

ODA issues in STFC-India collaborations

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Overseas Development Assistance

Main requirement

The main objective should be the economic development and welfare of the DAC countries: requirement for Newton & GCRF activities

Three routes for scientific activities:

- **Research** directly and primarily relevant to the problems of the DAC countries
- **Training and up-skilling** to take advantage of the research, contributing to economic development
- **Translational research**, creating collaborative solutions to development challenges and strengthening innovation systems, aiding economic development

ODA Experience in Newton Fund projects so far

The Newton-Bhabha program

- Bringing together the UK and Indian scientific research and innovation sectors to find joint solutions to the challenges facing India in economic development and social welfare
- £50 million over five years
- Supported through ministerial agreements.
- Delivery Partners: the Academies; British Council/HE International Unit; **Research Councils**; Innovate UK; and the Met Office



Prioritised by UK-India Science and Innovation Taskforce

Identified 3 grand societal challenges

- **Sustainable Cities and Urbanisation**
- **Energy-Water-Food Nexus**
- **Public Health and Well-Being**

And two underpinning capabilities

- **High Value Manufacturing (HVM)**
- **Big Data**



Three ODA pillars



People:
building skills and
capacity through training
and people exchanges



Programs: research
collaboration on
development topics



Translation: taking
innovation from
universities to industry

Ongoing programs

BRITISH COUNCIL
Department of Biotechnology
Govt. of India
Newton-Bhabha Fund
Newton-Bhabha PhD placements programme in collaboration with
Department of Biotechnology 2015-16

List of selected Indian applicants **Joint PhD programs & CDT's**

S.no	Name of the applicant	Indian Home Institute	UK Host Institute	Status
		Indian Institute of Science,	University of Bristol, Bristol, United Kingdom	Selected
			Birmingham,	



Mega Cities, Air Pollution and Health



Maternal Health, Childhood And Under-nutrition and Infectious Disease

Involved Partners

- DST, DBT (India)..
- MRC, NERC, ..
- Coordinated by RCUK India office

Where does STFC fit in?

- STFC departments joined at a slightly later stage
- Existing/potential joint research programs in ODA relevant areas
- Training/access to facilities
- Ministerial agreements



ODA: challenges

- Identifying research topics
 - Outside the priorities set by the task force
 - Finding research groups working on specific problems relevant for India & ODA compatible
 - Matched funding requirement
- People: training (mostly because of matched-funding requirements)
 - Biased against less-affluent institutions
 - Absence of ring-fenced funding for hiring new people
 - Cannot hire people in the UK
 - Cannot pay for their travel from India
- Translational
 - No infrastructure for this
 - Capital spending is not allowed
 - Limited networking possibilities

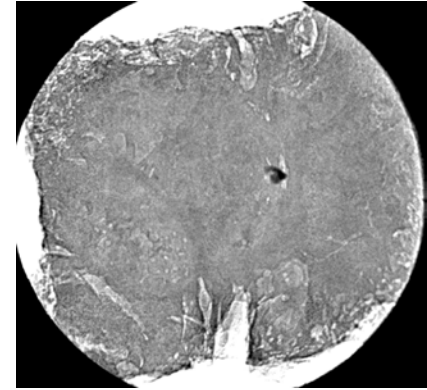
Building-on existing collaborations

- Uncertainty over ODA compliancy and matched funding clauses
- Tata Institute of Fundamental Research (TIFR) was the only place that could fulfill these in a short span of time
- Established an MoU with TIFR in 2014 (official press release during Indian PM's visit in 2015)



CLF-India collaboration

- Optimising sources of ionising radiation and particles for therapy and imaging: ODA pillar: program
 - Involves all aspects of related fundamental science
 - Translational research – not started yet
- Capacity building – ODA pillar: people
 - Training of skilled people
 - Joint developments of mutual interest



Outline of the CLF-India program

- £350k over 5 years
- No ring-fenced access to facilities in CLF
- Access to CLF facilities through collaborative experiments that get scheduled through the FAP prioritisation
- Have had 4 joint experiments in CLF and in India.
- Indian contribution ~ £50k so far
- Training of 12 PhD & 1 Masters students so far
- 1 joint PhD started



Future directions for this collaboration

- Two workshops held in India, exploring the potential of high power lasers as cost effective and alternative sources for ionising radiation for therapy, diagnosis and biomedical imaging.
- Established collaborations between other Indian Institutes and UK universities: training and up-skilling

Opportunity to address the third pillar:
translational research

Strong interest in a UK-India Innovation
Centre



ISIS-India collaboration

- DST's £2M investment in ISIS
- Championed through India's nanomission programme: supported by Newton-Bhabha programme
- Access to all ISIS portfolios
- Involvement in new instrument development – Zoom: insights into how drugs interact with the body
- Up-skilling in the area of neutron scattering : capacity building in India
- Impact in food and energy nexus
- Took a few years to establish but set to grow now



ODA: lessons learned & opportunities

- Vital to have early buy-in from Indian departments/funding bodies
 - We had to reverse-engineer departmental agreements.
 - Found difficult during last GCRF round
- How to prove the problems are vital for India?
- Involve multiple organisations/institutes: **involve RCUK India office from beginning**
- GCRF doesn't have matched funding requirements – easier to manage
- Facility access: are we missing an opportunity here?
- Funding PhD students for their degrees from UK universities?
Postdocs?
- Joint capital investment for translational research?