&T interaction with Brazil (2)

- British Council/CAPES universities scheme
- British Council/FINEP/FAPESP collaboration on science partnerships and technology transfer
- Dorothy Hodgkin Postgraduate Awards Scheme
- Brazilian students in the UK
  - Approx. 1800 in higher/further education

BUT....

- we would like to do more!

# Future challenges and opportunities

- To build positively and engage on UK-Brazilian bilateral relations in S&T and innovation
- To work together on issues such as climate change, energy and use of scientific advice in forming policy
- To promote participation in S&T funding opportunities for research collaboration, bilateral exchanges, graduate and postgraduate schemes using UK and EU funding opportunities

# Sustainability in 21<sup>st</sup> Century

- Science, modern medicine and technology have, since the industrial revolution, provided us with societies in which we can live longer healthier lives than in the pre-industrial period....
- .... Now we need to use our wealth and technology not only to manage our economies within finite natural resources but also to adapt to a more populated and warming planet.



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Consulate-General  
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