Dear Task Force Members,

The University of Sydney welcomes the opportunity to make this submission to the Australia in the Asian Century White Paper. The University commends the Australian Government for committing to develop a coherent strategic framework to guide Australia’s future engagement with Asian countries and their peoples. Moreover, the University strongly supports the aims of identifying a series of priority actions to be taken over the next five years and developing policy initiatives for the longer term.

We believe that an Asian education and research engagement strategy should form a critical element of the proposed White Paper. We therefore note with some concern the limited attention that the consultation paper gives to educational issues, and in particular to the role that the Australian higher education sector might play (building on its already significant achievements) in any national strategy for engagement with Asia. We see enormous opportunities for the Australian higher education sector to contribute to improvements in Australian society, culture and the economy more broadly through enhanced strategic engagement with Asia, and trust that the Task Force will be engaging with the University sector at various levels about this key part of the proposed strategy.

As many have noted, Australia is in a unique position to play a role in bridging the gap between the West and Asian countries. The threshold question is how Australia can maximise this unique position and fully realise the potential economic and social benefits from engagement across the region. Aware of the need to consider this question strategically, the University has undertaken a review of its own teaching and research strengths to understand how the University can best support the development of engagement in the region.

This review highlighted that people-to-people relationships formed through international education underpin Australia’s engagement with Asia, forming the basis for future personal, business and research collaborations as part of the global knowledge economy. The issues of international student mobility and international research collaboration lie at the core of international education and will be addressed in this submission. International education and internationalisation are now fundamental and clearly articulated strategic objectives of the University with its mission of developing global citizens, international research collaborations and other linkages for the benefit of Australia and the wider world. Together, these strategies will strengthen the University’s international standing and competitiveness.
In addition to this overall strategic objective of promoting and enhancing international education and internationalization, the University has responded to the specific challenges of the Asian Century with the establishment of the China Studies Centre, and is in the final planning stages of establishing a Southeast Asia Centre. Both these Centres build upon extraordinary concentrations of interest and expertise. As part of a broader Area Studies strategy, these new cross-disciplinary research, teaching and outreach centres will join the United States Studies Centre to become the key pillars of the University’s vision of a high quality, globally engaged institution.

The decision to co-ordinate the University’s expertise relevant to China and South East Asia through the establishment of these two new Centres has been based on both an assessment of our teaching and research strengths and the challenges posed by the Asian Century. The defining feature of the Asian Century is the emergence and rise of China. It will be to Australia’s detriment to underestimate China’s scale and potential. There has been remarkable development in the cities of the Eastern seaboard – Beijing, Shanghai, Qingdao, Hangzhou, Guangzhou – and this scale is likely to be dwarfed as development moves westwards across the country. With the largest cohort of Chinese students on an Australian campus, a long history of teaching and research on China and research collaboration with Chinese academics, the University is well positioned to support increasing engagement and emerging opportunities. Drawing on the expertise across disciplines, the China Studies Centre has a commitment to business outreach, education and research to raise understanding of how to do business with China and to strengthen business networks. The Centre will also focus on community outreach and education to raise understanding of contemporary China and China-Australia relations across all fields of interaction.

A further prominent feature of the Asian Century is the economic growth of our neighbours in the Southeast Asian region. The region is marked by rich diversity, by challenging problems, and by countries, communities and cultures that have a rapidly changing sense of their own place in the world. There is no disputing that Southeast Asia is of strategic importance to Australia, in terms of both its physical proximity and the political involvement which this proximity entails. In planning to establish the Southeast Asian Centre, the University will draw on its long history of Southeast Asian inter-disciplinary academic excellence. This new Centre will provide a focal point for expertise, will boost the University’s academic and people-to-people engagement, and contribute to the development of knowledge, understanding and policy development for the region.

**International education**

**Student mobility**

People to people relations underpin, and are arguably the most important vehicle for strengthening Australia’s engagement with the Asia. International education is at the core of this relationship building and engagement. Minister Chris Evans recently supported this view:

“...we are very determined to try and lift the number of Australian students who come and study in China, to increase their awareness of China and to make sure we have those very strong people-to-people engagements that I think are at the heart of a strong bi-lateral relationship.” Minister Evans-Beijing doorstop 21 February promoting international education and the Square Kilometre Array.

Student mobility is the basic building block of people-to-people engagement. It is also a key to cultural literacy, and there is much to be gained on all sides in creating opportunity for cultural engagement and exchange throughout society. Australia’s higher education institutions provide a critically important platform for cultural understanding, with trickle-out effects for embracing and benefiting societal heterogeneity within and between Australia and Asia.
It is important to note that Australia’s international students continue to be predominantly from the Asian region – in 2010–11, one fifth of all student visa applications lodged and granted were from China (18% and 20% respectively), followed by India (14% and 12% respectively) and South Korea. In addition to the benefits of people-to-people engagement through international education, it is important to emphasise the significance of this international student market to the economy.

The provision of educational services to international students in Australian schools, colleges, vocational education institutions and universities has grown by an average annual rate of 14% compared with 6% for other service industries, to become Australia’s largest services export industry and the third largest export industry overall behind iron ore and coal:

- In 2009 international education generated $18 billion in export income and had grown by 94% since 2004;
- In Victoria and NSW, international education is the largest and second largest export industry respectively;
- Higher education is the most economically significant component of the international education sector. In 2009, this sector captured 32% of the total student market (630,000 students) and generated 57% of revenues ($10.3 billion);\(^1\)
- On average, each international higher education student generates over $50,000 annually for the Australian economy. Just over a third (36%) of this is spent on tuition fees. The balance is spent on goods and services – generating additional jobs and income;
- The economic activity resulting from international higher education students has recently been estimated to support an additional 100,000 jobs in Australia in 2009, with 80,000 of these occurring outside the education sector; and
- It has been estimated that for every two international students enrolled in an Australian university, one extra job is created somewhere in the economy.

A key dilemma that the sector faces is that unless the quality of the overall educational experience for all students can be sustained and, ideally, improved, international students will simply go elsewhere. This would serve to compound the significant funding challenges that are currently faced by Australian universities as confirmed by the Australian Government’s recent review on higher education base funding. International higher education in Australia is now under severe pressure as a result of several recent domestic and global developments. These include:

- the stronger Australian dollar; (means that the cost of Higher Education courses relative to the US, for example, has increased);
- the continuing impact of world financial instability;
- increased competition from other countries (especially from US, UK and Canada)
- Increased investment in higher education in key Asian source countries; while the developed world has traditionally dominated the market, developing nations are now increasing their share of the market. Countries like China and, in particular Malaysia, are pushing hard to attract international students;
- reputational damage caused by high profile attacks on international (especially Indian) students and the collapse of some private colleges;
- the fall-out from the major changes to student visa and skilled migration requirements, subsequently reviewed and in the process of changing following the recently released Knight Review recommendations;
- the reluctance of some state governments to provide travel and other concessions to international students; and
- accommodation challenges.

Longer term, however, we expect that international student mobility (much of it from Asia) will grow consistently in the foreseeable future due to a number of interconnected factors, which at first glance may seem contradictory (British Council 2004; OECD 2008; 2009).

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- National education systems throughout Asia will continue to expand. International mobility tends to increase with the development of higher education systems and China and India will continue to be the major source countries for mobile students.
- Major source countries like China are unlikely to meet the growing demand for university places through local provision. Therefore, the governments in the source countries will continue to encourage outbound mobility and transnational provision (i.e. delivery of education by overseas providers in the source countries).
- Institutions in both source and host countries will be actively encouraging outbound mobility of their own students through study abroad, exchange and short-term programs (internships, fieldwork, work placements).
- Globalisation and increasing accessibility and affordability of overseas travel, the highly mobile nature of present-day professional careers and intensified competition for talent mean that student mobility will continue to be a dominant feature of global higher education landscape.

However, Government and political support will be required to encourage an increase in the number of Australians studying in Asia. The numbers are growing, and many exchange programs are developing. The numbers, though, need to remain high for Australia’s future engagement with the region, not just in order to learn the language, history and politics of those countries, but also to build people to people ties that will be the bedrock of mutual economic growth and for the development of sustainable regional association. Minister Evans referred to the issue of student mobility in Beijing last week, highlighting that many more Chinese students are travelling to Australia than vice versa:

“At the end of 2011, more than 97,000 Chinese students were enrolled in higher education courses in Australia ... At the same time, it is estimated more than 3,000 Australian students were studying in China.”

Minister Evans press release 21 February 2012

It is important to emphasise that International education is much more than an industry. Large numbers of students return to their home countries to build their careers and retain links and goodwill towards Australia. Equally, these students bring a cultural richness and economic benefits to both the universities and communities in which the students live. The University recognises, though, the difficulties and challenges many face in settling into a foreign country and maximising the full educational experience. The University is keen to ensure the overall student satisfaction of international students, including both success with their tertiary studies and their active participation in the community. However, this desire and vision requires government and community support and engagement in addressing the challenges faced by international students to ensure that Australia remains competitive in the international student market.

International research collaboration

A vital, though less researched, dimension of the internationalisation of higher education is a progressively more globally interconnected nature of research. International research collaboration is driven by a variety of external (environment and policy) and internal (institutional and personal) factors.

... academic research has become more internationalised in many respects over the two past decades. International academic mobility, international collaboration, international influence of science, and funding from abroad have all increased, while new poles of research are gradually emerging in the world. ...³

There is no unified set of data on such mobility. Although the overall trend of academic mobility remains largely from developing and emerging economies to developed

countries, there is a growing flow of academic talent from developed to emerging economies. Korea, as well as Taiwan, China and Singapore have seen a shift from being largely academic talent exporters to English-speaking developed countries to becoming an importer of academic talent from these countries.

International collaborations have become a norm of the modern-day higher education and research environment. A recently published report, by the Royal Society on International Scientific Collaborations, estimates that over a third of all scientific papers have more than one international author. This is supported by data from the University of Sydney database, which demonstrates that research collaboration with Asian academics resulting in publications has practically trebled in only eight years:

![University of Sydney collaborations with Asia: HERDC Publications, 2002-10](image)

Source: IRMA University of Sydney database

The recently released Department of Industry, Innovation, Science, Research and Tertiary Education report, *Science and Research Collaboration between Australia and China 2011*, recognises the increasing strength of the research collaboration between Australia and China, demonstrated in following graph:

![Joint publications](image)

(Defined and ordered by the most joint publications over the entire period 2000-2010, not necessarily any particular year within that period.)

Source: Department of Industry, Innovation, Science, Research and Tertiary Education *Science and Research Collaboration between Australia and China 2011* p66

This recent report sets out clearly why relationship building is essential in developing research linkages with China:

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“China’s research system has a strong role for central government direction and strategic priority setting...the key role of China’s central government in its research system makes government-level linkages an important part of successful collaboration. Establishing a long-term relationship based on mutual trust is vital.”

It is positive that both Australia and China have prioritised the link between science, research and innovation and have both agreed to commit funds to the Australia-China Science and Research Fund. It is the government-level linkages and government prioritisation of collaborative research that will greatly assist in fostering an increase in activity among Australian academics. There is no disputing that many contemporary scientific and societal challenges (e.g. climate change, HIV-AIDS or global finance) require a global approach. Advances in communication technologies have assisted with the development of these collaborations but importantly, it has been international research linkages, such as the US Fulbright and Australia’s Development Awards, and increasingly open access to national research funding schemes that support the development of a favourable environment for global academic collaborations.

There is a need, however, to review the international competitiveness of the Australian Government’s programs in support of fostering people to people research links with China and elsewhere in Asia. We note, for example that the number of postgraduate research scholarships provided to the brightest international students under the Government’s International Postgraduate Research Scholarship (IPRS) scheme has not grown for many years, even though the level of demand from outstanding students from Asia in particular has increased exponentially. Moreover, competitor countries (for example Canada through its Canada-China Scholars Program) appear to have much larger scale and more flexible programs in place to encourage collaboration between Chinese and Canadian researchers. Similarly, the Government’s Endeavour Scholarship program, while an improvement on what went before, remains overly complex and is arguably not being used as strategically as it could be to foster long term relationships between people and organisations in Asia.

In recent years higher education sector groupings of universities such as the Group of Eight have sought to establish strong relationships with the leading Chinese universities, reaching agreement on a variety of innovative collaborations that are being implemented gradually. The sector’s capacity to capitalise on such opportunities is currently limited, however, by the availability of funding in an operating environment where funding to support core teaching and research activities is severely constrained. There may be a strong case for the Australian Government working with Australia’s leading research universities directly to support the creation of larger scale research partnerships with leading Chinese institutions and elsewhere in Asia, for direct, indirect and ‘trickle down’ benefits that this would deliver for the higher education sectors in both countries.

Many of these issues and further ideas were canvassed in the University’s submission and supplementary joint submission to the House of Representative’s Standing Committee on Industry, Science and Innovation Inquiry into Australia’s International Research Collaborations. The University’s submission dated 29 January 2010 is attached as Appendix 1 and the supplementary joint submission dated 21 May 2010 is attached as Appendix 2. The hyperlink to the final report and its useful and pertinent recommendations is below:

Inquiry into Australia’s International Research Collaborations


The University of Sydney’s response/action to the challenges of the Asian Century

China Studies Centre

As previously mentioned, The University of Sydney China Studies Centre is a key pillar of the University’s response to the Asian Century. The University of Sydney is proud to have taught Chinese language and culture for nearly a century and to have developed one of the world’s most comprehensive teams of 130 academic leaders working in partnership with China across all major academic disciplines.

However, the China Studies Centre has a commitment to an interdisciplinary approach to business and community outreach, education and research and will complement the work that is being undertaken at the Australian National University. The China Studies Centre will harness the cross-disciplinary expertise to address the most pressing contemporary problems and opportunities, including business development, emerging markets and business opportunities; public health; urban sustainability and food security; and, social change in China.

The Centre has a clear aim to raise knowledge and understanding of how to do business with China and to strengthen community and business networks. Towards that goal, the Centre has taken a number of steps to assist the business community in its dealings with China. One is the cooperation with the City of Sydney to launch the Sydney China Business Forum in 2011. This is intended as an annual event with the second currently being planned for September 2012 with the additional support of the NSW Government. Another move has been the establishment of a strategic alliance with KPMG to publish a series of business intelligence reports: Australia & China: Future Partnerships. A third has been the introduction of a China Master of Public Administration for middle level managers in Australia and China. The program will be a bilingual, cohort-based experience with limited numbers. Already companies in both China and Australia have signed up to sponsor their staff’s participation in this programme.

China can be likened more to a continent, whose provinces are socio-economically equivalent to countries elsewhere. In population terms Australia would be a very small province in China. The first note of caution in dealing with China is to think that China is ‘behind’ Australia in its development of technology. It is important not to minimize the problems China faces, especially in rural areas, and especially away from the Eastern seaboard. At the same time, it is clear that for a range of reasons (late development and access to advanced technology, state strategic planning, the maintenance of genuine competition in large-scale markets) China is in many areas ahead of Australia. Telecommunications are efficient, effective and cheap, as are urban public transport systems. There are those who criticise the new high speed rail system for its costs and one well-publicized accident but even they presumably might be attracted by the prospect of travelling from Sydney to Canberra in an hour. These days any first time traveller in China can readily observe that while there may be things China can learn from Australia, there are more lessons to be learned in return.

The second note of caution is that it would be a mistake for Australia to remain as overwhelmingly reliant on our mineral exports to China as we are at present. This would be self defeating, not simply because natural resources are necessarily limited, but because by not working synergistically with China and Chinese economic enterprises we run the risk of missing opportunities for innovation and future development in our own economy. Minerals and mining may have the current headlines but increasingly Australian technology is entering the China market, not just in solar panels but in all kinds of new technological areas (grid technology, green buildings, provision of health centres for starters) to meet the challenge of an expanding economy.

The challenge is to develop the people-to-people relations to facilitate and develop opportunities. There is a real need to get people from Australia to China and vice versa. The prominent China expert, Professor David Goodman, Academic Director of the University’s China Studies Centre, has long advocated the establishment of Provincial
Dialogues with China. These dialogues would focus on a single Chinese province or city each year and provide a framework for formal and informal meetings during the year for people from Australia and China to come together to discuss issues of mutual interest and to appreciate each other and their way of life. At a formal level, a Provincial Dialogue could usefully include business people, politicians and academics, who would have separate meetings but at least one ceremonial occasion together. Political leadership is required to make engagement more widespread and mainstream. Professor Goodman points to the success of similar programs following the twinning of towns and cities across countries in post World War II Europe. The involvement of all sections of society in exchange programs worked very effectively to quickly build relationships, understanding and communication channels.

Of course, as we noted above, Chinese students are coming to Australia. The challenge is to maintain and increase these numbers while ensuring the quality of the student experience. Also, importantly, Chinese tourism to Australia has grown by twenty five per cent over the past two years. China is our most valuable growth market for the tourism sector, which employs hundreds of thousands of Australians. It will be vital to maintain our favoured destination status for Chinese tourists, and we suggest, this will include investing in infrastructure and greater cultural literacy skills in the sector.

Southeast Asia Centre
The Sydney Southeast Asia Centre (SSEAC) aspires to be Australia’s premier centre of inter-disciplinary academic excellence on Southeast Asia (Brunei, Burma, Cambodia, East Timor, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam). It aims to forge an innovative and engaged approach to the region and respond to policy needs as well as intellectual challenges, foster regional engagement and equip Australian graduates with the confidence and skills to interact professionally and culturally in the region.

At the University of Sydney, 179 academics and honoraries across 13 Faculties work on or in Southeast Asia, of whom at least 25 have held Southeast Asia-related Australian Research Council Discovery Project grants and 88 have recent publications on a Southeast Asian topic. Moreover, Sydney is already engaged in regional collaborations, involving at least 121 academics and honoraries in applied research or capacity development. This may well represent one of the largest concentrations of academic expertise about South East Asia in the world.

SSEAC will tap into the University's Southeast Asia expertise to give researchers and practitioners working on critical real-world issues – like childhood obesity and food security – access to each other and to academics with the in-depth cultural and political knowledge necessary for sustained regional engagement.

SSEAC will engage extensively with Southeast Asian universities as peers, but also – where appropriate – as a form of outreach, to develop research capacity through SSEAC’s flagship program in Timor-Leste. In the city of Sydney, SSEAC will engage with Southeast Asian community organisations and work with schools to promote Southeast Asia literacy.

Australia is in a strong position geographically, economically and culturally to contribute to the integration of the ASEAN community by the target of 2015, particularly in supporting the response to the 2001 “Hanoi Declaration on Narrowing the Developmental Gap”7 for closer ASEAN integration. AusAID currently provides important funding for projects that address gap issues of poverty, education, health, human rights and infrastructure, but, we suggest, this could be strategically broadened to a multiparty approach to collaboration involving more countries and organisations to create a wider impact.

Suggested actions for consideration
International education

7 http://www.aseansec.org/934.htm
To ensure that Australia is positioned to capitalise on this future growth, Australia must demonstrate in Asia, in particular, that Australia is an open and tolerant nation that values international education for the social, cultural and economic benefits that it brings. Key drivers of growth in international student enrolments will include:

- General improvements in the quality and growth in the capacity of Australian universities through greater policy coherence and increases in base funding per domestic student place.
- General improvement in the overall student experience.
- Policy competitiveness with key countries such as the US, UK and Canada.
- Student visa policy competitiveness and certainty for current and prospective international students and education providers.

Many more Australians need to study, travel, live and work in Asia. There are already some such links but Australian universities and businesses need to develop a higher level of engagement. Our competitors are already establishing large scale exchange programs with countries such as China, where very few Australians are to be found even the in leading universities. For Australia to be positioned to maximise the opportunities of globalisation across business and higher education, Australia needs to develop deeper engagement with Asian universities, industries and local governments which are investing in research and development for the jobs of the future.

**Cultural literacy**

Many more Australians need to speak the major languages and understand the cultures of Asia. Many efforts have been made to emphasise the importance of ‘Asian cultural literacy’ to Australia, with a strong emphasis given to the acquisition of Asian languages as a significant part in the development of that literacy. Yet, as reports continue to show, some languages (e.g. Indonesian) continue to attract only small numbers of students. There is a danger in interpreting ‘literacy’ only as language acquisition. At the same time, it would also be mistaken to interpret literacy as the acquisition of knowledge about the socio-political-cultural and economic life in Asian countries, without language. It is a cliché to say that language is an important artefact of culture, and therefore if Australia is to enhance its knowledge of Asia, it is imperative that it continues to prioritise languages. But unless that cliché continues to be emphasised, the meaning of ‘Asian cultural literacy’ would be narrowly understood as ‘knowledge of the political and economic interests of Asian countries’.

Asian ‘cultural literacy’ should better be imagined as familiarity with the classical and contemporary aspects of Asian culture, ie along with knowledge of the Ramayana and Confucius, should be familiarity with the authors that are well known in Asia (many well-read Australians still have not heard of Murakami, for example), and with the forms of art and popular culture that provide the basis of conversations between Asians. The popularity of anime and manga in Australia might provide a useful starting point for education in a broader kind of cultural literacy. Connected to the rise of tourism and the cultural and political media use, has been the importance of what the analysts call ‘cultural flows’, the influence of Asian media in Australia, beginning with Asian communities, but spreading out to broader communities. Often these influences are felt as a trans-Asian phenomenon, for example the attendance of people with backgrounds from all over Asia at K-Pop and J-Pop concerts, or the popularity of Bollywood film and related cultural forms.

Political leadership – and bipartisan political leadership – is needed to make this a national priority, build community understanding of its importance and invest in the capabilities of schools to teach the skills relevant for this century to a much larger pool of students. Part of the problem is the attitude that Asia is ‘out there’, and not directly engaged with Australia. Politicians of both sides use the cliché of saying that ‘the West is our history, Asia our geography’, when in fact Asia is deeply embedded in Australian history.

**Governance**

Australia is viewed as a role model for reforms in governance and social infrastructure. Australia’s participation in regional economic and financial institutions (ADB, APEC,
G20, etc.) serves perfectly for maintaining a positive image and for exerting its soft power across Asia and the Pacific.

**Public Health**

Health is not specifically mentioned in the Issues paper. The mobility in the Australasian region increases the risk of the spread of transmissible diseases, which requires rigour in biosecurity practices at all borders. Australia’s well developed biosecurity system can be adapted and shared as a model for many countries in Asia, which has benefits for all.

Beyond the issues of transmissible diseases and biosecurity, the lifestyle of Australia and the western world in general has influenced the increasing epidemic of non-communicable diseases (NCDs) throughout much of Asia, particularly cardiovascular heart disease and diabetes. Australia has both a responsibility and an opportunity to strengthen capacity in addressing the challenges for preventing and managing NCDs in Asia.

**Strategic investments**

In addition to the above more immediate issues for consideration, the University would urge the Task Force to consider what strategic investments should be encouraged now to reap future long term benefits for Australia. For example, we are aware of the clear strategic advantages of investment in sustainable technologies, practices and capacity building, to name just one possible investment opportunity. Further, the recent paper by the United Nations Environmental Programme (UNEP, 2011)\(^8\) ‘Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication’, suggests that the main areas for improving economic efficiency and creating a buffer against natural disasters are agriculture, building, energy use, tourism, transport, energy supply, forestry, fisheries, industry, water and waste management.

This is supported by the *Science and Research Collaboration between Australia and China 2011* report which indicates that there is scope for collaborative relationships in the areas of global importance such as sustainable agriculture and energy. The report also clearly states that there are significant opportunities for business to create innovation-driven partnerships with Chinese organisations. The University would urge the consultation process for the White paper to explore strategic priorities for future government support and investment.

The University has many area and subject matter experts who are willing to assist the Task Force with further advice and comments. The initial academic contact points are as follows:

**Countries and regions**

**University International Strategy**

Professor John Hearn, Deputy Vice-Chancellor (International)

[John.hearn@sydney.edu.au](mailto:John.hearn@sydney.edu.au)

**China**

Professor David Goodman, Academic Director of the China Studies Centre

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Professor Hans Hendrichske, Director, Confucius Institute

[hans.hendrichske@sydney.edu.au](mailto:hans.hendrichske@sydney.edu.au)

Professor Jeffrey Riegel, Head of School, School of Languages and Cultures

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**South East Asia**

Professor Adrian Vickers, Professor of South East Asian Studies

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Professor Philip Hirsch, Professor of Human Geography, Director of the Mekong Research Group

philip.hirsch@sydney.edu.au
Assoc. Professor Michele Ford, Department of Indonesian Studies
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Business and China/US/Australia relationship
Professor Geoff Garrett, Dean of the University of Sydney Business School and former CEO, US Studies Centre
geoff.garrett@sydney.com.au

Japan
Dr Olivier Ansart, Chair of Department, Department of Japanese Studies
olivier.ansart@sydney.edu.au

We also have many outstanding academic leaders with disciplinary expertise relevant to each of the thematic areas of public policy listed in the consultation paper on page five, and would be happy to mobilise this capacity to assist the Task Force with its consideration of strategies relevant to each area.

Please do not hesitate to contact Ms Jane Oakeshott, Senior Adviser, Government Relations, in my office in the first instance, if you require any further information or assistance from the University of Sydney: ph: 02 9036 5273 or email jane.oakeshott@sydney.edu.au

Yours sincerely

Michael Spence
Dr Michael Spence  
Vice-Chancellor and Principal  

29 January 2010  

Ms Maria Vamvakinou MP  
Chair  
House of Representatives Standing Committee on Industry, Science and Innovation  
PO Box 6021  
Parliament House  
Canberra ACT 2600  

Dear Ms Vamvakinou,

The University of Sydney is pleased to make the attached submission to the House of Representatives Standing Committee on Industry, Science and Innovation’s inquiry into Australia’s international research collaborations.

The case for ensuring that Australia’s public research organisations and businesses are able to engage effectively in international collaborations was made forcefully in the 2008 venturousaustralia review of the national innovation system, and in Powering Ideas – the Australian Government’s response to that review and others.

The Government has taken a number of important initial steps to make our research system more outward looking and internationally engaged, and this inquiry provides a welcome opportunity to take stock of the current situation – with a view to developing a more strategic and coordinated approach to Australia’s involvement in international research collaborations.

We see room for substantial improvements to be made in the way that Australia engages in international research collaborations through governments, businesses and universities and other publicly funded research organisations working more closely together to provide a framework, information and processes designed to make collaboration as easy as possible – as well as a routine and expected part of Australia’s overall approach to research.

The University of Sydney would be happy to provide further information to the Committee as required.

Yours sincerely  

Michael Spence
University of Sydney submission to the House of Representatives Standing Committee on Industry, Science and Innovation’s Inquiry into Australian International Research Collaborations, January 2010

1. The nature and extent of existing international research collaborations

In 2008 some 32 per cent of the University of Sydney’s 5691 academic publications were co-authored with one or more collaborators from outside Australia, while around 20 per cent of our postgraduate by research students and 23 per cent of all students were drawn from some 130 countries. During 2008 our researchers published with colleagues in some 85 countries, with the United States, the United Kingdom, China, Canada, Germany, France, Japan, New Zealand, Italy and the Netherlands representing the top ten countries our researchers collaborated with – as indicated by the total numbers of publications co-authored with researchers from each country.

We are involved in several research programs funded by the United States National Institutes of Health and the European Union that involve multi-national collaboration, particularly in health and medical research, but also in the physical sciences. We have extensive research linkages with leading international universities throughout the world through our membership of three major international network groups – the Academic Consortium 21 (AC21), the Association of Pacific Rim Universities (APRU) and the Worldwide Universities Network (WUN). These networks give universities that share common goals in major global research challenges the capacity to build mobility and communication using state of the art global conferencing and video link technologies, and provide a platform for connecting leading researchers and educators through contact groups and the resulting research programs that would not otherwise happen.

We will shortly host a node of the renowned European Molecular Biology Laboratory (EMBL) as an important part of a major research and teaching initiative focused on obesity, diabetes and cardiovascular disease. We also plan to play a leading role in Australia’s involvement in the Square Kilometre Array (SKA). Through internal schemes such as our International Development Program Fund, we are pursuing strategies to increase international engagement throughout our teaching, research and outreach activities.1 We particularly encourage our researchers to pursue multilateral partnerships, as well as collaborations that incorporate a research mobility component for postgraduate research students and early career researchers. Furthermore, we encourage international research leaders to come to Sydney to collaborate with our staff by offering around 50 international visiting research fellowships each year for visits of up to 10 weeks.

The University has established substantial international research networks with most of the world’s top 100 universities. These linkages are reviewed annually against criteria that include

1 University of Sydney International Development Fund
national research priorities; our own strategic priorities; the quality and sustainability of the partnership; and the potential for the attraction of short and long term resources. While we are already highly internationally connected in our research and teaching, we recognise that we can only achieve our goal of being a world centre for scholarship, research and education by embedding internationalisation at the core of all of our activities.

It is difficult to pinpoint the full extent of Australia’s existing international research collaborations at all levels for a variety of reasons. At a national level, unlike for Australia’s international bilateral and multilateral agreements on trade and investment, for example, there is no single Government Minister and supporting agency responsible for the negotiation, oversight, coordination, implementation and review of our formal international research agreements. Responsibility for Australia’s research engagement is distributed widely across many Government departments and agencies. Similarly, at the State and Territory level it is not always clear that there is effective coordination with Federal departments and agencies with overlapping interests and responsibilities for research. At the University level, while good information generally exists about collaborations occurring under formal agreements with other institutions, the ‘bottom up’ and informal nature of much research collaboration, the sheer scale of the activity in large institutions, the wide variety and short-term nature of most funding for research, and the constant turnover of research staff and students, all provide challenges for institutions in terms of keeping data current and linkages intact. At the business level, organisations are sometimes reluctant to share information about international research collaborations for commercial or other reasons.

The international research and education framework is a dynamic one, and includes rapid developments in response to major international events such as the global financial crisis and the responses to it from the US, UK, Europe and Asia, pandemics, terrorism and natural disasters. All of the leading 100 research universities in the world are increasing their international activities in research and in competition for the best staff and students. This increasing competition will directly affect Australia’s attraction of talent and research leaders over the next 10 years. It will also affect the retention of Australian talent.

2. The benefits to Australia from engaging in international research collaborations

In Powering Ideas the Australian Government set the core goal of progressively increasing the number of our research groups performing at world-class levels, as measured by international performance benchmarks. This goal will not be achieved unless our research organisations and researchers are entrenched firmly within global research networks and Powering Ideas recognises this by including increased international research collaboration as one of the Government’s seven national innovation priorities.

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3 Powering Ideas, p.5.
4 Powering Ideas, p.4
As a relatively small and geographically isolated nation, responsible for only a fraction of global R&D investment and output, it is vital that Australia’s research system is embedded within the global system. Participation in international research collaborations enables our researchers to access specialist research facilities that are beyond our capacity, or beyond the capacity of any individual nation to provide on its own. It increases the impacts of our research by providing broader avenues for the dissemination of research findings as demonstrated by higher citation rates in some fields. It provides our researchers with the linkages and networks that are essential in order to achieve success in international funding schemes. It ensures that our researchers, governments and businesses have early access to the vast majority of advances in new knowledge and technological innovation that occurs elsewhere – enabling them to apply this knowledge and understanding in an Australian context. In an environment where global competition for the best researchers, educators and research students is intense and looks certain to increase, the personal contacts formed by researchers and students through active participation in international research networks improves our ability to identify and attract top talent to Australia – thus contributing to our long-term national and international competitiveness. Further, publication in internationally peer reviewed journals with colleagues from key institutions in the US and the UK also increases not only our citations, but ultimately contributes to the international ranking of Australian universities. For better or for worse, international league tables of universities are now an entrenched part of the system, influencing decisions by governments, businesses, researchers and students.

Perhaps most importantly, active participation in international research collaborations raises our international standing as an open and engaged, advanced research nation, willing to contribute its fair share of resources and expertise to address global challenges. It also serves to foster friendly relations and understanding between individuals and nations. In this regard the University of Sydney is committed to working in partnership with the Australian Government to promote research and education diplomacy, in line with the Government’s ambition for the future as a middle power with links globally and especially in Asia.

3. The key drivers of international research collaboration at the government, institutional and research level &

4. The impediments faced by Australian researchers when initiating and participating in international research collaborations and practical measures for addressing these

The drivers of international research collaboration at the Government level should align with the practical needs of research organisations and researchers, the key benefits that result from international collaborations such as those outlined above, and agreed national strategic research and innovation priorities. In the absence of such a framework, government decisions appear sometimes to have been driven more by the diplomatic imperatives of the day, rather than

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5 FEAST (March 2009), A Bibliometric Analysis of Australia’s International Research Collaboration in Science and Technology: Analytical Methods and Initial Findings
than by close consideration of the approaches that are most likely to achieve desired outcomes, or of how well specific proposals under consideration fit with other programs and the research system more broadly. Over time, this has resulted in the establishment of various small schemes, administered by different agencies for different purposes – each with its own processes and selection criteria, which often involve high transaction costs and lengthy delays for applicants, with questionable sustainability. It has led to governments often reacting to opportunities as they arise, rather than being in a position to seek out proactively those intergovernmental opportunities that align best with national and disciplinary priorities. It has also led, on occasion, to some confusion about which Minister, department or agency is responsible for coordinating the Government’s consideration of specific opportunities for international research collaborations that can proceed only with the approval and active involvement of the Australian Government.

At the institutional level, the overriding impediment to international research collaboration is access to funds to support such activities for both researchers and research students. The longstanding shortfall in the capacity of competitive and block funds combined to meet the direct and indirect costs of core research activities has made it difficult for Australian universities to provide the resources required to support international collaborations at optimum levels. The introduction of measures such as the Sustainable Research Excellence (SRE) initiative to meet more of the indirect costs of research, improved indexation of block grants and the prospect of performance funding through the proposed compact arrangements will have a positive impact on overall institutional capacity, but this will take time.

Immigration and visa requirements for incoming researchers and students sometimes also serve to impede collaboration in some instances. For example, the Department of Immigration and Citizenship’s recently introduced rules on sponsorship for visits of more than 90 days are quite burdensome, time consuming and require host institutions to pay a fee, while recent changes to the skilled migration laws have also impacted on international students with Australian doctoral degrees, who now face longer waiting times and stricter rules for permanent residency applications following graduation. While tighter rules and regulation of providers to protect against exploitative practices and ensure quality is supported, this should not come at the expense of making Australia a less attractive destination for high quality international students who have so much to offer the Australian research system and the economy more broadly. Further, relatively simple changes such as ensuring that international students are entitled to the same public transport and other concessions as their domestic counterparts can influence perceptions about Australia as a potential study destination.

5. Principles and strategies for supporting international research engagement

The Australian Government has started to articulate new policy principles that have the potential to substantially improve our national research capacity, as well as the way that Australian university researchers engage with their colleagues overseas. It has done this by, for example, moving to open all Australian Research Council Fellowship schemes and Linkage
Australian Postgraduate Award (Industry) (APA(I)) scholarships to international candidates who apply through eligible Australian institutions, and by making a raft of other internationalising changes to the rules of key ARC schemes designed to encourage and support international collaborations. There will always be a need for specific funding initiatives to, for example, foster collaboration with countries that prefer bilateral agreements, enable Australia to join major international research projects, or provide researchers with access to major international research facilities located overseas. Nevertheless, as a general policy principle, embedding the costs associated with international collaboration as allowable expenses within core competitive funding programs is sound, as it provides researchers and institutions with certainty and reduces the transaction costs associated with sourcing supplementary funding from a myriad of smaller schemes.

Based on the above observations the following principles and strategies for supporting and enhancing Australia’s research engagement are offered for consideration by the Committee:

5.1 **Continue to internationalise all Federal funding schemes.** Continue to progressively open up all Federal schemes for research fellowships, higher degree by research scholarships and project grants to international candidates who apply through, or to, an eligible Australian institution. For example, consideration should be given to allowing Commonwealth funding and research partner contributions to meet the tuition costs of international postgraduate research students in receipt of Australian scholarships such as the APA(I)s. The current prohibition on meeting student fees from such sources has diluted the effectiveness and reduced the impact of opening up the APA(I) scheme to the best international candidates. Steps should also be taken to ensure that all Commonwealth competitive schemes (ARC, NHMRC and others) designed to support research projects have internationalisation objectives and include funding to cover the reasonable costs associated with supporting international collaboration.

5.2 **Enhance researcher mobility.** Ensure our immigration and visa requirements for both short and longer-term visits by international researchers promote rather than impede researcher mobility. This may include the active pursuit of agreements with other countries to facilitate the movement of researchers and research students.

5.3 **Attract more high quality international research students.** Scholarship support to attract the highest quality international students to study in Australia rather than in leading institutions in North America or Europe is comparatively limited and of questionable competitiveness. The main Government scheme - the International Postgraduate Research Scholarship Scheme (IPRS) - provides 330 new tuition cost only scholarships a year nationally and has provided around this many scholarships for more than decade. In 2009 the University received an allocation of 30 IPRS scholarships with all successful
candidates ranked in the top 30 per cent of all scholarship recipients (domestic and international). The quality of applicants for the IPRS awards is generally exceptional and demand is consistently strong despite the fact that unlike the major schemes for domestic candidates, IPRS scholarships do not cover student living costs. The IPRS underwent a departmental evaluation in 2009 to examine, among other things, whether the scheme should be integrated and aligned with the main scheme for Australian research students – the Australian Postgraduate Award (APA) scheme - which could then be opened up to international candidates as a single scheme. In an era when domestic demand for postgraduate research studies can be fickle due to changes in economic conditions and the relative attractiveness of research careers in some disciplines, the international market for students represents an opportunity for Australia to attract the highest quality candidates to our research institutions. The University encourages the Review to engage with the Department of Innovation, Industry, Science and Research regarding its evaluation of the IPRS and would be likely to support any recommendations designed to enhance access by the highest quality students, regardless of their nationality.

5.4 **Enhance mobility for Australian research students.** Many Australian postgraduate research students are currently disadvantaged in their ability to build international research connections because of difficulties they face in having an international experience as part of their studies. This is often due to the tight timeframes and funding constraints Australian research students face compared to their colleagues in many leading international research universities. In addition to progressively opening up Australia’s postgraduate research scholarship scheme to high quality international research students, consideration should be given to supporting an optional international research experience of at least six months for holders of Australian Postgraduate Awards. This may require a six month extension to the maximum length of scholarship support available, along with some additional funding to cover travel and other reasonable costs associated with such placements. Funding mobility placements is bilaterally beneficial to both the host organisation based overseas and the home institution and can encourage future collaboration.

5.5 **Establish a new Australian International Research Fund.** Such a fund would provide seed funding, on top of existing competitive resources, to enable Australian participation in major international research and infrastructure programs of strategic value to Australia. The strategies of the European Union which link mobility, migration, future workplace needs, innovation and cultural engagement present a framework that could be drawn upon in an Australian context. There are examples of Australian involvement in such partnerships (eg. EMBL and SKA) but there are many other strategic opportunities Australia could take advantage of if a dedicated fund existed.
Australian governments have tended to be wary of providing research funding support to international organisations, preferring to retain the funds and work bilaterally with countries. While this may provide for the more efficient allocation and control of funds, it also diminishes the engagement of Australia with international organisations on most pressing issues that require international cooperation. These arrangements need to be reviewed. In particular, relations with the EU, UN and development organisations could be managed through an Australian International Research Fund with criteria that include stringent requirements around quality and alignment with the national research and innovation priorities.

5.6 Make a single Minister responsible for international research collaboration at the intergovernmental level. To enhance coordination and to minimise fragmentation and duplication of effort, a single Minister should be made responsible for all decisions about Australia’s involvement in major intergovernmental research agreements and for the oversight and coordination of all Federal programs and activities in support of the internationalisation of Australia’s research effort. Under the current administrative arrangements the Minister for Innovation, Industry, Science and Research would appear to be the most appropriate minister to assume this role.

A unit within the responsible Minister’s department could then act as the key source of expertise and advice to all other Government departments, agencies and research organisations about Australia’s international research strategies, priorities, agreements, programs, and processes. It could, for example, coordinate input on international research matters to the Prime Minister’s Science, Engineering and Innovation Council, the Chief Scientist, the Coordinating Committee for Science and Technology and peak representative bodies. It could also work closely with all government departments (including Immigration & Citizenship), the research funding councils, universities and other research organisations, industry groups and our embassies to make high quality information available about relevant visa rules, intergovernmental agreements, programs, intellectual property opportunities, and the location of research expertise within Australia.

5.7 Promote international cotutelle arrangements and treat them more flexibly. Currently, the Australian government views cotutelle (jointly-badged degree) students as having the status of exchange students and requires that for every one inbound student received by a university, the hosting university should endeavour to return one outbound student to the partner institution. For this reason, cotutelle agreements can only be established where reciprocity is likely, thereby limiting some potentially fruitful collaborations in emerging fields and countries. Cotutelle arrangements at the postgraduate research level provide enormous opportunities to enhance international
research linkages, particularly in countries where issues such as language proficiency sometimes make it difficult for Australian institutions to reciprocate.

5.8 **Explore technology options to support international collaboration.** Australia’s distance from the research hubs of North America and Europe has always made research collaboration relatively difficult and expensive. In a low carbon future and as fossil fuels are depleted, it is possible that air travel will become increasingly expensive and undesirable. Many innovative technological options already exist for facilitating international collaboration and it would be sensible for Australia to start thinking now about future technological options for supporting international research engagement in an environmentally sustainable way.

5.9 **Protect our reputation as a reliable partner in research.** Attention needs to be given also to building and maintaining short and long term relationships that provide our international partners with confidence that Australia can and will deliver in collaborative research. This depends on extending engagement well beyond relationships at the individual researcher level. The Australian Government is increasing its support to international alumni networks in some Asian countries but more could be done, for example, to build links between universities, university and business groupings, and public research agencies in different countries.

5.10 **Use mission-based compacts to drive international collaboration.** The Australian Government’s proposed compact approach to the funding and performance monitoring of Australian universities should be used to reward those universities that improve their levels of engagement in international research collaborations.

Should the Committee require further information on any of the issues raised in this submission our Deputy Vice-Chancellor (Research), Professor Jill Trewhella and/or Deputy Vice-Chancellor (International), Professor John Hearn, would be happy to answer any questions the Committee may have.

January 2010
Dear Ms Vamvakinou

Supplementary submission – Inquiry into Australia’s International Research Collaborations

On 8 April 2010 at the New South Wales Parliament we gave evidence as a group before the House of Representatives Standing Committee on Industry, Science and Innovation inquiry into Australia’s international research collaborations. During the hearing we discussed the many ways by which international research collaborations benefit Australia and proposed some relatively simple steps that we thought the Australian Government could take to improve dramatically the way that Australia engages in such collaborations. In particular, we discussed the value that could be gained if the Australian Government were to:

(1) play a more strategic and proactive role than it does now in the identification and assessment of international research opportunities where Australian participation depends upon the leadership and involvement of the Australian Government; and

(2) take a whole of government approach to ensuring that Australia is an attractive destination for international researchers and research students.

At the conclusion of the hearing you invited us individually to provide more detail about how our ideas might work in practice. With this letter we accept that invitation, but do so as a group with a common interest in seeing Australia maximise its capacity for engagement in international research collaborations - not least because we view this as vital to maintaining the strength and relevance of our domestic research effort.

Current challenges

Intergovernmental research collaborations

During the hearing, consensus was reached by the five of us that, compared with its international competitors, Australia is currently disadvantaged in its capacity to take advantage of significant international research opportunities when they arise. We suggested that this is due to Australia’s lack of a forward looking, transparent, well coordinated and publicly understood framework for assessing opportunities for involvement in international research collaborations at the intergovernmental level. Noting the trend towards large scale multilateral research collaborations that are seeking to address major global challenges and scientific questions – which can take many years to plan – we agreed that Australia would benefit from improving the way that it identifies emerging opportunities and assesses the value of Australian involvement.

Recent experiences with the International Thermonuclear Experimental Reactor, the Square Kilometre Array, Membership of the European Molecular Biology Laboratory and various other smaller bilateral opportunities point to an absence at the Federal Government level of a coherent strategy and responsibility point within Government for determining the value of Australian participation in such opportunities. As a result, our approach to participation in such initiatives appears to have been reactive rather than proactive, with decisions made on an ad hoc basis, sometimes due to diplomatic or political pressure, rather than through an open and considered process. Further, when opportunities for Australian participation emerge, it is often not clear where these should be taken in the Australian Government for consideration; how the Government will make its decision in each case; the timeframe within which such decisions will be made; and the possible sources of funding (if any) that are available to support any potential Australian involvement in a given opportunity.

Facilitating researcher and student mobility

We also discussed at some length the impediments posed to international research collaboration by, for example, Australian immigration, superannuation, taxation, education, public transport and health care policies...
In so far as they apply to researchers coming to Australia for short or longer periods. In particular, we discussed the current difficulties being experienced by some visiting researchers as a result of recent changes to visa regulations including the cancellation of the 418 visa. In our view these changes probably resulted from the Department of Immigration and Citizenship making well-intentioned decisions, but without an understanding of the nature of international research and visits by researchers. Successful international research collaboration relies upon the mobility of researchers and research students. It depends upon ensuring that spending time in Australia is an attractive overall proposition for researchers and their families. It also requires making Australia an attractive return destination for our researchers after spending time gaining valuable experience and contacts working overseas. If we are serious about improving Australia’s long term engagement in international research collaborations then we must do more than we do currently to address the myriad of practical issues, which might individually appear insignificant, but which when combined together serve to deter many high quality international researchers and research students from spending time in Australia (or indeed returning to Australia).

Proposed solution

To address these two related problem areas we suggested that a unit should be established under the Minister for Innovation, Industry, Science and Research, which has clear responsibility for developing, coordinating and communicating Australia’s international research collaboration strategy; and for leading a whole of government approach to facilitating Australian and international researcher mobility. In practice, this is likely to mean a strategically enhanced policy development, program coordination and service role for the existing International Science Branch of the Department of Innovation, Industry, Science and Research.

In relation to the proposed intergovernmental research collaboration function of this unit, we envisage that it would have formal links with the following agencies:

- Within the Innovation, Industry, Science and Research Portfolio - the Chief Scientist, the Prime Minister’s Science, Innovation, Engineering Council, the Australian Institute of Marine Science, the Australian Research Council, the Australian Nuclear Science and Technology Organisation, and the Commonwealth Scientific and Industrial Research Organisation.
- Within the Agriculture Fisheries and Forestry Portfolio – the various Rural Industry Research and Development Corporations.
- Within the Defence Portfolio – the Defence Science and Technology Organisation.
- Within the Health and Ageing Portfolio - the National Health and Medical Research Council.
- Within the Foreign Affairs and Trade Portfolio, the Department and the Australian Centre for International Agriculture Research.
- The Department of Education, Employment and Workplace Relations.
- The Department of Immigration and Citizenship.

The unit would coordinate a cross-department ‘council’ on international research collaboration, to be chaired by the Chief Scientist and tasked with achieving a whole-of-government approach to the identification and assessment of intergovernmental research collaborations, along with the facilitation of researcher mobility (see below). The unit would also maintain close links with industry peak bodies, universities, other publicly funded research organisations, disciplinary and cross-disciplinary research communities to ensure that expert advice is provided to the Government as early as possible about whether an opportunity is likely to be of strategic value to Australia. It would establish and manage a transparent process for assessing, against agreed criteria, competing international research opportunities as they emerge and would have responsibility for advising the Minister about the strategies the Government should pursue in relation to each opportunity. The criteria for assessment might include, for example:

1. the quality and uniqueness of the research underpinning the collaboration;
2. its fit with national strategic research priorities;
3. its fit with national research strengths and/or weaknesses;
4. the opportunities for Australian industry, researchers and students to benefit from the partnership;
5. the extent to which Australian participation would enhance Australia’s broader relationships with the countries involved; and
6. the cost and value for money.

The process of identification, assessment and advice to Government would be ongoing. The approach taken through the National Collaborative Research Infrastructure Strategy could be drawn upon as a possible model for developing a framework for assessing competing opportunities in different disciplinary and thematic areas of research. Ideally, a dedicated pool of funding would be made available to support new strategic
partnerships, but if not, the criteria and process by which the Government would make its funding decisions would be available publicly.

In relation to researcher mobility, this would first require an overarching commitment from the Government to prioritise the easy movement of researchers in and out of Australia as part of its productivity and innovation agenda. The unit would then be tasked with responsibility for achieving policy and procedural reform, at the Commonwealth and State levels, to maximise Australia’s overall attractiveness to high quality researchers and research students. It would do this through a process of ongoing consultation, policy review and reform, which would take some years given the sharing of relevant responsibilities between different levels of government. In the meantime, the unit would also play an important role as the main point of information, advice and advocacy for research organisations that require assistance in expediting the applications of sponsored and collaborating researchers through the Department of Immigration and Citizenship and other relevant agencies.

We welcomed the opportunity to discuss these important issues with the Committee on 8 April and trust that this supplementary submission will assist the Committee as it considers the content of its report to the Government.

Yours sincerely

Professor Mike Calford

Professor Margaret Harding

(Signatures withheld for electronic distribution)

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