

## MEETING NOTES

### AUSTRALIA-INDIA RESEARCH SYMPOSIUM

INDIAN INSTITUTE OF SCIENCE, BANGALORE, 25 AUGUST 2015

#### Introduction

An Australian Education Mission including Vice Chancellors from many of Australia's leading universities, representatives of peak higher education organizations and Australian Government officials visited Bangalore in Karnataka from 25-26 August 2015. The focus of the delegation was on forging research and collaboration linkages between Australia and south India.

The delegation was hosted at Bangalore's Indian Institute of Science (IISc) on 25 August, for discussions on possible avenues for collaboration. Discussion centred on the themes outlined below.

#### What are the best mechanisms to set up institutional research collaborations, to ensure that they are developed on a sustainable basis?

Joint research workshops on a focussed theme were identified as a good first step to begin an institutional relationship. Funding for these can be sought from Indian and Australian government programmes, which will also provide the structure to drive collaborations to the next level. The

##### **CEFIPRA**

*An example was provided by Indian participants of a sustained research collaboration over decades between Indian and international partners: the [Indo-French Centre for Promotion of Advanced Research \(CEFIPRA\)](#).*

*An Indo-French water cell was funded as joint laboratory by the Indian and French Governments. The Government support for CEFIPRA began with PM Gandhi and President d'Estaing agreeing to take it forward, as has been seen with the AISRF commitment of PMs Modi and Abbott. Intergovernmental meetings between France and India between 1980-87 lead to equal funding commitments from both sides*

*Five French scientists are permanently stationed at IISc through the initiative. The institute began by offering joint student exchanges in the 1990s and is now a fully-fledged joint laboratory.*

*It can call for original proposals in any discipline of science and technology that are collaborative and of high scientific quality. Applications are peer-reviewed by Council of 6-8 scientists from each side representing different disciplines. Students go on to do joint degrees and research projects. Some students come for initial short term mobility programmes similar to Endeavour Scholarships and Fellowships, and have come back to work on a joint project.*

Australia-India Strategic Research Fund (AISRF) is a good source of support for workshops such as this.

Matching in-kind support for PhDs was also nominated as a preferred format for institutional linkages. One Australian university currently has a post-graduate student exchange programme with India for periods of 6 months to 1 year, including scholarships, and joint-supervision of PhDs. For projects such as these, institutions can maximise chances of success by putting forward their own funding to initiate them, which will often then catalyse broader funding sources through government or industry.

Encouraging interest in collaboration is important from the earliest point in an academic career. To this end, the Australian Government's [New Colombo Plan](#) can be used to support mobility programmes for undergraduate students. The interest generated by these programmes can be built upon to

encourage the same students towards semester-based study and eventual postgraduate courses. They also help to generate word-of-mouth interest among students, and can serve to assuage parent's anxieties which often act as a barrier to mobility programmes for undergraduates.

This taster-level engagement is necessary before students will commit to the 4-5 year PhD models. IISc summer programmes could be moulded to fit such a need, offering a host laboratory between May-July when interns currently come to the institute. IISc has an agreement with Brandeis University in the United States that up to 10 students per year can come during their winter break – this could act as a model for Australian institutions as well. With any of these short term programmes it is important to ensure that students don't study in a bubble, but are mingled with domestic students.

Discussions emphasised the utility of base funding from universities themselves. Many government programmes such as AISRF and Endeavour Scholarships are competitive, which means it is hard to use them as the basis for ongoing mobility programmes year to year. Universities may wish to set aside a certain amount of funds each year to provide this certainty. An analogy was made to the requirement for large Indian companies to set aside 2 per cent of their net revenue for Corporate Social Responsibility projects – a set amount of the university corpus could be set aside for mobility programmes.

Co-teaching can also lead to collaboration. The Indian Government's Global Initiative of Academic Networks (GIAN) is a model to support this. The Australian Government could also consider supporting academics from overseas for short visits for a similar purpose. Fulbright Scholarships also allow for this type of mobility. It would expose senior scholars to the opportunities for research collaboration at facilities in the counterpart country. The Australia-India Education Council has also piloted an Eminent Researcher Lecture Programme to bring Australian academics to India for this purpose.

### **How can industry support research collaboration?**

Joint research programs are often focused on joint paper publication. If instead they focused on applications or technology development, this may build traction with industry and encourage co-investment.

For example, Australian institutions are world leaders in agricultural sciences. There are opportunities in this discipline for research collaboration with India on shared challenges that would be of use to industry in both countries. Healthcare is another discipline with similar opportunities. It is also worth leveraging the interests of companies from one country with a presence in the other, as they may have more reason to support such projects.

Where fundamental research is of interest to industry, they can be approached to sponsor relevant PhD projects. The language of the researcher has to match the process for the industry project management process. Goals of the projects need to be clearly explained against industry benchmarks to prove their utility. This will address a mistrust which sometimes exists in industry over whether the outcomes from research projects will match the original goals.

There is also a need to identify research and industry leaders who can champion such collaborations. There may only be a small number corporate leaders that will be willing to take on sustained support for research. Relationships with these people need to be initiated and nurtured. This is the case in both countries. Institutions should also be strategic about identifying where research areas do not

have industries to support them in their home country, but may in the other country. For example, Australia produces high quality medical research but there are not as many pharmaceutical companies to support it as there are in India.

Universities should seek to develop programmes where researchers and students can spend some time in a company as part of a collaborative program. This can build confidence of the companies in the students and in the collaboration overall.

Institutions should look to programmes such as the [Biotechnology Industry Research Assistance Council \(BIRAC\)](#) in India, which is a venture capital fund bringing together expertise from around the world to support start-ups in India.

The Indian Australian diaspora has grown exponentially in recent years. The reputation of Indian institutions in the diaspora should be leveraged to build industry participation through them. This would involve institutions not only looking to their own alumni, but diaspora organisations in Australia more broadly.