



The UK and China – Building the Right Framework For Research Collaborations

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Energy & Climate Change Conference

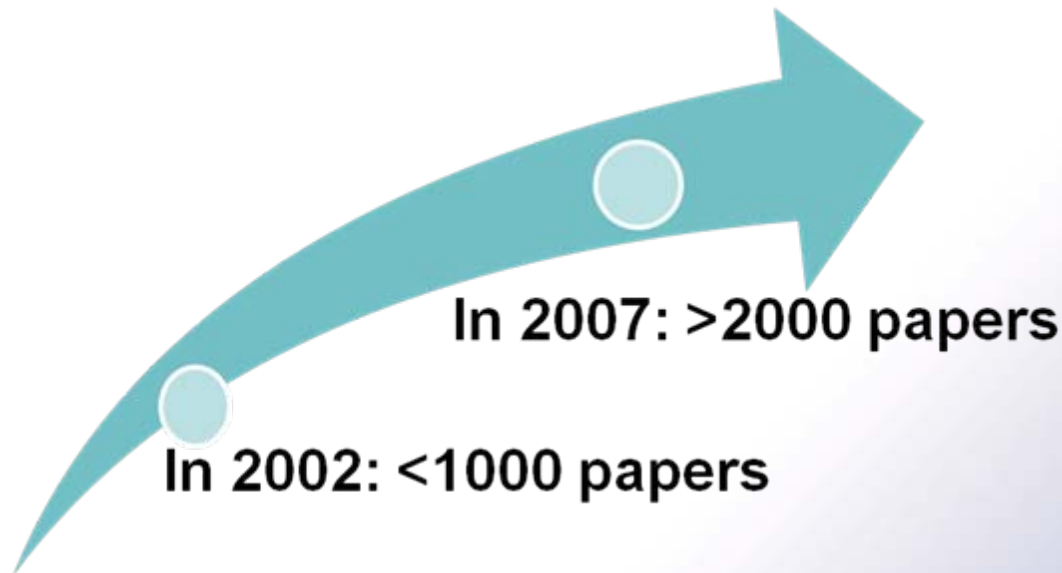
Peking University, 1 December 2008

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- International collaboration - producing stronger research
- UK Research Councils and RCUK China Office
- Building a framework for collaborative Research

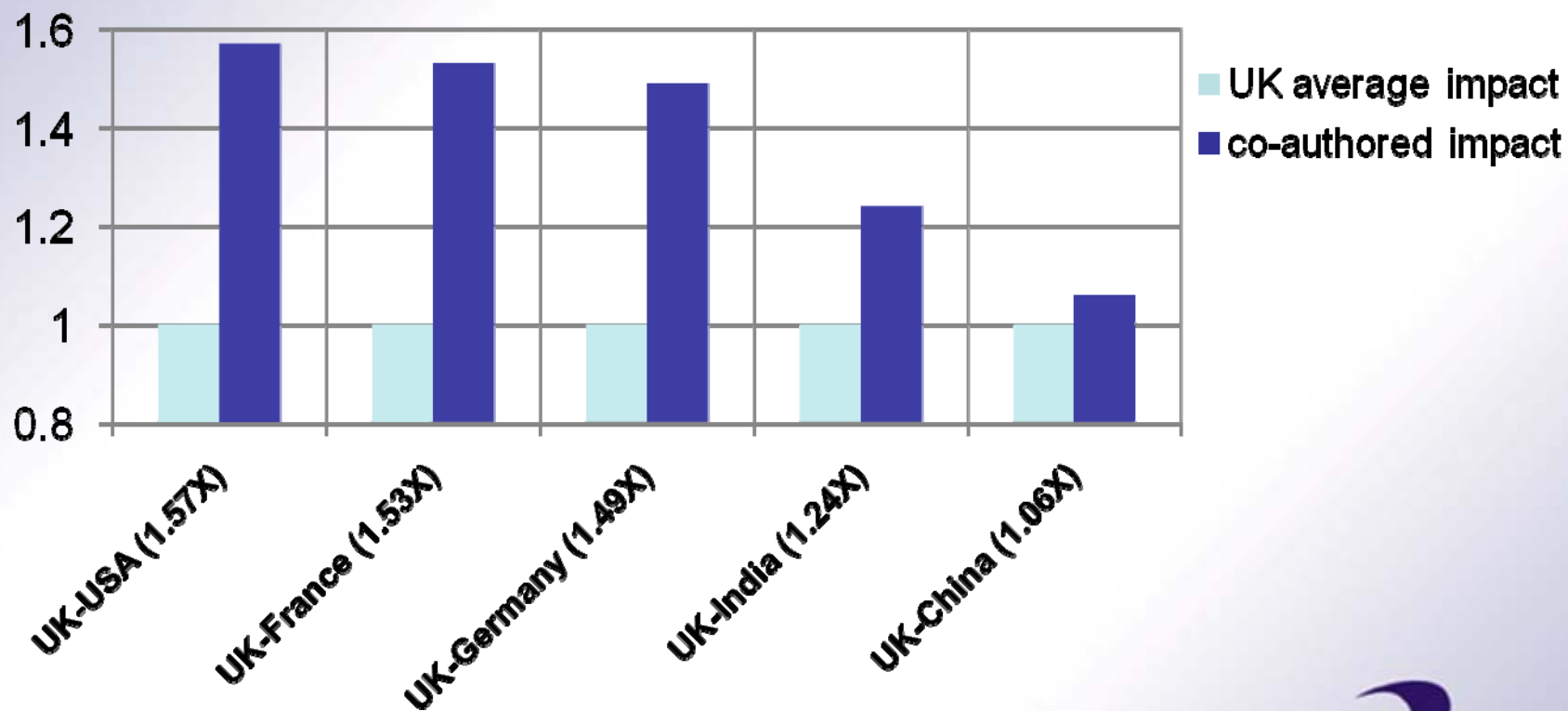
1.1 UK-China collaboration is growing

- International research collaboration is increasing globally
- 44.6% of UK papers have a non-UK co-author
- China is the UK's fastest-growing partner
- UK is China's biggest partner in Europe



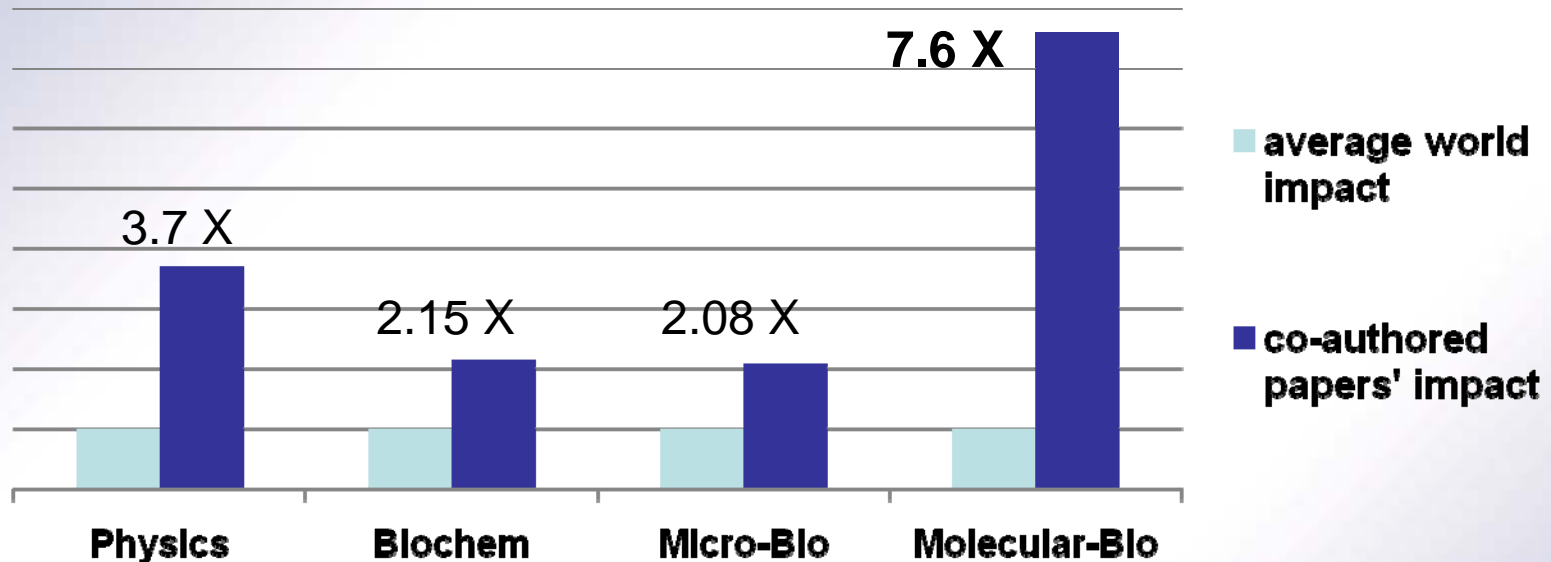
1.2 Collaboration adds impact

Impact of UK co-authored papers 2002-06



1.3 Some notable UK-China impacts

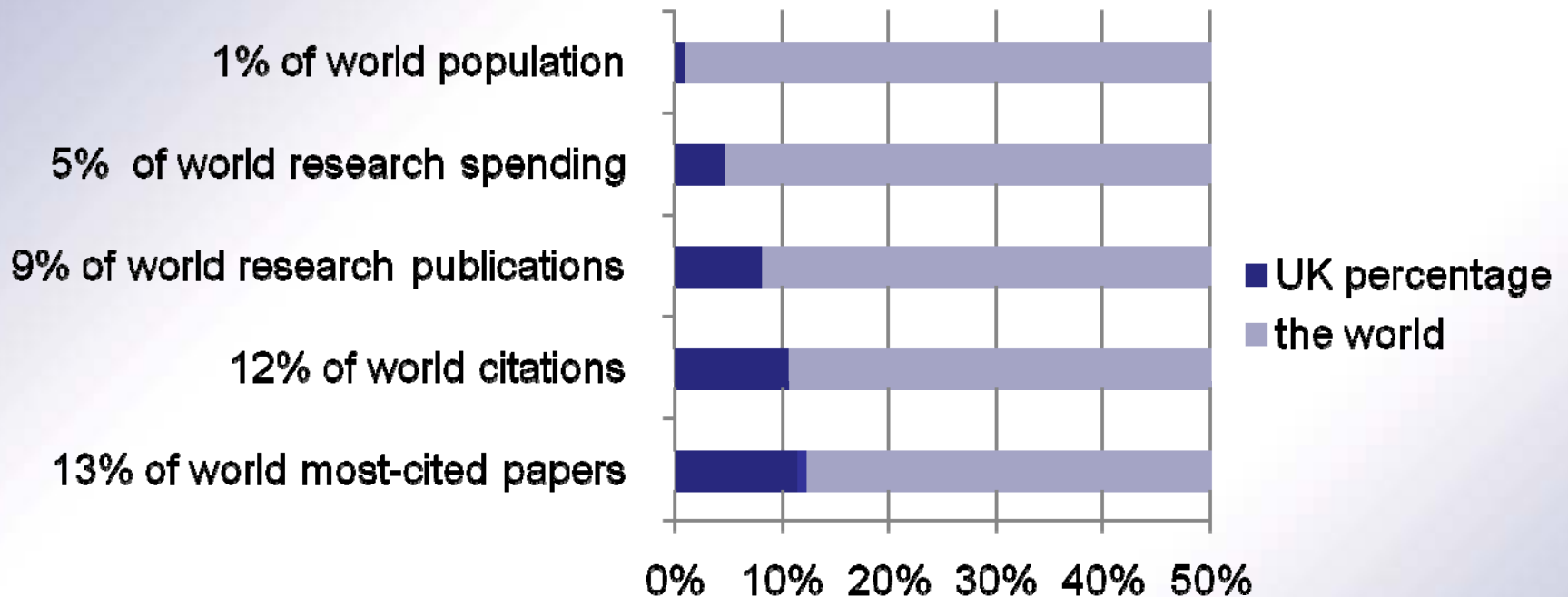
UK-China co-authored papers' impact in 2002-06



Of 20 subjects with >100 items each:

- 18 exceeded world average impact
- 13 exceeded UK-only average impact

1.4 UK – world's most productive research nation!

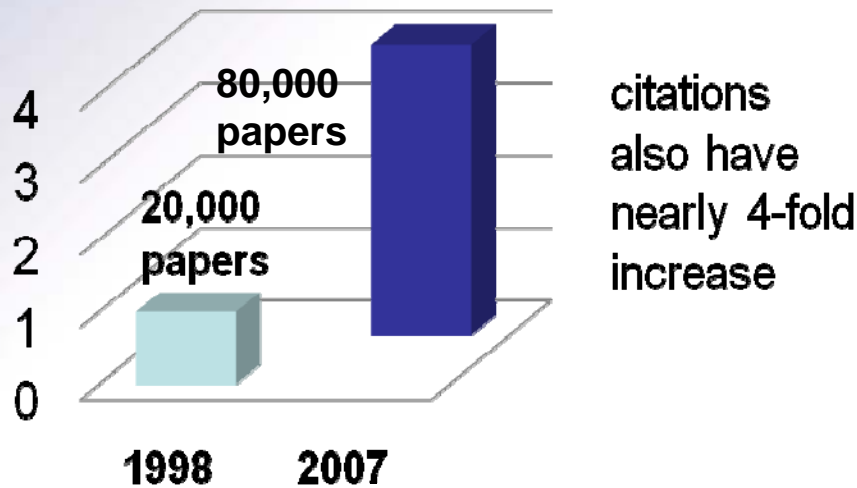


*UK has **broadly-based** strengths: citation share is world #2 in many areas.*

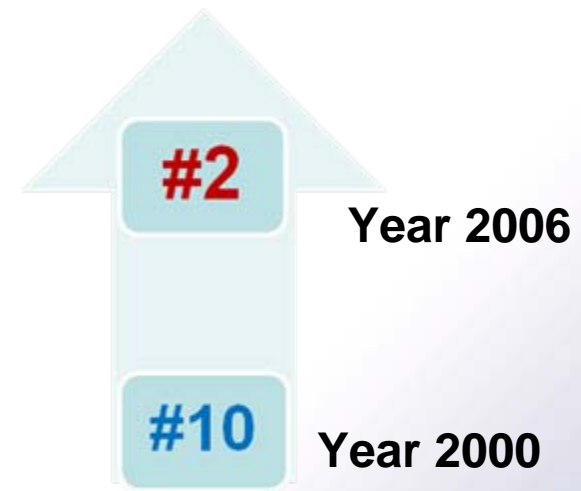
*UK is **maintaining** its position. USA is **slipping**.*

1.5 China – fastest rising research nation in history!

China's output of scientific publications



China's world ranking for scientific publications



- China now matching G8 performance in *Physical Sciences and Engineering*.
- China has overtaken Japan in citations per gross spend on R&D

1.6 An Equation...

World's most productive research country

+

World's fastest growing research country

=

Wins for UK, China and the World!

2 The UK Research System



Science & Technology
Facilities Council

科学和技术设施理事会



Arts & Humanities
Research Council

艺术和人文科学研究理事会



医学研究理事会



RESEARCH
COUNCILS UK

英国研究理事会



生物技术和生物科学研究理事会



NATURAL
ENVIRONMENT
RESEARCH COUNCIL
自然环境研究理事会



工程和自然科学研究理事会



经济与社会科学研究理事会

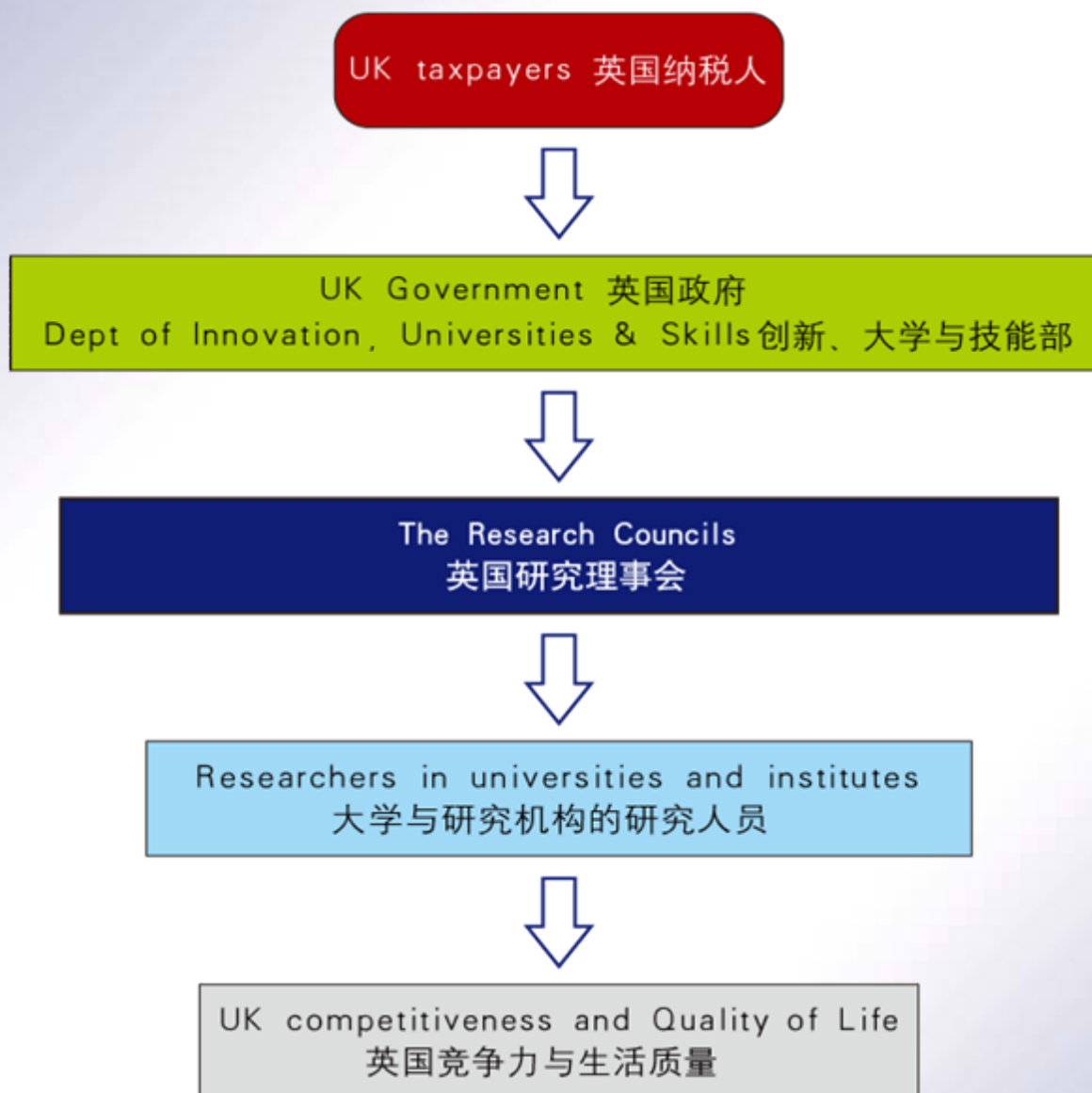
2.1 Research Councils & RCUK

RCUK is where the Research Councils join together on common issues, e.g.

- Research **administration**
- Postgraduate **training**
- Researcher **careers** and capacity building
- Research **impact** and knowledge transfer
- **Inter-disciplinary** research programmes
- **International strategy**



2.2



2.3 Core Values of Research Councils

- **Independence –**
 - Funding decisions are made by researchers, not politicians or civil servants (*Haldane Principle* 1919).
- **Excellence –**
 - Funding decisions emerge from *competitions* using *open peer review*.



2.4 Shaping a Strong Science Base

The Research Councils:

- **Challenge researchers** to rise above “comfort zone”
- Shape **new agendas** to meet **new research needs**
- Encourage research **across discipline boundaries**
- Promote new research **tools, skills, methodologies**



2.5 RCUK in China



- First RCUK office outside Europe
- Opened October 2007.
- Working with **all** relevant partner agencies in China
- Working closely with UK Embassy Science & Innovation Network, but located separately.

3.1 RCUK in China



Support agencies must work better together so that

- **Top Level Government agreements more easily lead to visible action;**
- **Bottom Level individual contacts more easily lead to substantive joint research.**

3.2 RCUK China Activities

- **Summer Schools** competition– at least 10 awards/year
- **Science Workshops** – around 10 a year
- **Information** science systems in UK and China;
- Funding Agency **staff exchanges**;
- **‘User’s Guide’** to cross-cultural research collaboration



UK-China Summer School

英中暑期学校

Chemical Modelling for
a Sustainable Environment

化学模拟及可持续发展环境

The international conference *Theory and Applications of Computational Chemistry* (TACC) is to be held in Shanghai, China, from September 23rd to 27th, 2008. Within its auspices the [University of Nottingham](#) and [Shanghai Jiao Tong University](#) are organizing a Summer School entitled *Chemical Modelling for a Sustainable Environment*.



BIOCLIMATIC ARCHITECTURAL DESIGN WORKSHOP
An Integrated Environmental Design Approach


RESEARCH
COUNCILS UK

3.3 RCUK China Strategy

- Make collaborations more **visible**.
- Develop a **coherent** and **sustainable** package of support -
 - *individual travel funding*
 - *young researcher links*
 - *'best with best' research group links*
 - *joint research projects supported by both sides*
- Make UK/China support systems **more user-friendly!**



3.4 UK-funded China Activities

UK Research Councils are funding **£25 mn** of **joint UK-China projects-**

- *Science Bridges* (£4 mn : Innovation focus)
- *Innovation China-UK* (£5 mn : proof-of-concept projects)
- *Sustainable Energy* (£10 mn for 14 research projects)
- *Sustainable Cities* networks (£1.3 mn for 4 networks. Research grant proposals being prepared.)
- *ESPA* (£0.64 mn Phase 1 + Phase 2)
- *RCUK China Office* (£4 mn over 5 years)



3.5 Jointly funded UK-China Research

- Past joint projects in *Space, Polar research, Infectious diseases...*
- Current joint competition with NSFC in *Nano-spintronics* (UK £2 mn)

... and not much else.

But researchers are hungry for collaboration opportunities!

3.6 How do we engage with China's research agencies?

MOST

- Biggest research funder in China; BUT
- Works in very different ways from a Research Council

NSFC

- Very similar to a Research Council

CAS, CASS, ...

- Good potential for Institute / Lab links

3.7 New RCUK-MOST MoU

- Signed on 17 November 2008.
- First agreement with RCUK representing all 7 Research Councils.
- Clear framework for developing co-funded joint activities.
- Co-funding must be available before an activity starts.
- MOST funds can be mobilised at project/lab level as well as at the centre.
- Easier to mobilise local/regional funds.

3.8 Joint activities with NSFC

Joint Call 2008 *Nano-spintronics* – a good model!

- Single project proposal from UK/China partners
- Single joint decision process – open peer review
- Separate funding for UK / China partners

Further joint calls possible in 2009 in

- Environment
- Biosciences

Visiting Fellows – MRC/NSFC:

- up to 12 months stay in the other country
- open to MRC/NSFC grant holders

3.9 Engaging with the Academies

CAS, CASS, ...

- Link up leading **research groups** on each side
- Develop **joint workshops**
- Develop **joint projects** for research funding bids

3.10 To sum up...

The RCUK Office in China is working to -

- Provide clear **support frameworks** for research collaborations.
- Help researchers tackle the challenges of **cross-cultural** working.
- Improve mutual understanding of UK / China **research systems**.
- Join research strengths in UK and China to **contribute more to the world**.

How can you help us to do better?



www.rcuk.cn

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