

Meeting of IARU Presidents

Yale University

22 – 23 April 2008

Monday 21 April

- 1815 Guests to meet in the foyer, the Omni Hotel
- 1830 Informal dinner hosted by Yale University President Richard C. Levin
(President's House)
- 2100 Guests transported to the Omni Hotel

Tuesday 22 April

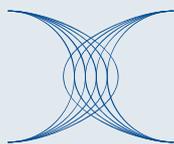
**The President or representative of the university listed in the italics will be invited to lead discussion of that topic*

- 0845 Guests to meet in the foyer, the Omni Hotel
- 0900 – 0905 Welcome – President Levin
- 0905 – 1015 Meeting session 1 (Golden Center)
1. Welcome – IARU Chair, Professor Ian Chubb AC
(Approx. 10 minutes)
 2. Sustainable campus initiatives (Approx. 60 minutes)
 - 2.1 IARU Campus Sustainability Plan (*Yale University*)
 - 2.2 Sustainability Fellowship/Internship (*Yale University*)
 - 2.3 IARU International Scientific Congress on Climate Change in
Copenhagen March 2009 (*University of Copenhagen*)
 - 2.3.1 Discussions around branding and association
- 1015 – 1045 *Morning tea*

- 1045 – 1130 Meeting session 2 (Golden Center)
3. Report and discussion of the conference on “Women and Men in the Globalizing University” (*Yale University*)
- 1130 – 1215 Tour of Yale Residential Colleges
- 1215 – 1330 *Lunch in the Master’s House, Pierson College*
- 1345 – 1520 Meeting session 3 (Golden Center)
4. General discussion of IARU research directions
- 4.1 Funding strategies and protocols related to approaching external stakeholders (Approx. 20 minutes)
- 4.2 IARU Global Change projects (Approx. 40 minutes)
- 4.2.1 Ageing, Longevity and Health (Approx. 10 minutes) (*University of Copenhagen*)
- 4.2.2 Energy, Resources and Environment (Approx. 10 minutes)
- 4.2.2.1 Proposal for a Demonstrative Project on Sustainable Cities (*University of Tokyo*)
- 4.2.2.2 International Symposium on Sustainability Science (ISSS) (*ETH Zurich*)
- 4.2.3 Security (Approx. 10 minutes) (*The Australian National University*)
- 4.2.4 Mobility of People (Approx. 5 minutes)
- 4.2.5 Summary of discussions (Approx. 5 minutes)
- 4.3 Building new projects under the Global Change umbrella - lessons learned and the next round (Approx. 20 minutes)
- 4.3.1 Global culture and citizenship proposal (*The Australian National University*)
- 4.3.2 Engaging younger staff in IARU Research Collaboration (*University of Oxford*)
- 4.4 New initiatives and directions (Approx. 15 minutes)
- 4.4.1 Industrial innovation proposal (*University of Cambridge*)
- 1520 Conclusion of Tuesday meetings
- 1530 Guests returned to the Omni Hotel
- 1530 – 1630 *Optional presentation and discussion of emerging digital technologies*
- 1630 Guests returned to the Omni Hotel
- 1815 Guests to meet in the foyer, the Omni Hotel
- 1830 – 2100 *Reception and Dinner (Yale Center for British Art)*
- 2100 Guests transported to the Omni Hotel

Wednesday 23 April

- 0845 Guests to meet in the foyer, the Omni Hotel
- 0900 – 1000 Meeting session 4 (Woodbridge Hall)
- 5. Education initiatives (Approx. 30 minutes)
 - 5.1 Global Summer Program (*Yale University*)
 - 5.2 Research-led teaching (*University of Oxford*)
 - 6. Evaluation of success of IARU and next steps (Approx. 30 minutes)
- 1000 – 1045 *Morning tea (Sterling Memorial Library)*
- 1045 – 1145 Meeting session 5 (Woodbridge Hall)
- 7. IARU membership (Approx. 20 minutes)
 - 8. Business Matters
 - 8.1 Student Exchange (*Peking University*)
 - 8.2 Location of Presidents meeting 2010
 - 8.3 Other business items
- 1145 – 1200 Closing summary and remarks – IARU Chair, Professor Ian Chubb AC
- 1200 – 1215 Group photo
- 1215 – 1400 *Presidents lunch in Executive Session (Sprague Hall)*
IARU delegates (Silliman College)
- 1400 Guests returned to the Omni Hotel
- 1400 - 1530 Optional tour around Yale University
- 1530 Guests returned to the Omni Hotel
- 1845 Guests to meet in the foyer, the Omni Hotel
- 1900 - 2130 *Informal drinks and dinner, Barcelona Wine Bar, 155 Temple Street*



Meeting of IARU Presidents

Yale University
22 – 23 April 2008

Attendees

Yale University

Mr Richard C. Levin, President
Ms Linda Lorimer, Vice – President
and Secretary
Mr Donald Filer, Director, Office of
International Affairs

The Australian National University

Professor Ian Chubb, Vice-Chancellor
Professor Mandy Thomas, Pro Vice-
Chancellor (Research)
Mr Tim Beckett, Registrar
Mr Darren Brown, Director, International
Development

ETH Zurich

Professor Dr Ralph Eichler, President
Dr. Margrit Leuthold, Head Strategic Planning

National University of Singapore

Professor Shih Choon Fong, President
Professor Tan Chorh Chuan, Senior Deputy
President
Professor Barry Halliwell, Deputy President
(Research and Technology)
Professor Lily Kong, Vice President
(University and Global Relations)

Peking University

Professor Xu Zhihong, President
Mr Li Yansong, Assistant President, Director
Office of International Relations
Professor Lu Zhi, Professor

University of California, Berkeley

Chancellor Robert J. Birgeneau, Chancellor
Dr John Lie, Dean, International and
Area Studies

University of Cambridge

Professor Alison Richard, Vice-Chancellor
Dr Kate Pretty, Pro Vice-Chancellor for
International Strategy

University of Copenhagen

Professor Dr Ralf Hemmingsen, Rector
Dr Lykke Friis, Vice-rector
Dr John E. Andersen, Director of
International Affairs

University of Oxford

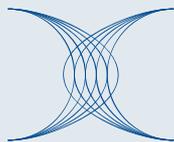
Professor Ewan McKendrick, Pro – Vice
Chancellor (Research, Academic Services and
University Collections)

The University of Tokyo

Professor Hiroshi Komiyama, President
Professor Kazuhiko Takeuchi, Vice President
for the Division of International Relations
Ms Mami Yagihashi, International Planning
Group, International Affairs Department

IARU Secretariat

Ms Amelia Whitelaw



IARU Campus Sustainability Plan

To: Presidents of IARU institutions
From: IARU Chair
Date: April 16, 2008
Re: IARU Campus Sustainability Plan

I would like to draw your attention to the IARU Campus Sustainability Plan which we are planning to discuss next week. I am hoping that one of the outcomes in next weeks meeting would be agreement that by the March 2009 Congress in Copenhagen, all IARU members will announce greenhouse gas emission targets that are appropriate to their circumstances. This would mean that we would need to be prepared next week to make a commitment to this goal.

I am highlighting this to ensure sure that we each consult with our senior officers in this field prior to departing campus to ensure our discussions can achieve this outcome.

IARU Campus Sustainability Plan

Introduction

At the Presidents' meeting held in March 2007, in Canberra, it was agreed that a sustainability strategy be developed for the International Alliance of Research Universities (IARU). A discussions paper was subsequently presented at the Senior Officers' meeting held in September 2007, in Tokyo, where it was agreed that the ANU and Yale would develop a proposal to be considered at the 2008 Presidents' meeting. This proposal was to be developed in consultation with representatives nominated by IARU members.

The ANU/Yale initially sought input from IARU members detailing their current campus environmental management plans. Using this information, along with analysis of specific regional and international targets, a draft strategy was developed. This first draft is included as Attachment A.

The purpose of this draft was to prompt discussion on specific issues, including the scope of the strategy, metrics and targets.

Comments were received from a number of Universities and they have been attached as appendices to this document.

The following proposals have been developed from these comments and attempt to balance the stated desire of the IARU Presidents to demonstrate international leadership in the area of corporate sustainability against obvious regional and institutional differences.

Summary of proposals

The following table summarises the proposals detailed in this paper

Proposal	Action	Metric	Target
IARU members to develop broadly based Environmental Management Plans for respective Universities which includes regional priorities	Development of plans	NA	Plans to be completed by 31 December 2009
Develop IARU Campus Sustainability Plan with focus on greenhouse emissions from energy and travel	<p>Proposed approach to be reviewed at 2008 Presidents Meeting.</p> <p>Plan to be finalised at proposed workshop to be held at UC Berkeley in October 2008.</p> <p>Detailed greenhouse gas inventory to be compiled by all Universities by 31 December 2008.</p> <p>Individual institutional targets to be finalised by 31 January 2009, for review at the 2009 IARU Presidents' meeting (<i>with the aim to announce individual institutional targets at the Copengahen Congress in March 2009</i>).</p>	<p>Energy (Electric/ Heat): CO₂ per EFT per annum.</p> <p>All new buildings and major refurbishments to be constructed using national best practice standards in ecologically sustainable design</p> <p>Travel (Air and Fleet) Internationally accredited conversion formulas for measuring CO₂ produced by travel.</p>	<p>Energy: Targets to be finalised by 2009, with targets to reflect individual University's circumstances (notionally, the target range will be between 5%-25% reduction by 2020. Institutional targets to be finalised by respective Universities by 31 January 2009)</p> <p>Travel: All emissions to be offset for necessary travel by 2012 using either external carbon offsets or by individual University investment in innovative technology or design on campus that will reduce emissions from University activities/facilities.</p>
Reporting	Annual report detailing the cumulative impact of IARU members actions in reducing emissions, to be presented to Presidents' meeting from 2010.	NA	Report format to be developed in consultation with IARU members and finalised at the proposed workshop to be held at UC Berkeley in October 2008.

Action required by Presidents

Endorse the proposals detailed in the paper (summary above) and approve the following recommendations:

1. IARU Sustainability Strategy to focus on reducing greenhouse emissions
 - Greenhouse emissions inventory to be developed by members, by 31 December 2008
 - 2006 to be established as the base year for measuring emissions from electricity and heat
 - All emissions from official travel (air and fleet) to be identified by 2012
 - Emissions to be measures against full time equivalent staff/student (CO₂ per EFT per annum)
2. Targets for reducing emissions (between 5%-25% by 2020) to be set by each University based on individual circumstances. Targets to be identified by Universities by 31 January 2009 and reviewed at the 2009 Presidents' meeting to be held at Cambridge (*with the aim to announce individual institutional targets at the Copengahen Congress in March 2009*).
3. A workshop to further develop Sustainability Strategy be held at UC Berkley in October 2008.

Scope

The feedback from IARU members identified that all Universities had a commitment to improving their campus environmental performance. Several respondents did point out that there were specific regional issues that did not affect other members.

There was general agreement that Universities should each have a broadly based Environmental Management Plan that included strategies for addressing local/regional environmental priorities and where appropriate IARU members with similar objectives in other areas (such as water, biodiversity, organic food production, etc) should establish collaborative arrangements.

However, all responding Universities agreed that the *reduction of greenhouse emissions* transcended national boundaries and therefore, they felt that this should be the primary focus of the initial IARU Campus Sustainability Strategy.

It was also agreed that the focus of this strategy will be reduction of emissions generated in the two key areas identified as the major sources: energy (electricity and heat) and travel (air and fleet miles).

Greenhouse emissions

All the responses to the original proposal agreed that the main focus of the IARU Sustainability Plan should be the reduction of greenhouse emissions.

To achieve an effective approach, it will be necessary to establish appropriate metrics and then use these to finalise targets for reducing greenhouse emissions.

Metrics – Energy and Heat

The feedback from responding Universities generally supported the following approach to establishing metrics:

IARU members develop a comprehensive greenhouse inventory detailing all major sources of emissions. For consistency, and to minimise administrative effort, an inventory template would be developed using the examples provided by Yale University and Cambridge University. This can be used by Universities which have not already completed their inventories. Inventories would be completed by 31 December 2008.

2006 to be used as the *base year* for establishing for the initial measurement of emissions generated from energy and heat. While 1990 is sometimes used by governments and organisations this is linked to the Kyoto Agreement. However, a number of IARU members do not have data on energy emissions that date back to that year.

Only emissions generated from operations under University management control will be recorded. In some cases this may exclude student accommodation. Where student accommodation is under University Administration, where possible the emissions should be shown separately in the inventory.

The emissions will be measured against equivalent full time staff and student (ie. CO₂ per EFT per annum). A number of responding Universities felt that this measure would take into account campus growth, while also emphasising the fact that emissions are the product, in large part, of campus community consumption.

All new buildings and major refurbishments to be constructed using *national best practice standards* in Ecologically Sustainable Design.

Metrics – Travel

IARU members will establish a process to identify emissions generated by “official” air and fleet travel, by 31 December 2010. These data will be included in the subsequent greenhouse inventory and reported prepared by each University.

Targets

Energy and Heat: A number of responding Universities disagreed with the initial proposal to establish the target of reducing greenhouse emissions from energy and heat by 25% by 2020. Some felt that a detailed inventory of emissions should be completed before agreeing on a target, while others noted that they had established a number of long-term energy efficiency strategies (dating back to the mid-1980s) and consequently a reduction on that scale would be difficult to obtain.

Given the IARU's desire to demonstrate leadership in this area, an appropriate target is necessary. While 25% is challenging, it should be considered against the fact that it would need to be reached over the next 12 years - a period which is likely to see significant improvements in technology and design (both within University operations and more broadly, in national energy production), with consequent reductions in emissions. Additionally, the metric to be established is CO₂ per EFT, hence as University communities grow in size and provided there is improved efficiency in facilities use, there should be a decrease in emissions per staff/student.

However, acknowledging that this is the first step in establishing a long term sustainability strategy for IARU members, the most suitable approach may be for the *members to agree that emissions reduction targets (between 5% - 25% by 2020) be established by each University based on their own particular circumstances*. These targets should be established by individual Universities by 31 January 2009 and reviewed at the 2009 Presidents' meeting to be held in Cambridge.

Travel: The initial proposal forwarded to IARU representatives recommended that emissions generated by travel (air and fleet) should be off set completely by the purchase of carbon credits by 2012. Carbon offsets are controversial, though generally accepted as medium term strategy for reducing air travel emissions while more efficient airframe and fuel technologies are being developed. However, given the concerns expressed, *a more flexible approach is suggested, with IARU members choosing- where travel is necessary- to either offset or invest in technologies/design that would reduce the emissions generated from their own campus facilities/operations (effectively, an internal "off set" program)*.

Reporting

An annual report will be presented to the Presidents' meetings from 2010. The format for this report is yet to be determined (see next section related to the proposed UC-Berkeley meeting in October 2008). However, in general, it should detail the overall performance of the IARU rather than individual performance of members. The report would not be used to "rank" performance, though specific initiatives that have achieved significant improvements in campus sustainability would be detailed. The report might also mention significant academic programs dealing with global sustainability. While these do not directly relate to campus operational performance, they would highlight the role that Universities are playing in addressing the larger issues and put therefore put their environmental impact in context.

Next Steps/Resources

Subject to agreement by the Presidents, a workshop will be held at UC - Berkeley to coincide with the Senior Officers Meeting being held in October 2008. The primary objectives of this workshop will be:

- Finalise greenhouse inventories for all IARU members
- Develop, in more detail, the metrics listed in this paper
- Develop the process for reporting to annual Presidents' meetings
- Discuss strategies that will be employed by Universities to achieve reductions in greenhouse emissions
- Identify opportunities for collaboration/information exchange (including the establishment of an online campus sustainability forum, benchmarking options and staff exchange opportunities)

Resources may be required to assist UC Berkeley in establishing the workshop.

Resources will also need to be identified to coordinate compilation of the annual report and management of online activities, sustainability officer networks and possible collaborative programs (including staff exchanges).

Bart Meehan
Associate Director
Facilities and Services
The Australian National University

Attachment A – Discussion paper detailing initial proposal for IARU Sustainability Plan, forwarded to IARU representatives for comment

Draft Discussion Paper

IARU Sustainability Plan – 2008-2011

At the IARU Senior Officers' meeting held in Tokyo in Sept 2007, it was agreed that a proposal for an IARU Sustainability Plan would go to the Presidents' meeting to be held in April 2008, at Yale University. The proposal was to be brief, but include targets and metrics options.

IARU members were subsequently asked to nominate representatives to work with ANU (as the coordinating University) to develop this proposal. As the first step, each member institution was asked to provide feedback on their current environmental programs and associated targets.

The following proposal has been developed from the responses received.

It is noted that agreement to the objectives outlined in this document does not prevent IARU members from having more aggressive targets, or an environmental management strategy that is more broad ranging. This Plan provides a base from which all members can work.

What we have in common

Most of the responses highlighted the differences between us, that is things such as regional variability, energy sources, age of building stock and maturity of campus environmental programs. However, what was clear is that IARU members have in common the desire to improve their campus environmental performance.

Reviewing the feedback from all Universities, it appears that member institutes can be divided into three groups. The first are Universities that have well developed campus environmental initiatives, established for several years and which include a program of investment and engineered solutions for improving corporate performance (particularly in energy and water consumption). The second are Universities with relatively "new" initiatives which are, nonetheless, comprehensive in scope and well funded. The third are Universities who are currently developing their campus programs and as such, are yet to formalise targets and management structures.

This creates differences that need to be reflected in an IARU Sustainability Plan.

Scope of IARU Plan 2008

Not surprisingly given the international interest in climate change, all Universities indicated that the management of greenhouse emissions was their key priority. The importance of other environmental issues, such as water conservation, waste management and biodiversity, varied depending on the region.

Consequently, while acknowledging these other issues (see section below), the IARU Sustainability Plan should focus on greenhouse emissions.

To this end, it is necessary to have a full understanding of what activities generate GHG emissions on campus through the completion of a GHG inventory. A template for an inventory is being developed to assist those Universities who have yet to complete this process. The template will be finalised after the April meeting and the process for completion of an inventory will be part of the discussions at a planned workshop to be held in October 2008 at University of California – Berkeley.

While it is clear there are a number of sources of greenhouse emissions, the main sources remain energy use (including electricity and heat); air miles and motor vehicle fleet miles. Consequently, these will be the main focus of this Plan, with strategies for addressing other sources of emissions to be developed after the Universities have completed their inventories.

The Plan would apply to all operations/buildings under the University's control.

Greenhouse Emissions Targets and Metrics

Given the differences between institutions, it is necessary to establish different targets for the various GHG sources.

Energy and Heat

In establishing a metric to measure the reduction in emissions from energy sources it is necessary to reflect efficiencies that have already been achieved by some Universities, as well as, accommodate projected growth. While there may be some value in using emissions per EFT to *drive* a community awareness program, this metric is an unreliable measure of performance as increases in population may see the emissions per person decrease simply because we have more people using the facilities. This would not necessarily mean there are efficiency gains in operations and/or building performance and as a consequence, there has been no real reduction in emissions.

The measure proposed by most of the IARU members is an emissions level per square metre of built space. This would only apply to emissions generated by energy use and heat, with a metric being developed for each existing building. The target proposed for Energy and Heat is:

Target - 25% reduction in CO₂ emissions from University owned/operated buildings by 2015. (Reduction can be achieved through engineered solutions and/or the purchase of alternative (green) energy)

Metric - CO₂ emissions per square metre of building space.

This is only applied to existing buildings. To ensure effective environmental performance of new buildings, these will be constructed using the relevant ESD standards and the design/operation will reflect national best practice.

Air Miles

In most cases, IARU members are not measuring emissions from official air travel. Yet air travel is a significant contributor to the GHG profile of a University. It is also an area where we can make an absolute reduction in emissions by a combination of using alternative travel options, where appropriate (for example, rail in Europe); video conferencing; and purchasing carbon offsets. The latter option is sometimes criticised, but in reality there are few alternatives to air travel and very limited “green options” within the industry. This will change in the coming years with more efficient aircraft and fuels, but until it does, offsetting is the most effective way of neutralising the environmental impact of necessary travel. The key will be to identify a reputable offset source. There is a generally accepted formula for calculating emissions from commercial flights. The ANU has completed some initial research in this area and believes that the cost of carbon offsets (using a combination of green energy credits and carbon sequestration) will be between 6%-10% of the economy air fare.

Target – 100% measurement and offset/reduction in emissions by 2012

Metric – There is no real metric required if it is agreed that there is a 100% reduction in emissions. However, Universities should establish a process to measure/estimate current emissions from travel, so the total annual saving by the introduction of this initiative can be identified.

Fleet Emissions

All Universities have motor vehicle fleets which generate carbon emissions. The target should be to neutralise these emissions by a combination of alternative transport (eg. hybrid vehicles; bicycles, public transport) and carbon offsets. The cost of offsets is estimated at \$(US)30 per vehicle per annum.

Target – 100% measurement and offset/reduction in emissions by 2012

Metric - There is no real metric required if it is agreed that there is a 100% reduction in emissions. However, Universities should establish a process to measure/estimate current emissions from travel, so the total annual saving by the introduction of this initiative can be identified.

Base Year

Nominating a base year to measure emissions generated by energy and heat is difficult, largely because some members do not have comprehensive energy use records. Given that, the option is to nominate 2 x base years which Universities can measure against (provided they have the data). Based on the responses received, the most appropriate years are: *1990 and 2006*.

The base year for measuring current emissions from air travel and fleet would be 2010, with full measurement processes in place by 2012. This gives members the time to identify the current level of emissions and to introduce policies/procedures to eliminate/off set all emissions from these sources.

Reporting

Each University will complete a brief report on their progress towards achieving the targets established in this plan. An IARU member institution will be nominated to consolidate these reports and present a summary to the annual Presidents' meeting.

The summary should be made available to the respective campus communities.

Broader environmental issues

As noted above, the IARU members have different regional priorities. For example, in Europe, the issue of "food miles" is important, whereas in Australia and Asia, water conservation and pollution controls are key objectives.

It is not practical to reflect specific regional targets in an IARU Plan. However, these issues should be reflected in a broad statement agreed by IARU members along the following lines:

The members of the International Alliance of Research Universities are committed to reducing their impact on the environment and to that end have established environmental plans to improve their performance in areas of international and regional concern. The Universities have implemented programs, where relevant, to reduce greenhouse emissions, waste generation and water consumption, as well as, improving biodiversity and pollution controls. The Universities are also committed to building ecological awareness within their communities.

Review of IARU Plan

This plan will be reviewed in 2011.

Next steps

The Plan will be presented to the Presidents' meeting to be held at Yale University in April 2008. Subject to their agreement, IARU members will begin to compile greenhouse inventories and develop strategies for meeting the agreed targets.

Representatives from IARU institutions will meet in a workshop to be held at University of California – Berkeley, to refine these targets and finalise the metrics methodology.

Nominated Campus Sustainability representatives

ANU	Mr Bart Meehan	Associate Director, Business and Site Services
ETH Zurich	Mr Dominik Andreas Brem	Division for Safety, Health and Environment
NUS	Mr Joseph P Mullinix	Deputy President – Administration
PKU	Prof Lu Bing	Deputy Director of Development and Planning Office
	Prof Li Qiang	Assistant President
UC Berkeley	Vice Chancellor Ed Denton	Facility Services
Cambridge	Mr Michael Bienias	Director of Estate Management and Building Services
Copenhagen	Mr Hans Halvorsen	Campus Programme Manager
Oxford	Mr Philip Pike	Estates Directorate
UT	Prof Keisuke Hanaki	Dept. of Urban Engineering
Yale	Dr Julie Newman	Director, Office of Sustainability

How did Berkeley establish the targets reducing GHG emissions?

Feasibility Study

Berkeley identified its carbon reduction target following a year-long feasibility study, initiated by the campus's Chancellor's Advisory Committee on Sustainability (CACs). The Cal Climate Action Partnership (Cal CAP) — a collaboration of faculty, administration, staff, and students working together to reduce greenhouse-gas emissions at Berkeley – was established at the campus's 2006 Sustainability Summit. Cal Cap's mission is to develop a strategy and implementation methods for significantly reducing UC Berkeley's GHG footprint without compromising its functions

The Cal CAP feasibility study began by creating a carbon emissions inventory for campus activities, and then identified greenhouse gas mitigation projects, and assessed the financial feasibility of emissions reductions through various campus initiatives. The key project deliverable was an institutional model for implementing campus emissions reduction projects.

Steering Committee

The Berkeley campus is highly decentralized and in order to create a credible study and achievable yet challenging target, the campus formed a policy group, the Cal CAP Steering Committee. This group brought together a broad constituency from across campus to provide recommendations to the Chancellor. The Steering Committee reviewed every major direction of the study – a process that ensured an interdisciplinary foundation and formation of recommendations that are visionary yet practical for the UC Berkeley campus.

The Steering Committee provided guidance as the study progressed and analysed the emissions reduction and financial feasibility for three separate emissions targets as applied to UC Berkeley through 2050. The targets evaluated were:

- US targets from the first commitment period of the Kyoto Protocol (7% below 1990 levels by 2008-2012);
- California state targets (2000 levels by 2010, 1990 levels by 2020 or AB-32, and 80% below 1990 levels by 2050); and
- A target appropriate for UC Berkeley based on the identified projects and their financial feasibility.

Inventory

The Cal CAP Feasibility Study team determined that the California Climate Action Registry (Registry) was the logical choice for UC Berkeley to use to ensure consistency with other state inventories and to help protect against future state legislation. The University joined the California Climate Action Registry (the Registry) in October 2006 to voluntarily report its emissions and the emissions from the identified sources will be certified this year. The Registry requires reporting emissions from electricity consumption, steam use, natural gas consumption, university fleet, and fugitive emissions of coolants. The Cal CAP Steering Committee recommended that we consider additional optional sources to more closely understand our overall carbon footprint, and in better preparation for meeting the goals outlined in AB-32, which California Air Resources Board may choose to regulate.

Cal CAP also used the Clean Air – Cool Planet (CACP) Campus GHG calculator to expand the scope of emissions sources so that the results of our inventory could be more complete and automatically roll into a trend analysis.

California Climate Action Registry

The campus utilized the reporting protocol of the California Climate Action Registry (CCAR), and measured required sources as well as sources not required by that registry but of concerns and interest to the campus. The Registry was established by California statute as a non-profit voluntary registry for greenhouse gas (GHG) emissions. The purpose of the Registry is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emission reduction requirements may be applied. Registry participants include businesses, non-profit organizations, municipalities, state agencies, and other entities.

The Registry requires that any year from 1990 forward be used as a base year. The Registry has developed a General Protocol and additional industry-specific protocols which give guidance on how to inventory GHG emissions for participation in the Registry: what to measure, how to measure, the back-up data required, and certification requirements. When organizations become participants, they agree to register their GHG emissions for all operations in California, and are encouraged to report nationwide. Both gross emissions and efficiency metrics will be recorded. The Registry requires the inclusion of all direct GHG emissions, along with indirect GHG emissions from electricity use.

The Registry requires the reporting of only CO₂ emissions for the first three years of participation, although participants are encouraged to report the remaining five GHGs covered in the Kyoto protocol (CH₄, N₂O, HFCs, PFCs, and SF₆). The reporting of all six gases is required after three years of Registry participation.

The campus has had its inventory certified by the Registry and upon completion of the reporting and certification processes was designated a Climate Action Leader. <http://www.climateregistry.org/PROTOCOLS/>

What would the base year be?

I suggest that measurements are not absolute but relative; a common base year is probably of no relevance to the broader goal of directing emissions downward.

Findings and Reduction Target

The Cal CAP study gave the campus enough confidence to announce a commitment to reach 1990 emissions levels by year 2014. This target, announced by Chancellor Birngeneau in April 2007, will meet the state required greenhouse-gas emissions six years earlier than the target set by California Assembly Bill 32, the Global Solutions Warming Act. The results of the study indicated that the campus can meet the new objective by increasing energy efficiency and conservation.

To achieve the target, the campus will first implement infrastructure-related emissions reduction projects, starting with the most cost effective (i.e., highest \$/ MTCO₂e) projects, and then invest in additional projects or purchase Renewable Energy Credits (RECs). Concurrent with these projects, the campus will aggressively invest in energy efficiency as a cost-effective GHG mitigation opportunity.

Should they be % reductions?

Yes, generally % reduction targets should be used, although if the university is a part of an organization that has already set a target, such as a local municipality or larger university system (University of California) the institution should use that target as a baseline/benchmark for evaluation.

Should they be different for different Universities based on the maturity of their environmental programs?

Each university should have different targets because of the varying maturity of their institutions overall, not necessarily only their environmental programs. The complexity of their operations and size are big determinants/influences for the targets, also the expectation the degree to which other institutions look to them for leadership.

Even though Berkeley is a mature institution, with relatively advanced environmental practices, the campus only recently adopted a Statement of our Commitment to the Environment

Statement of our Commitment to the Environment <http://campuspol.chance.berkeley.edu/policies/environment.pdf>

The statement solidifies the institution's commitment to taking a leadership role as responsible stewards of the physical environment and to using educational and research activities to promote environmental awareness, global thinking, and local action. This commitment includes:

- Protecting and enhancing the campus environment;
- Purchasing environmentally preferable products, minimizing the use of toxic substances, and handling wastes responsibly;
- Conserving natural resources through their sustainable use in building projects, transportation, and campus operations;
- Significantly reducing campus greenhouse gas emissions;
- Conducting innovative research on sustainable technology and practices;
- Increasing awareness of these values through instruction and example; and
- Collaborating with a diverse and engaged campus community on these issues to help fulfill the

University's mission.

We are making this commitment because:

- UC Berkeley is a world leader in education and research, and must also be a leader in environmental stewardship;
- Realizing these values will create a healthier educational and work environment;
- Resource conservation helps save valuable resources for future generations and lowers operating expenses; and
- Our commitment serves as the foundation of a system to assess, prioritize, and implement campus environmental programs and sustainability initiatives.

By embracing these values and integrating them into all University activities, we can better fulfill the University's mission of teaching, research, and public service. This policy will be important as the campus moves forward with both GHG reduction as well as general sustainability programs.

Leadership and Additional Commitments

With the emissions reduction benchmark, the campus is set to "play a pivotal role in California's climate strategy and action," according to Chancellor Birgeneau. In March, Birgeneau, along with other UC chancellors, signed the American College and University Presidents Climate Commitment (ACUPCC), which calls for the University of California to reduce its greenhouse-gas emissions, with the ultimate goal of making all 10 UC campuses carbon-neutral.

Given that the three major GHG contributors for most institutions are energy, travel (particularly air travel) and vehicle fleet, the answer to this question may not be straightforward. Most of us probably measure energy use, but I know from the early survey document circulated that several do not measure other GHG generators - such as air miles, food miles etc. Hence, do we set different base years for different GHG sources, thereby allowing those Universities that are not measuring in an area, time to set up the measurement process?

The UC Berkeley greenhouse gas emissions inventory includes ten emissions sources - electricity consumption, steam use, natural gas consumption, the University fleet, student, faculty and staff commuting, faculty and staff air travel, fugitive emissions from coolants, solid waste and water use. We also conducted a preliminary analysis of the campus' overall carbon footprint which would account for the full lifecycle emissions of the products used by the university. In each of these categories, we worked with the experts and faculty to apply best-practices for developing these estimates to most fully-account for the emissions that we are responsible for. In general, the geographic boundary for the inventory has been defined as campus buildings in the central campus, all student housing on- and off-campus, and the Richmond Field Station. However, for some emissions sources (i.e., commuting, air travel) the geographic boundary was not an appropriate boundary.

See <http://sustainability.berkeley.edu/calcap/inventory-2006data.html>

How do we deal with known capital and population growth in some Universities?

Allow for growth by using performance indicators rather than absolute targets e.g. kg CO₂/m² (gross internal area). The Berkeley campus used the growth projected in our Long range Development Plan as the baseline, without any targeted emission reduction programs, Every campus must have some growth projections against which they can measure performance.

Emissions Trend Analysis

With the inventory completed, we calculated temporal trends in these metrics. By combining these GHG emissions metrics with projected campus growth (specified in number of students) we established a business as usual projection of GHG emissions through 2050. We have actual data for 1990 through 2006. From 2007 onwards, we used the growth projections from the UC Berkeley Long Range Development Plan (1.14% annual increase in gross square footage and 0.609% annual increase in population). Then, we mapped possible targets to assess what type of reductions would be feasible for UC Berkeley.

Should we consider different targets for different IARU members based on regional issues - particularly capital growth and/or availability of alternative energy, carbon offsets etc?

Yes. The very nature of local environmental context should strongly influence both the opportunities and challenges ... Also varying policies around the purchase of carbon offsets influences this. Greatly

***Do we acknowledge “improvements in performance” that have already been achieved over the past decade in our overall targets (and consequent reporting)?**

Yes. Previous environmental efficiency work may limit the scope for further reductions in emissions / waste etc. That is why a common base year is not that important, but rather a common reduction goal as a percentage or to meet emergent standards.

Other metrics used

1. Berkeley uses LEED equivalent to a certified level, try for Silver or higher. Beginning to see a growing interest in pursuing LEED certification through the USGBC. Capital Projects has established an Assistant Director for Green Building Programs to guide capital projects, train project managers educate clients and provide other tools necessary to implementing sustainable building and energy efficient buildings projects. For Lab buildings, use Labs 21. Working with researchers and manufacturers on energy efficiency laboratory equipment.
2. By UC policy, projects are required to outperform T24 of the California energy Code by 20%. There are some modest financial incentive programs that assist with this, but the design professionals are required to deliver this in their contract agreements.

Intern program - Input from Berkeley offered for consideration by Yale and ANU

UCB has operated a Sustainability Intern program for the past 4 years. Funded by the campus through the Vice Chancellor for Facilities budget, the program also accepts donations from outside agencies. In this way, the campus creates sustainability employment opportunities for our students that occur within the campus as well as in the community-at-large. The campus administers the program, by doing the hiring and payroll for the students. The internships are created for all types of students - graduate and undergraduates – and often occur in partnership with other initiatives in operations or research. List attached.

Internship Awarded to	Project/Effort	Sponsor
FY 2007-08 (\$55,000)		
Sustainability Team (STEAM)	Focus the Nation Planning	Associated Students of UC
Sustainability Team (STEAM)	The Local” Market Coordinators	ASUC
Sustainability Team (STEAM)	Earth Week Coordinators	ASUC
Grounds Department	Sheet Mulching	Physical Plant
Waste management	Renovation and Demolition	Capital Projects
Recycling	Green Room Development	Physical Plant
Berkeley Environmental Alumni Network	Alumni Outreach	Alumni Association
Residential and Student Services	Greening RSSP	Housing
Stanley Hall	Education and Outreach	QB3 Institute
Waste management	Satellite ReUSE	Physical Plant
Green Building Programs	Green Buildings - materials	Capital Projects
Cal CAP	Climate Change research	Vice Provosts Office
City of Berkeley	Measure G implementation	City of Berkeley
Ecology Center	Climate planning and outreach	Ecology center
Berkeley Unified School District	Sustainable food and gardens project	BUSD
Yaya Furniture reuse	Furniture use	
Stopwaste	Education hotline	Stopwaste
Stopwaste	“	
Stopwaste	“	

Internship Awarded to	Project/Effort	Sponsor
FY 2006-07 (\$45,000)		
Internship Awarded to:	Project/Effort:	Sponsor:
Professor Raquel Pinderhughes	Green Economy/Green Collar Jobs	Berkeley Sustainable Business Office
Berkeley Cooperative Grocery	Launch Berkeley Cooperative Grocery	Berkeley Sustainable Business Office
Teleosis	Reduce pharmaceutical waste pollution	Berkeley Sustainable Business Office
Custodial	Test green cleaning chemicals,	Plant
Re-USE Satellite Stations	satellite Re-USE stations 5-6 buildings	Plant
Energy Conservation Awareness Initiative	Decrease campus energy consumption through education and behaviour	Berkeley Unified School District/City of Berkeley
Centre for the Built Environment	Building Energy Use Dashboard Project real-time energy and other utility use data	Green Building Research Centre
Berkeley Institute for the Environment	Sustainability Database	Berkeley Inst . Env.
Classroom manager Green Classrooms	green building for classroom renov.	Capital projects
FY 2005-06 (\$30,000)		
Internship Awarded to	Project/Effort	Sponsor
Energy conservation education program	educating occupants in conservation	Physical Plant - Utilities
Bicycle planning	support bicycle commuting to campus	Parking & Transportation
Communication and Outreach	materials and publicity for the CACS	Capital Projects
CACS Website	development and maintenance	Capital Projects
CACS administrative support	sponsor	Capital Projects

Comments to IARU sustainability plan 2008-2011

We have to announce that KU do not agree with all the proposed metrics and targets.

Energy and heat

CO₂ emissions per square metre of building space, is a good indicator to monitor the performance of buildings and to compare between buildings, and it should certainly be included in an indicator-set for environmental management.

However, universities should not be compared relatively to the size of their buildings. If you have large buildings with little activity you will perform well measured by a per-square-metre-indicator, but it will not be a sustainable use of resources. If you increase the activity per square metre you will have a more sustainable use of resources (higher production with the same energy consumption for heating, construction, repair etc.), but a per-square-metre- indicator may increase because of higher activity per square metre.

Therefore, it is our opinion that CO₂ emissions pr square metre should not be the only indicator.

It is good for measuring building environmental efficiency but not for measuring university environmental efficiency.

Universities should be compared relatively to their production. Better building performance is an important tool to obtain a sustainable university, but it is a tool and not the final goal. The final goal must be to have a sustainable university production e.g. research and education. We admit that university production is difficult to measure, but an example could be:

- CO₂-emissions / scientists man years + no of graduates.

Indicators that relate to the production level are also best practice in other sectors: Industry uses emissions per tons of product, transportation sector uses emissions per tons-kilometre or person-kilometre, and service sector uses emissions per produced service, e.g. number of photocopies, number of hotel-nights etc.

Best alternative to relate to size of production is to relate to size of population, which is also easier to measure.

- CO₂-emissions / no of full-time employees + full-time students.

This is similar to when we compare between countries, states, municipalities: We compare emissions per person.

Using CO₂ emissions per size of population is based on an assumption that size of population and size production is proportional, which is not necessarily the case, but it could be the necessary assumption.

At KU we will include an indicator that relate to size of production or size of population, and we strongly recommend that IARU do the same. Otherwise we will only be able to compare the efficiency of our buildings without relating to what is going on inside. It will not be feasible in a Danish or European context.

At KU we are at the beginning of a reorganisation that will strongly reduce our use of square meters of building space. This process will reduce KU's total energy consumption (however projected growth in production will do the opposite), and it will reduce the energy consumption relative to the size of the production or population. We find it sustainable even the energy consumption per square metre will increase.

Air miles and fleet emissions

CO₂ emissions from our transportation (air miles, fleet emissions, taxi miles, university travel in private cars) in our present environmental inventory accounts for approximately 10 % of our total CO₂ emissions, and will therefore not be our top priority. We will consider many tools to reduce the CO₂ footprint from our transportation, including buying carbon offsets, but we will presently not commit to buying carbon offsets. Other tools include: bikes, train rides and public transportation.

Targets

We agree in setting common reduction targets, but not in fixing which tools to be used (e.g. carbon offsets). Each university must be free to choose the most suitable tools for their situation.

Common IARU reduction targets should include all measurable CO₂-emissions (presently energy, heat and transportation) and be measured relatively to production or population. We propose:

25% reduction in total CO₂-emissions / no of full-time employees + full-time students by 2015.

When all IARU partners have established metrics enabling a comparison it could be considered to set a common long-term target following the "best-in-class" university. Big differences in actual baseline between IARU members are expected and it should be those with the largest emissions per production that reduce emissions the most.

The overall target could be supplemented by targets for building efficiency measured per square metre as you proposed.

In order to compare indicators across universities it is important to have the same delimitations for the environmental inventories. We propose:

1. The inventory should include all university premises (all buildings and field stations etc.).

2. Housing (for students and employees) should be reported separately. KU has no housing included in the inventory.
3. Transportation should be reported separately in order to compare with universities lacking transportation data.
4. Students and employees transportation to and from work should be reported separately.

Targets could be established for each of these areas.

IARU Sustainability Plan – 2008-2011

Generals

The ETH Zurich supports the development of this sustainability plan. Focus on energy and GHG related issues might be justified by the current discussions. However, we suggest to broaden the spectrum of environmental initiatives at the university campus in the future to assess and improve the overall environmental footprint of our university campus sites.

Energy and Heat

Target: The proposed target (25% CO₂ emission reduction until 2015) is not too ambitious, however, it depends highly on the base year and the already implemented efficiency enhancements at the sites.

Building new, energy efficient buildings should have highest priority. Hence also new buildings should be included in the CO₂ balance of the universities (not only existing). Because universities of IARU are situated in completely different regions of the world with corresponding needs for heating and cooling, an overall benchmarking among the universities is not feasible. It might be interesting to focus more detailed on important energy consumers, which are comparable among each other. Examples are Lab's, lightning, clean room facilities, etc.

Metric: ok

Air Miles

Target: ok.

However, there might be some other innovative approaches to lower CO₂-emissions supporting the process of simply compensating the emissions. Examples may include a promotion of Video Conference Systems (and similar technical tools and aids) at the universities. From our point of view, the utilization of the available tools and infrastructure is rather low. An joint initiative among our universities could help to promote the use of those systems.

CO₂-certificates should be bought from projects with an internationally agreed standard (e.g. WWF gold). Supported projects could be either in the home country or foreign countries.

Metric : ok

Fleet Emissions

Fehler! Verweisquelle konnte nicht gefunden werden.

Page 2/2

Target: Here we should have more than one target. Beside compensating we also should reduce the average fuel consumption per car or per mileage by x% until 2012. Only compensating is not a sustainable target. In contrast to the air miles, we can influence the fleet quality ourselves by exchanging old cars, buy efficient new ones, etc.

Metric : add fuel /mile or /km or /car

Base Year

Ok.

Reporting

An annual reporting should be established. This could be accompanied by 1-2 telephone/video conferences during the year to comment on the results. Further, bilateral exchanges (e.g. on the same continent) of experiences should be encouraged.

Broader environmental issues

Sustainability is not defined by energy and GHG only. Therefore, we suggest that each university should have further environmental goals in this sustainability plan. Those goals can be different from university to university, the goals should cope regional efforts for an environmental sound operation and development of the university campus. However, by reporting also individual environmental target and its implementation strategies, other campus may highly profit of these experiences, starting comparable initiatives.

Regards, on the behalf of the ETH Zurich

Appendix 4 – Response from the University of Tokyo

Response from the University of Tokyo

Email dated 18 February 2008

The University of Tokyo (Todai) has internally discussed about the draft as well as long-term objectives of sustainable campus activities with asking opinion of the president.

Todai thinks as follows:

- 1) At first each IARU universities should analyze GHG emission by itself with comparing with other member universities. Even sustainable campus working group members, at least I, have not seen comparison of GHG emission of majority of the member universities. All I know is that CO₂ emission per floor area is 0.197, 0.185, and 0.098 ton/squre m in Yale, Berkeley and Todai, respectively. Do we know the performance of other universities?
- 2) Todai is not supporting the idea of introducing uniform target (such as x percent reduction from 2006 level) to all member universities without analyzing current status. In fact, planning something without knowing enough information will cause problems later. We should not go to the diplomatic negotiation process like UNFCCC.
- 3) The role of academia is to demonstrate various innovative and successful examples of reducing environmental loading. For example, Yale has planned and is implementing GHG reduction program with clear emission reduction target. Todai is trying to demonstrate successful case studies so that university and even society find the pathway toward low carbon society. Each of IARU member universities should try ambitious countermeasure in various aspects and learns successful case each other.

Email 9 March 2008

I happened to visit ANU for other IARU business last week and had a good talk with Bart.

I am afraid if my previous e-mail might have given you negative impression. I have no intention to discourage our activity.

Our president is extremely positive to GHG emission reduction from campus activities. Todai is preparing a plan of GHG reduction in short-term and long-term. We want to implement several innovative trials to some of the building rather than applying common energy-saving method to all buildings.

I did not mention about the carbon offset for travel. We have calculated CO₂ from travel in Todai. This value is much greater than Yale due to the large emission from trip to US and trip to Europe. Todai is not supportive to the carbon offset. Todai wants to spend money for innovative trial mentioned above rather than paying money to an offset company.

Response from the National University of Singapore

Email dated 4 March 2008

Many thanks for sharing the draft with us and the hard work necessary to produce this draft.

NUS shares some of the concerns raised by Todai regarding the proposed IARU Campus Sustainability Plan and has a few additional observations..

As we noted earlier, we appreciate the importance of recognizing the achievements of universities in reducing CO₂ emissions in existing facilities, as proposed in the memo. However, using this as the sole measure of energy and heat impacts and establishing targets without consideration of existing conditions appears inappropriate. NUS CO₂ emissions in 2006, for example, were .123 tons/sq meter -- above Todai's, but still substantially below the levels reported below for Yale and Berkeley. This is without any consideration of the local environment -- weather being one obvious important element. Given the significant amount of existing "unconditioned" space at NUS, the need to upgrade our existing research space to conform to international standards, and Singapore's tropical environment, we would suggest that adjustments be made to the goal to reflect the impacts of at least upgrading existing space to conform to health/safety/environmental standards and consideration! be given to moderating the reduction targets for universities that already emit less than average on a square meter as well as per unit of output basis.

We also do not believe that it is best to consider only emissions per square meter of space, not per unit of output, in analyzing our environmental impacts, and disagree with the conclusion that a university which increased output (number of students educated) in the same amount of space without changing its emissions would not have made a positive environmental contribution. Utilizing the best methodologies currently available, we should all be looking at the level of emissions generated per each degree produced, and ultimately by some broader measure of overall output. Failure to recognize the wide disparities in amount of emissions per unit of output is certainly inappropriate in establishing reduction targets on a global basis for educational (or other economic or governmental) entities. (This is not to say that all institutions should reach the same level of emissions per unit of output, but only that the relative differences in consumption and emission should be! reflected in looking at environmental performance).

While we do not have a strong objection to the recommendation that we should make our internal transportation systems "environmentally" neutral, we do note that it has a rather perverse impact on institutions that have launched substantial, reliable campus transportation systems to encourage use of public transportation by our staff and students. We have an extensive on-campus bus system (walking across campus at midday can be uncomfortable in the tropics), and plan to expand to provide better linkage to mass transit options. In the longer term, IARU needs to gather data on commutation patterns of staff/students so we can better assess the total impact of universities

on transportation usage, and we would suggest that this be recognized with the introduction of this measure.

The focus on air transport for an island nation far distant from many of our academic partners at a time when we are trying to promote global interaction and exchange is not ideal -- clearly long distance land transportation options are limited in Singapore. While we appreciate the “political” value of purchasing offsets, the relative cost of this option is influenced by resource availability as well as the ability to exploit alternative transportation options. Could we suggest that the universities pledge to commit an amount equivalent to the cost of purchasing the offsets (or even some multiple of this cost) to either the purchase of offsets or investment in new campus programs that will have significant, long term impact on reducing CO₂ emissions.

We strongly support using the best national standards for new construction and would propose that we commit to sharing and acknowledging best practices in this area.

Thanks again for the opportunity to comment.

Response from Cambridge University

Email dated 17 March 2008

Thank you for sending us a copy of the draft IARU Sustainability Plan for comment. Sorry for the delay in getting back to you, but we wanted to consult with the University's Committee for Environmental Management before responding.

It's clear that trying to establish a scheme that takes into account all the various national issues and climatic factors is going to be no simple task.

We agree with the proposal that the Sustainability Plan should focus initially on Greenhouse Gas (GHG) emissions, and that the priorities should be emissions associated with energy use in buildings, followed by transport related emissions. However, we repeat our earlier comments that we feel that it would be inappropriate to set targets until we have a better understanding of:

- Where we all are now, and understand the reasons for any differences in our current positions.
- What we have done already (and hence what else we might be able to do).
- What we might/could do in the future, given any other commitments and the availability of options such as renewable energy generation.

We welcome the acknowledgement concerning the importance of compiling inventories to establish consistent and comparable data using the templates developed here at Cambridge and at Yale. We feel that it would be better to delay the agreement of any specific targets until after the meeting planned for October 2008 at Berkeley, when everyone will have had the opportunity to collect and assess comparable data to establish exactly what we are measuring and consequently what appropriate targets might be.

Although we recognise at Cambridge that it is important to achieve something that will raise awareness on the importance of climate change at the highest level, we will need to be sure that in the long term this can be seen as a properly thought-out and executed strategy that can stand up to vigorous scrutiny both externally and (possibly more importantly) by our own academic and professional colleagues.

Buildings

The issue of absolute targets vs a target linked to some form of growth metric is a difficult issue that requires further consideration. Whilst we recognise that actions to mitigate against climate change require a global reduction in the absolute emissions, we need to consider how this might be achieved against the acknowledged need for increasing participation in higher education.

If a growth metric is considered to be a suitable way forward, we feel that a metric based on FTE students / staff is more appropriate than one based on the size of the estate. This is because one of the best ways of improving our level of sustainability is to improve our level of space utilisation within existing buildings, although we recognise that there may well be more appropriate metrics that could be considered, such as levels of research funding.

The Plan mentions that it should apply to all buildings under the University's control. We need to be clear whether this should be limited to just academic and administrative buildings or whether it should also include student accommodation. This would currently be difficult at Cambridge, and possibly other collegiate Universities, because student accommodation is in Colleges, which are separate independent institutions, responsible for their own individual energy usage. Our data collection template was intended to clarify this sort of issue.

The proposed limitation of any targets to existing buildings on a building by building basis would be difficult to achieve, as changes in operations within individual buildings over time can lead to considerable variations in the energy usage of that building. We feel that an overall target for the whole estate would be more appropriate so that improved energy efficiency of new sustainable buildings can contribute towards any overall reduction target. We also need to consider how we can overcome the problem associated with the increasingly dominating effects of plug loads from energy-intensive research equipment which is negating any improvements being made in building envelope efficiency. Just concentrating on building envelopes alone without examining the effect of academic use is simply not going to make any inroads into an increasing programme of high energy use research equipment.

We would also need to ensure that any targets are compatible with any existing or proposed local / national commitments. For example, Cambridge has an existing commitment to reduce absolute emissions associated with energy use in buildings by 10% from 2005/2006 levels by 2010/2011. In addition, there will be an additional target to make a further 11% cut on 2010 levels by 2030 to comply with the UK Government's proposed Carbon Reduction Commitment initiative. We need to ensure that we don't end up trying to satisfy a myriad of separate initiatives with incompatible targets and timescales. The array of targets is already potentially very confusing.

In institutions that have a long history of energy conservation, such as Cambridge, a further 25% reduction in emissions by 2015 through engineered solutions alone would be unrealistic. The use of bought-in green energy as part of an electricity supply contract would not be considered as a viable carbon reduction strategy under current UK Government guidance. Given the time needed to secure budgets and implement the initiatives, coupled with the time lag for the effects of these actions to kick in makes the prospect of achieving headline cuts by 2015 a tall order (assuming that the purchase of renewable energy or carbon off-sets are not allowed). As with the targets themselves, we feel that it would be better to review our current positions further before deciding on a target date.

Given the concerns surrounding the validity of purchasing carbon off-sets we would suggest consideration is given to each individual institution using the money it might have spent on buying carbon off-sets on the open market to establish its own ring-fenced revolving fund to facilitate the development of initiatives to reduce unavoidable emissions at the institution that would otherwise be impossible due to the lack of capital funding.

With respect to a baseline year. Although we have data back to 1990 at Cambridge, and recognise that there may be benefits in aligning any targets with other international agreements such as the Kyoto Protocol and the UK Climate Change Bill, we feel that it would be better to set a current baseline so that the focus of attention can be on future achievements rather than past actions.

Transport

We agree that it is important to quantify the emissions associated with air travel and vehicles. However, we don't feel that purchasing carbon off-sets alone could be seen as a defensible carbon reduction strategy without attempting to reduce actual emissions. Again, one option might be for each institution to establish its own ring-fenced revolving fund to facilitate the development of initiatives to reduce actual emissions associated with travel, such as low emission vehicles and improved video-conferencing facilities.

As with the emissions from buildings, we feel that it would be better to delay setting any specific targets until everyone has had a chance to give further consideration our current positions.

Response from Oxford University

Email dated 20 March 2008

In a belated response to the IARU draft Sustainability Plan please note Oxford's comments below.

Oxford University is in agreement with much of Cambridge's response. This is primarily because the organisation of the two universities is similar, and they are both facing the same external pressures and targets from national government and funding councils.

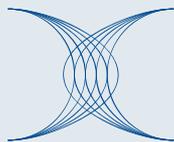
The priority should be building related emissions, followed by transport related emissions. Delaying the agreement of targets until October 2008, after there has been time to assess comparable data, is a better course of action.

Oxford too has an ambitious building programme to meet the future needs of research, which tends to require energy hungry equipment.

Student accommodation is provided by Colleges, so is not under the remit of the central university, and may not be included in new targets.

Oxford would probably want to invest in energy saving measures rather than carbon off-sets, primarily to meet national and European carbon emissions targets.

I hope you find these comments useful.



IARU Student Sustainability Fellowship and Exchange

Following discussions at an IARU meeting held at Yale in 2006, it was agreed to trial a student exchange between Sustainability Offices at ANU and Yale. The intent was to allow selected students to work in the Sustainability Offices on campus sustainability initiatives. This would provide operational experience that complements study.

The initial trial, 2007, was very successful - with two Yale students working at ANU and three ANU students completing exchanges at Yale.

After discussions at the 2007 Senior Officers' meeting, it was agreed to expand this trial to involve other IARU members. The following paper was forwarded to an IARU representative in late 2007 and Oxford has agreed to participate in the trial in 2008. Consequently, students from ANU, Yale and Oxford will participate in sustainability exchanges during the year. There are indications that other members will want to participate in 2009.

As this program expands, the administrative demands of coordinating it will increase. A proposal outlining resource needs and funding arrangements for the exchanges will be prepared for discussion at the 2008 Senior Officers' meeting and for consideration at 2009 Presidents' meeting.

Julie Newman, Yale and Bart Meehan, ANU

Summer 2008 IARU Student Sustainability Fellowship and Exchange

Goal

Sustainability Fellowships will provide (select) students with the opportunity to work on campus sustainability at IARU member institutions. Project topics ought to lead to lessons learned that can be applied at both the home and the host institution. *Sustainability Fellowships* are intended to target a broad range of disciplines ranging from the arts to engineering.

Timeframe

The student exchange will take place between June 15th and August 15th. If there are schools which have better aligned summer vacation time – additional dates can be arranged between institutions.

Framework

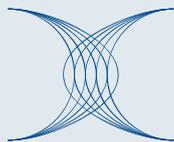
Student Sustainability Fellows will work a standard [35+ hour] work week in the Sustainability or related office of participating institutions and live in housing provided by the host institution. Select students will be matched with projects based upon skill and background upon arrival at host institution. Project topics will be institutional specific or related to IARU activities. Supervision and oversight will be provided to the students throughout their stay. Students will have access to all the resources required to complete their projects.

Application process

Interested applicants must submit a resume, cover letter and 1-2 page essay describing how this opportunity fits into their studies. Selection will take place at home institution. In person interviews are highly recommended. Once students are selected the resume and essay will be shared with host institution.

Associated institutional costs include

- 1) Stipend/fellowship to cover student airline ticket/basic expenses from your own institution;
- 2) Cost of housing for students that you will be hosting [residential college/dormitory preferred].



IARU International Scientific Congress on Climate Change

Copenhagen, March 10 – 12, 2009

‘Climate change – global risks, challenges and decisions’

Fundraising and logistic preparations - update as of April 1, 2008

With respect to fundraising, the University of Copenhagen has presently seven primary sponsors, who have each contributed approximately 200,000 USD (1 million Danish crowns). The goal is ten primary sponsors and the University is continuously in positive dialogue with several other possible sponsors. In addition, approximately 600,000 USD has been applied for from the “Foundation for the Marketing of Denmark”. A reply is expected on May 5. The planning is based on a congress with 4,000 participants, but there is still a possibility for scaling up or down.

A plea for support from all IARU partners

Two Scientific Committee (SSC) plenary meetings have been held. These were poorly attended. Therefore, no other SSC plenary meeting is current scheduled. However, a sub group of the SSC has been contributing and continues to contribute constructively to the work of the SSC via internet communication. The IARU universities currently participating actively in this manner are: Tokyo, Berkeley, Yale, Oxford, ANU and Copenhagen.

The SSC is working closely with The Earth System Science Partnership (ESSP) under ICSU and has included the chairman of the ESSP as an observer. He is also contributing actively to the work of the SSC via the internet.

The SSC is targeting other relevant scientific conferences and encouraging them to use the IARU conference as an outlet for their findings. This will be to their advantage, as a synthesis document from the Congress will be a part of the official COP15 documentation.

It has been agreed that the review of this synthesis document will be carried out by the ESSP. In addition, each IARU university is encouraged to identify three to four potential reviewers of the documents.

Each IARU University is asked to publicise and encourage participation in the congress. Publicity

is *the* major challenge in the coming months, so do spread the word. Information about the congress can be found at the congress website www.climatecongress.ku.dk We encourage all IARU universities to link to the congress website on their own website.

At the COP 14, taking place in Poznan, Poland, December 2008, IARU universities will be present and will promote the IARU Scientific Congress on Climate Change.

Negotiate the Copenhagen Protocol before the real COP 15 takes place - Join “The Copenhagen Competition”

The Faculty of Law at the University of Copenhagen hosts the international negotiation competition arranged by IARU, “The Copenhagen Competition” in spring 2009; a competition that gives law students from various places of the world a chance to negotiate the Copenhagen Protocol before the “real” COP15 takes place.

The vision of the competition is to let the students explain their innovative ideas. The final result of the competition - the draft text - will hopefully inspire governments all over the world in their negotiations at the COP15. The vision, however, goes beyond its perceived social impact, as it is also an opportunity for these top law students to advance their individual and collective talents in areas of critical legal analysis of the treaties they draft, abilities to negotiate, team work, etc.

The competition is by invitation only. The invitation was sent on February 1, 2008. The Law Faculties at the IARU Universities are invited to enter with one team each. Moreover, selected universities from regions that are not represented in IARU are also invited. The goal is to have 16 teams entering into the competition, and having 8 teams proceeding to Copenhagen where the oral round is to be held in March, 2009. These 8 teams will be invited to participate at the IARU congress.

Student climate change conference

It has been decided to accept an application from the international student organisation, Energy Crossroads, to hold a student conference at the IARU congress venue on 10-12 March, parallel to the IARU congress. The IARU congress and the Energy Crossroads conference will be two separate events, connected, however, by positive synergies.

Energy Crossroads is an international non-profit student organisation.

The Energy Crossroads' conference will focus on mobilizing the inheriting generation.

500 participants are estimated at the conference. The conference will consist of discussions, presentations debates and workshops, featuring scientists, policymakers, thought leaders and students.

Climate Change: Global Risks, Challenges and Decisions

10-12 March 2009

Copenhagen, Denmark

Venue

Bella Center, Copenhagen, Denmark.

Participants

Approximately 4,000 participants from all around the world are expected to take part in the Congress. A wide range of researchers, student communities, business, policy makers and civil servants are anticipated participate. An open call for scientific contributions has been posted.

Mission

Climate change represents a clear and unprecedented challenge for human society. This symposium focuses on providing a synthesis of existing and emerging scientific knowledge necessary in order to make intelligent societal decisions concerning application of mitigation and adaptation strategies in response to climate change. The symposium aims to identify and synthesise the science, technology and policy advances required in order to ensure sustainability of global communities in the current and coming decades.

Output

The Congress will take place in the run-up to the United Nations Climate Change Conference (COP15) in Copenhagen in November-December 2009. The Congress is supported by the Danish Prime Minister Anders Fogh Rasmussen.

All findings of the Congress will be compiled in a book on climate change.

It has been agreed with the organisers of the COP15 that an executive summary with the main findings of the Congress will be handed over to policy makers at the UN Climate Change Conference.

The Congress supplements the consensus-based assessment reports of the Intergovernmental Panel on Climate Change (IPCC) by attempting to capture and report to the COP the research energy

now being focused on questions relevant to dealing with climate change. Rather than assessment, the Congress aims at identifying emerging knowledge relating to climate change and relevant for responding to the challenges it presents.

Outreach

A congress website – www.climatecongress.ku.dk - was launched at the beginning of March. The website includes practical information, preliminary program etc.

The congress has been and will be announced in leading international journals.

All plenary sessions will be live-streamed and webcast in order to increase the outreach to the broad public around the world. This includes all IARU universities who will also arrange climate change sessions.

Financing

The financial model of the Congress is (million USD):

Registration fees	2.8
Sponsors	2.0
Funds	0.6
Total	5.4

Preliminary Program March 2008

Climate Change: Global Risks, Challenges and Decisions

10-12 March 2009, Copenhagen

10 March: Framing the Issues

Opening session

Global Warming: How to Solve an Intractable Problem?

Plenary sessions

Theme 1: Exploring the risks: understanding climate change

- Climate Systems Analysis: recent advances, certainties and uncertainties.
- Detection, Attribution, Projection.
- Reasons for Concern: impacts, tipping points, teleconnections and feedbacks.

Theme 2: Sharing the burdens and opportunities: equity issues

- Equitable Allocation of Emission Rights.
- Liability and Compensation.
- Avoiding Land Cover Change.
- Intergenerational Equity.

11 March: From Knowledge to Action

Theme 3: Reducing the risks of climate change: opportunities for mitigation

- Decarbonizing the World: energy efficiency, clean carbon, renewables, lifestyle changes.
- Economic frameworks for effective mitigation.
- Transforming institutions to manage a carbon-constrained world.
- Targets and Timetables: emissions scenarios and climate guardrails.

Theme 4: Preparing for impacts: adapting to the inevitable

- Medium-Term Forecasting.
- Enhancing adaptive capacity and resilience.
- Economic consequences of adaptation.
- Vulnerable sectors and regions.

12 March: From high-end scenarios to sustainable solutions

Theme 5: Managing the planet

- From geo-perturbation to geo-management.
- From climate change to global sustainability.
- Earth System governance.

Theme 6: Mobilising the populace: human dimensions of climate change

- Development through Environmental Cooperation.
- Detection and Defusion of Climate Conflict Constellations.
- Management of Intercontinental Migration.

Synthesis and summary

Parallel sessions (10 – 12 March)

Theme 1 : Exploring the risks: understanding climate change

- Cryosphere, instabilities, sea level rise.
- Global/regional climate state in 2030.
- Changes in ocean circulation related to regional climate.
- Vulnerability in carbon sinks.
- Developing a spectrum of models to describe the Earth System.
- Tipping elements in the Earth System.
- Informing the future by understanding the past.
- Earth System feedbacks from carbon sequestration.
- Detection and attribution: state of play in 2009.

Theme 2: Sharing the burdens and opportunities: equity issues

- Equity between sectors and individuals within countries
- Equity between nations and regions.
- Equity in time: past, present and future emitters and victims.
- Equity between humans and the rest of nature.

- Differential effects of climate change on human health and well-being.
- Avoiding land-cover change to reduce carbon emissions.

Theme 3 : Reducing the risks of climate change: opportunities for mitigation

- Integrating economic models and the dynamics of the carbon sinks.
- Carbon capture and storage: technology, economy, social attitudes.
- Potentials and limitations of biofuels.
- Renewable energies: How far can they take us?
- Enhancing energy conservation and efficiency
- Integrated energy mixes from a socio-economic and environmental perspective.
- Transforming institutions to managing a carbon constrained world.
- Integrating national and international approaches to emission caps and trading.
- The role of forests in mitigation climate change.
- Beyond technology: changing the ways we live?
- Low carbon science, technology or policies.

Theme 4: Preparing for impacts: adapting to the inevitable

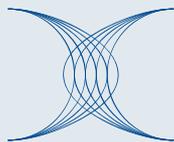
- Hydrological cycle and ecosystem services.
- Impact of climate change on biodiversity ecosystem services.
- Biodiversity: enhancement of resilience or facilitating transformation?
- Economic costs of not adapting to climate change.
- Adapting urban areas to climate change.
- Adapting landscapes to climate change.
- Adapting coastal zone and marine resources to climate change.
- Approaches to measuring and enhancing adaptive capacities.
- Adapting forests to climate change.
- Climate tools and information to support adaptation.
- Learning from ongoing adaption: A comparative study from seven countries.

Theme 5: Managing the planet

- Integrating climate change into global sustainability.
- Filling in the gaps between IA (Integrated Assessment), GCM (General Circulation Model), economic and ES (Earth System) Models.
- From geo-perturbation to geo-management.
- Consequences of acidification of land and ocean.
- Optimizing food and fibre production in a C, N, H₂O constrained world.
- Earth System governance.

Theme 6: Mobilising the populace: human dimensions of climate change

- Enhancing food security in a changing world.
- Economic costs of not mitigating climate change.
- Role of media in contributing in combating climate change.
- The role of non nation state actors (cities, NGOs, business) in combatting climate change.
- Ressources in a changing climate: building collaboration and avoiding conflict.
- Human migration – geopolitical conflicts.
- Cultures, values and world perspectives as factors in responding to climate change.



Women and Men in the Globalizing University

A Conference of the International Alliance of Research
Universities (IARU)

April 21, 2008, Yale University

This one day working conference continues the research project of the IARU on Women and Higher Education and builds on the conversation begun at the first meeting of this group at Cambridge University in September 2006. This colloquium examines the relationship between gender and universities in terms of the kind of data collected mapping the roles of women and men, of how aspirations for equality interact with understanding excellence in the academy, and the impact of globalization.

Program and Schedule

Location: Yale School of Management
Horchow Hall, 55 Hillhouse Avenue
General Motors Room

Registration and Buffet Breakfast: 9:00-9:45 a.m.

Opening Session: 9:45-10:15 a.m.

Introductions

Welcome by Linda Lorimer, Vice President and Secretary of Yale University

**I: Engendering Self-Knowledge: Mapping Gender in University Data
10:15 a.m.-12:15 p.m.**

The location and nature of barriers to women's integration in the academy across countries and institutions need to be mapped carefully in order to design targeted interventions. For the meeting held in Cambridge in the fall of 2006, initial data were provided from the IARU member universities. However, as we learned, collection or provision of information varied greatly and how much monitoring can and should be done remains an open question.

Accordingly, this session is devoted to methods for mapping gender in university data. The main goals are to assess what kind of data collections can be used for which purposes. To do so, we consider quantitative and qualitative data collection efforts such as faculty entry and promotion data, faculty surveys, and exit interviews. The discussion also addresses challenges in creating internationally comparable datasets and the possibilities of an IARU data collection initiative for mapping gender in university data.

We begin with Marc Goulden, Director of Data Initiatives for Academic Affairs at the University of California at Berkeley and co-author of the “Do Babies Matter?” research project, who has developed an example for a template for data collection that might be usefully employed to promote equity in universities. His presentation will include data from a survey of IARU member schools’ institutional research capacity and ability to benchmark gender issues on their campuses.

Lily Kong, Vice President of University and Global Relations at the National University of Singapore (NUS), will present sample data from NUS and comment on the feasibility and usefulness of the data proposals. Yale Women Faculty Forum (WFF) Co-Chair Hannah Brueckner, a Professor of Sociology who specializes in analyses of life patterns for women, will present sample data from Yale. Russell Adair, Associate Director of Yale’s Office of Institutional Research, will discuss data comparability issues and possible solutions.

Commentators include Alice M. Agogino, Roscoe and Elizabeth Hughes Chair of Mechanical Engineering at the University of California at Berkeley, who will address efforts at Berkeley to use data collection to drive change on campus, and Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility at Columbia Law School, will help us think about institutional structures that support leveraging data to promote equity and inclusion. Mandy Thomas, Pro Vice-Chancellor, Australian National University (ANU) will respond to the forms of data and their use. Convener: Hannah Brueckner, Professor of Sociology, Yale University

**Luncheon at the Provost’s House, 35 Hillhouse Avenue
12:15-1:15 p.m.**

IARU Continuity: From Cambridge to Yale and Beyond:

Remarks by Kate Pretty, Pro-Vice-Chancellor, University of Cambridge

**II: Intervening: What Works, What Doesn’t, and How Do We Know?
1:30-3:30 p.m.**

In this segment, we examine university and governmental policy interventions to improve the representation and advancement of women in universities, particularly in the sciences. This session addresses the range of interventions attempted by such programs to discuss how to measure success and what interventions are successful. Upon identifying “best practices,” we will consider the transportability of such interventions to institutions within and across nations and to women and men in other fields. Our questions include whether IARU should sponsor common forms of interventions across its members.

Abigail J. Stewart, Sandra Schwartz Tangri Distinguished University Professor of Psychology and Women’s Studies and Director of the ADVANCE Program at the Institute for Research on Women and Gender at the University of Michigan, will speak about initiatives undertaken as

part of the US's National Science Foundation's ADVANCE program, which provides national funding to institutions proposing "institutional transformations" to improve the representation and advancement of women in science and engineering.

Akiko Tsugawa, Professor of Medical Sciences and Coordinator of the Office for Gender Equality at the University of Tokyo, and President of the International Network of Women Engineers and Scientists (INWES) in Japan, will report on the activities of INWES Japan and Japanese policies for women in science and technology.

Felicity Cooke, Head of Diversity and Equal Opportunities at the University of Oxford, will discuss Project Athena, an initiative in the UK which aims to promote women in the fields of science, engineering, and technology in higher education and research.

Conveners: Kim Bottomly, President, Wellesley College
Meg Urry, Israel Munson Professor of Physics and Astronomy, Yale University

III: Equality and Excellence in the Globalizing University 3:45-5:45 p.m.

In the third segment, we turn to the overarching question of what a robust commitment to substantive equality looks like in a global research university. Is equality complementary to or in tension with the university's quest for excellence? How have the curriculum, research, intellectual agendas of and organizations within universities been affected as the ranks of the professoriate and student bodies change in diverse ways?

These questions can also be framed in terms of the relationship between universities and the globalizing societies in which they sit. As universities, students, and faculty cross national and disciplinary borders, how are barriers, representation, and attention to gender in scholarship affected? How do other trends in higher education (such as standardization and competition) impact aspirations for women and men to be full participants in universities? And what role do, should, or could universities play in ameliorating inequalities or in contributing to them -- given the gatekeeper roles played by higher education at elite institutions?

We will begin with comments from three scholars of these issues. Amina Mama, Barbara Lee Distinguished Chair in Women's Leadership at Mills College, Oakland, California, and Chair in Gender Studies at the African Gender Institute, University of Cape Town, South Africa, will focus on gender equity in universities in Africa. Linda McDowell, Professor of Human Geography at Oxford University, an economic geographer with a longstanding interest in equity and equality in organizations and institutions, will consider the effects of economic change on gendered divisions of labor. Catharine R. Stimpson, Dean of the Graduate School of Arts and Science and University Professor at New York University, former director of the MacArthur Foundation Fellows Program, and a pioneer of women's studies in the academy, will speak to the interaction of gender and globalization in higher education.

Responding will be Barrie Thorne, Professor and Chair of Gender and Women's Studies, Professor of Sociology, University of California at Berkeley, and Xiaoying Zheng, Director and Professor of the Institute of Population Research, Peking University.

Convener: Judith Resnik, Arthur Liman Professor of Law, Yale University

Part IV: Agenda-Setting: Research, Scholarship, and Institutional Structures
5:45-6:30 p.m.

To conclude the afternoon, we invite reflections on what roles IARU can play in enabling its member universities to explore how gender affects them and how they in turn have an impact on work, research, scholarship and study of women and men in global universities. The discussion will be led by Judy Chevalier, Deputy Provost for Faculty Development, Yale University, and William S. Beinecke Professor of Finance and Economics, Yale School of Management.

Dinner at the Quinnipiack Club, 221 Church Street
7:00 to 9:30 p.m.

Cocktails and Music: Whim 'N Rhythm, songs from Yale's Senior Women's A Cappella Group

Reflecting on “Women and Men in the Globalizing University”

Remarks by Michael S. McPherson, President of the Spencer Foundation
Harriet Zuckerman, Senior Vice President of the Andrew W. Mellon Foundation

Participants in IARU Conference - April 21, 2008

Australian National University

Mandy Thomas, Pro Vice-Chancellor
Inge Saris, Equity Program Officer for Women

ETH Zurich

Luzia Lehmann, Co-Director, Office of Equal Opportunities for Women and Men

National University of Singapore

Lily Kong, Vice-President for University & Global Relations

Peking University

Xiaoying Zheng, Professor and Director of the Institute of Population Research
Yukun Hu, Associate Professor, Institute of Population Research

University of California at Berkeley

Alice M. Agogino, Roscoe and Elizabeth Hughes Chair of Mechanical Engineering
Marc Goulden, Director of Data Initiatives for Academic Affairs
Sheila O'Rourke, Assistant Provost for Academic Affairs
Barrie Thorne, Professor and Chair of Gender and Women's Studies, Professor of Sociology

University of Cambridge

Juliet Mitchell, Professor of Psychoanalysis and Gender Studies
Kate Pretty, Pro-Vice-Chancellor for International Strategy

University of Copenhagen

Lykke Friis, Prorector
Birgit Petersson, Associate Professor of Women and Gender Research in Medicine
Bente Rosenbeck, Associate Professor of Gender Studies

University of Oxford

Felicity Cooke, Head of Diversity and Equal Opportunities
Linda McDowell, Professor of Human Geography

University of Tokyo

Akiko Tsugawa, Professor of Medical Sciences & Coordinator, Office for Gender Equality

Yale University

Russell Adair, Associate Director, Office of Institutional Research

Robert Alpern, Dean, Yale School of Medicine

Megan Barnett, Associate Dean for Academic Affairs, Yale Law School

Linda Bockenstedt, Harold W. Jockers Professor of Internal Medicine and Rheumatology, and
Director, Office of Faculty Development, Yale School of Medicine

Hannah Brueckner, Professor of Sociology

Judy Chevalier, Deputy Provost for Faculty Development, Yale University, and William S.
Beinecke Professor of Finance and Economics, Yale School of Management

Lisa Curran, Professor of Tropical Resources and Director of the Tropical Resources Institute,
Yale School of Forestry and Environmental Studies

Donald L. Filer, Associate Secretary and Director of Office for International Affairs, Yale
University

Glenda Gilmore, Peter V. and C. Vann Woodward Professor of History

Andrew D. Hamilton, Provost, Yale University

Dolores Hayden, Professor of Architecture, Urbanism, and American Studies

Serene Jones, Titus Street Professor of Theology, Yale Divinity School

Paula Kavathas, Professor and Associate Chair for Research in Laboratory Medicine, and
Professor of Genetics and Immunobiology, Yale School of Medicine

Richard C. Levin, President, Yale University

Linda Lorimer, Vice President and Secretary, Yale University

Carolyn Mazure, Associate Dean for Academic and Faculty Affairs and Professor of Psychiatry,
Yale School of Medicine

Shirley McCarthy, Professor of Diagnostic Radiology and Obstetrics and Gynecology, Yale School
of Medicine

Mary Miller, Vincent Scully Professor of History of Art and Master of Saybrook College

Priyamvada Natarajan, Associate Professor of Astronomy and Physics

Judith Resnik, Arthur Liman Professor of Law, Yale Law School

Dorothy K. Robinson, Vice President and General Counsel, Yale University

Frances Rosenbluth, Damon Wells Professor of International Politics

Nancy Ruther, Associate Director of the Yale Center for International and Area Studies and
Lecturer in Political Science

Barbara Shailor, Deputy Provost for the Arts, Yale University

Reva Siegel, Deputy Dean and Nicholas deB. Katzenbach Professor of Law, Yale Law School

Stephanie Spangler, Deputy Provost for Biomedical and Health Affairs, Yale University, and
Clinical Professor of Obstetrics and Gynecology, Yale School of Medicine

Joan Steitz, Sterling Professor of Molecular Biophysics and Biochemistry, Yale School of Medicine

Meg Urry, Israel Munson Professor of Physics and Astronomy

Laura Wexler, Professor of American Studies and Women, Gender, and Sexuality Studies

Guests:

Nancy Alexander, Associate Chubb Fellow, Timothy Dwight College, and Alumna Advisor to the Women Faculty Forum, Yale University

Sandy Baum, Professor of Economics, Skidmore College, and Senior Policy Analyst, College Board

Kim Bottomly, President, Wellesley Colledgancement of Teaching, Dean of the Graduate School of Arts and Science at New York University

Amina Mama, Barbara Lee Distinguished Chair in Women's Leadership at Mills College, Oakland, California, and Chair in Gender Studies at the African Gender Institute, University of Cape Town, South Africa

Margaret H. Marshall, Chief Justice, Supreme Judicial Court of Massachusetts, and Fellow of the Corporation of Yale University

Michael S. McPherson, President, Spencer Foundation

Abigail J. Stewart, Sandra Schwartz Tangri Distinguished University Professor of Psychology and Women's Studies and Director of the ADVANCE Program at the Institute for Research on Women and Gender, University of Michigan

Catharine R. Stimpson, Dean of the Graduate School of Arts and Science and University Professor, New York University

Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility, Columbia Law School

Vera Wells, Director, Boone Memorial Project; Member, Yale University Council; Alumna Advisor to the Women Faculty Forum, Yale University

Harriet Zuckerman, Senior Vice President, Andrew W. Mellon Foundation

Yale Women Faculty Forum Staff:

Naima Farrell, Program Coordinator

Susan Overton, Research Associate

Christine Slaughter, Program Coordinator

Edith Rotkopf, Administrative Assistant

Elizabeth Breese, Graduate Liaison, Sociology

Hannah Burnett, Undergraduate Liaison, Literature and Art

Isabel Chen, Undergraduate Liaison, History of Science, History of Medicine

Jessica Svendsen, Undergraduate Liaison, English and Women's, Gender, and Sexuality Studies

Yale Office of International Affairs Staff:

Sheila Cook

Abby Jackson

Michelle Koss

Aggie Leary

Sheila Pastor

Women and Men in the Globalizing University

Engendering Self-Knowledge: Mapping Gender in University Data (*Material related to Session I*)

<https://osr2.berkeley.edu/cgi-bin/Access/Web-surveys/Users/idmg/iaru/lo..>

IARU Gender Equity and Institutional Research Capacity Survey, 2008

In preparation for the upcoming IARU meeting in April 2008, we are interested in learning about your institution's current institutional research capacity and your ability to benchmark your campus in terms of issues of gender equity, primarily in regard to faculty but also in regard to other campus populations (e.g. students, postdoctoral fellows, researchers, and so forth).

Accordingly, this survey presents you with examples of institutional data representation (in the form of powerpoint slides) that are possible ways of assessing/benchmarking issues of gender equity in a University environment (these are drawn from existing examples at University of California, Berkeley) and asks you whether or not your institution currently possesses the capacity (broken down into necessary component parts) to develop a similar version of the data representation for your university.

Given the fact that IARU member institutions represent a wide variety of different employment/educational structures (e.g. faculty rank or student degree types) and varied population sizes, our expectation is that each University will have to modify the existing examples to reflect their setting and to be useful in terms of gender equity benchmarking. Thus the examples drawn from Berkeley are meant to serve as a possible starting point for conversations about these issue (not a representation of some predetermined end-point).

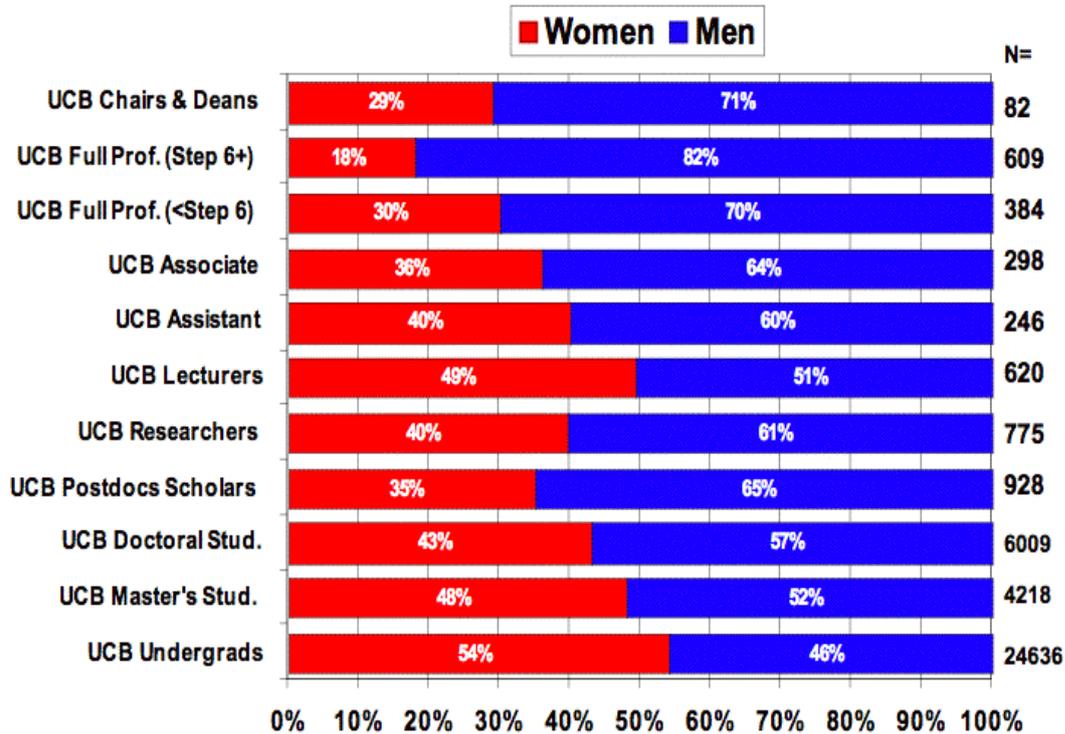
Please note that a full copy of the original powerpoint slides may be downloaded by [clicking here](#). They can be used to create versions of the slides for your own university and are of better resolution than the below images.

You may, at any time, save your responses (by clicking one of the save buttons).

When you have finished the survey, please click the submit button (located at the very end of the survey).

A. Cross-Sectional Views of UC Berkeley Academic Populations (December 2007) by Percentage Women and Men

Slide 1: UC Berkeley (UCB) Chairs & Deans, Tenure-Track Faculty, Postdoctoral Scholars, Graduate Students, and Undergraduates by Gender, Dec. 2007



Sources (top to bottom): UCB Chairs & Deans list, 2007; UCB Fac. Pers. Records, 2007; UCB HRMS Aff. Action detail rep., 2007 (postdocs); Office of Student Research Student Census File, 2007.

Notes: Slide 1 represents a cross-sectional view of the UC Berkeley academic population by selected groups, from deans of schools and colleges and departmental chairs (top) to undergraduate students (bottom).

- In general, the higher tiers of our academic populations have a lower proportion of women relative to the lower tiers.
- Our deans of colleges/schools and chairs of departments are drawn from the faculty ranks and serve in leadership positions.
- The UC Berkeley faculty structure includes three major ranks [assistant (pre-tenure but tenure eligible), associate (tenured), and full professor]. We also have steps within our faculty ranks and full professors step VI and higher are essentially an additional, higher faculty rank.
- UCB postdoctoral positions are disproportionately located in sciences and this helps to account for the lower relative proportion of women in this strata.
- Our undergraduate population is disproportionately female and this reflects a general national pattern.

1. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop a similar version of this data representation (*Slide 1*) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

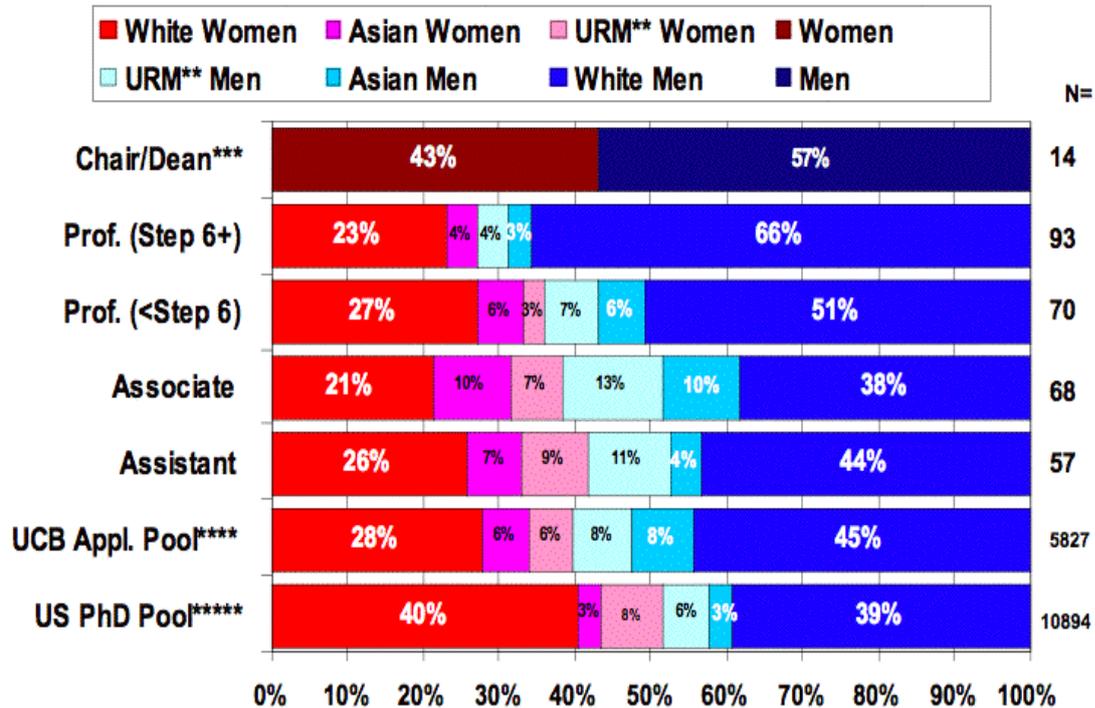
Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Generally agreed upon academic strata/tiers that could be displayed on a single slide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Current/recent headcount or full-time equivalency (FTE) data for all of the salient academic strata/tiers (as specified by your institution)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Current/recent headcount or FTE data that is linked to gender (male, female, decline to state, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing a similar data representation at your institution:

Based on the above, do you currently possess the necessary capacity to develop a similar data representation for your institution and, if yes, would you be willing to do so and bring it to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar version of this representation at the upcoming meeting
- Other response (specify) →

Slide 2: UCB Faculty Social Sciences* by Rank, Gender, and Ethnicity, Dec. 2007



*Social Science includes Division of Social Sciences and International Areas Studies.
 **URM=Individuals of African, Hispanic, or American Indian or Alaskan native origins. Faculty Headcount Source: UCB Faculty Pers. Rec. 2007.
 ***Chair/Dean figures are broken down only by gender because of low counts.
 ****Source: UCB Faculty Applicant Pool Database, 2001-2007. Not all departments have responded.
 *****Based on PhDs granted to U.S. Residents, 2000-2004, at the 50 Institutions producing the most PhDs at Top Quartile Rated doctoral programs (National Research Council Reputation Ratings), Survey of Earned Doctorates.

Notes: Slide 2 represents a cross-sectional view of the UC Berkeley faculty structure in the social sciences by leadership (chairs and deans) and faculty rank (December 2007). It also displays data on recent faculty applicants (2001-2007) and estimated available United States PhD pool (2000-2004) which are selected to roughly correspond with the timing of the hiring of our current assistant professor population.

- As noted above, our deans and chairs are drawn from our faculty and there are essentially four major faculty ranks at UCB.
- This slide is filtered to only include UCB leadership, faculty, faculty applicants, and estimated PhD pool availabilities in the social sciences because the proportion of women in academia is highly correlated with broad disciplinary groupings. Accordingly, we have constructed separate slides for four other major disciplinary groups [PTEM (Physical science, technology, engineering, and mathematics), biological sciences, professions, & humanities--not shown here].
- At the time of applying to faculty positions, faculty applicants are asked to voluntarily respond to a survey regarding their gender and racial/ethnic identity (for a copy of the survey [click here](#)).
- Our US PhD Pool numbers are drawn from data from a U.S. national survey, the Survey Earned Doctorates ([click here](#) for more information); sponsored by the National Science Foundation and others that collects data on U.S. PhD recipients. We have filtered this population to only include recent domestic PhD recipients (2000-2004) who received a PhD from a highly ranked institution (i.e. National Research Council reputation rankings--[click here](#) for more information) and fields of study offered at UC Berkeley.
- Even after filtering this population, UC Berkeley's assistant ranks and actual job applicants to our faculty positions are not fully reflective of the diversity of the estimated availability pool (this commonly observed discrepancy is sometimes referred to as the "pool problem").

2. The following questions seek to ascertain whether your institution currently possesses

the necessary capacity to develop a similar version of this data representation (Slide 2) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Generally agreed upon faculty strata/tiers that could be displayed on a single slide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
b. Generally agreed upon broad disciplinary groupings (with the necessary level of aggregation to make data representations by gender potentially useful)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
c. Current/recent headcount or full-time equivalency (FTE) data for all of the salient faculty strata/tiers (as specified by your institution)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
d. Current/recent faculty headcount or FTE data that is linked to gender (male, female, decline to state, etc.) and race/ethnicity (if appropriate)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
e. Current/recent faculty headcount or FTE data that is linked to broad disciplinary groupings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
f. Data on recent faculty applicants linked to gender (and race/ethnicity if appropriate) and broad disciplinary groupings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
g. Data that can be used to estimate faculty pool availabilities by gender (race/ethnicity if desirable) and broad disciplinary field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
h. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Please use the text box below to provide any other comments you might have regarding the possibility of developing a similar data representation at your institution:



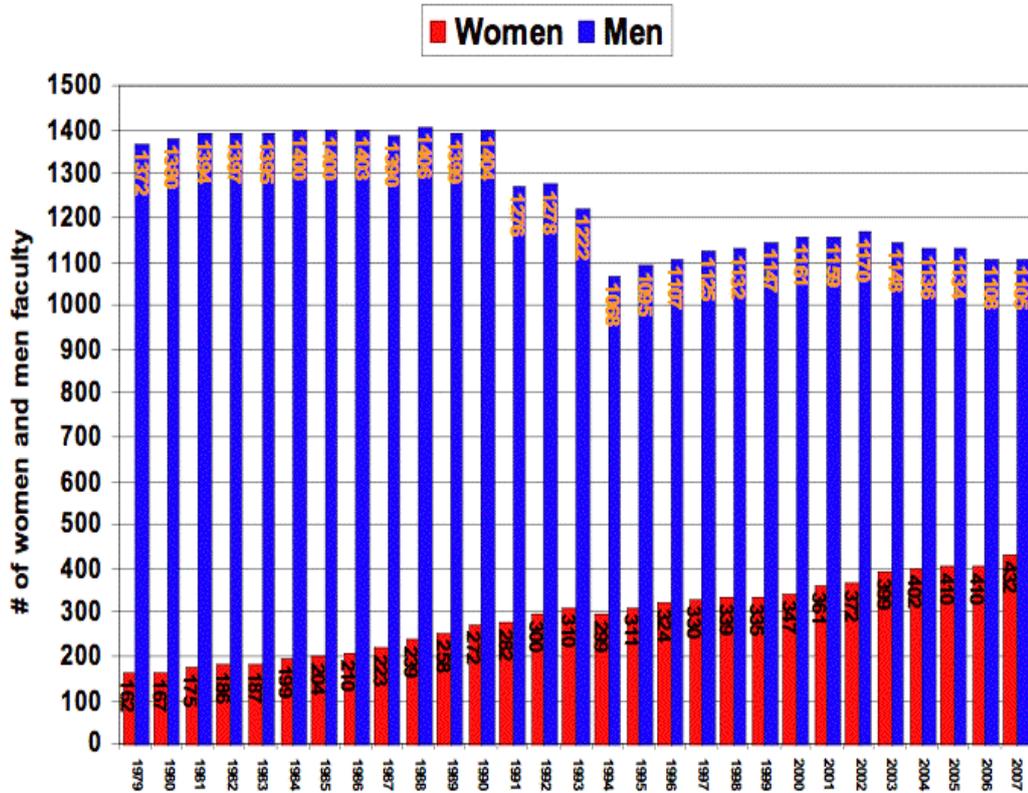
Based on the above, do you currently possess the necessary capacity to develop a similar data representation for your institution and, if yes, would you be willing to do so and bring it to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar version of this representation at the upcoming meeting
- Other response (*specify*) 

If you would like to save your work, please click the save button now.

B. Time-Series Views of Selected UC Berkeley Academic Populations by Selected Gender Equity Benchmarks

Slide 3: UCB Faculty Headcount by Gender, 1979-2007



Source: UCB Faculty Personnel Records, 1979-2007.

Notes: Slide 3 represents an aggregate headcount of UC Berkeley faculty by gender from 1979 to 2007.

- All UC Berkeley tenure eligible and tenured faculty are included in these aggregate counts.
- In the early 1990s, the University of California system experienced a period of significant financial restriction and large numbers of faculty throughout the system and at UC Berkeley chose to retire in the response to a series of retirement incentive programs (referred to as VERIPs).
- Since 1994, UC Berkeley has experienced a net increase of 37 male faculty and 133 female faculty.
- Currently, women comprise 50% of all domestic PhD recipients in the United States but only 28% of our faculty.
- By definition, aggregate faculty headcounts reflect a combination of net flow into the institution, in the form of hiring, and net flow out of the institution in the form of resignation (e.g. leaving to pursue another job), end-of-contract (e.g. failure to receive tenure by the end of the eight-year probationary period), termination, retirement, or death.

3. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop a similar version of this data representation (Slide 3) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

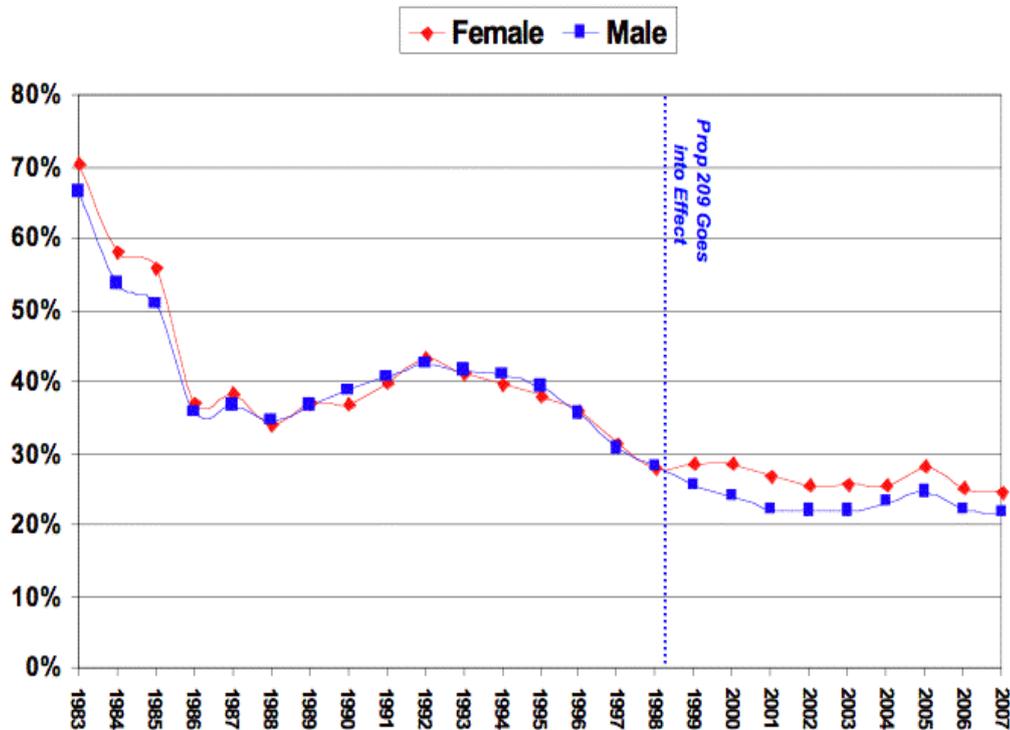
Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Faculty headcount or full-time equivalency (FTE) data that spans multiple years and is consistent (<i>preferably more than five years and has been constructed in similar fashion through the years in regard to timing of data and population specifications</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Faculty headcount or FTE data (for multiple years) that is linked to gender (male, female, decline to state, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing a similar data representation at your institution:

Based on the above, do you currently possess the necessary capacity to develop a similar data representation for your institution and, if yes, would you be willing to do so and bring it to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar version of this representation at the upcoming meeting
- Other response (*specify*) →

Slide 4: UCB Undergraduate Admit/Applicant Ratio by Gender*
Freshman Applicants, 1983-2007



*Includes Calif. residents & non-residents.

Source: UCB Office of Student Research (OSR), Undergraduate Applicant Files, 1983-2007.

Notes: Slide 4 represents an admission to applicant ratio for UC Berkeley undergraduate freshman applicants from 1983 to 2007 by gender.

- Admission to applicant ratios are one form of transition rates that can be useful in benchmarking equity issues. Here are some other examples used at Berkeley: yield rates in the form of the proportion of first-offer faculty candidates who accept our job offers or UCB student registration rates among individuals offered admission to Berkeley, 6th year graduation rates for undergraduate students (i.e. the percentage of incoming freshmen who graduate within 6 years of entry), 10th year doctoral student completion rates, 8th year assistant professor tenuring rates, faculty separation rates by age categories, yearly outside job offer rates to our faculty, etc.
- After 1998, a new California state law known as Proposition 209 went into effect that included the following language: "The state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting." At the undergraduate level, admit/applicant ratios for female applicants increased relative to those for male applicants after 1998.

4. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop similar types of data representation (Slide 4) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Generally agreed upon transition rates or ratios such as admission to application rates, graduation rates, promotion rates, retirement/attrition rates for selected academic populations (faculty, undergraduates, graduate students, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Transition rate data that spans multiple years and is consistent (<i>preferably more than five years and has been constructed in similar fashion through the years in regard to timing of data and population specifications</i>)--the data can be based on annual increments or multiple years can be rolled together (e.g. undergraduate admits/applicants, 1990-1994, 1995-1999; proportion of first-offer faculty candidates who accept job offers, 1996-2000, 2001-2006; etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Transition rate data (for multiple years) that is linked to gender (male, female, decline to state, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing similar types of data representation at your institution [please note which transition rate(s) and population(s) you are referencing in your response]:

Based on the above, do you currently possess the necessary capacity to develop similar types of data representation for your institution and, if yes, would you be willing to do so and bring an example to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar type of representation at the upcoming meeting
- Other response (*specify*)

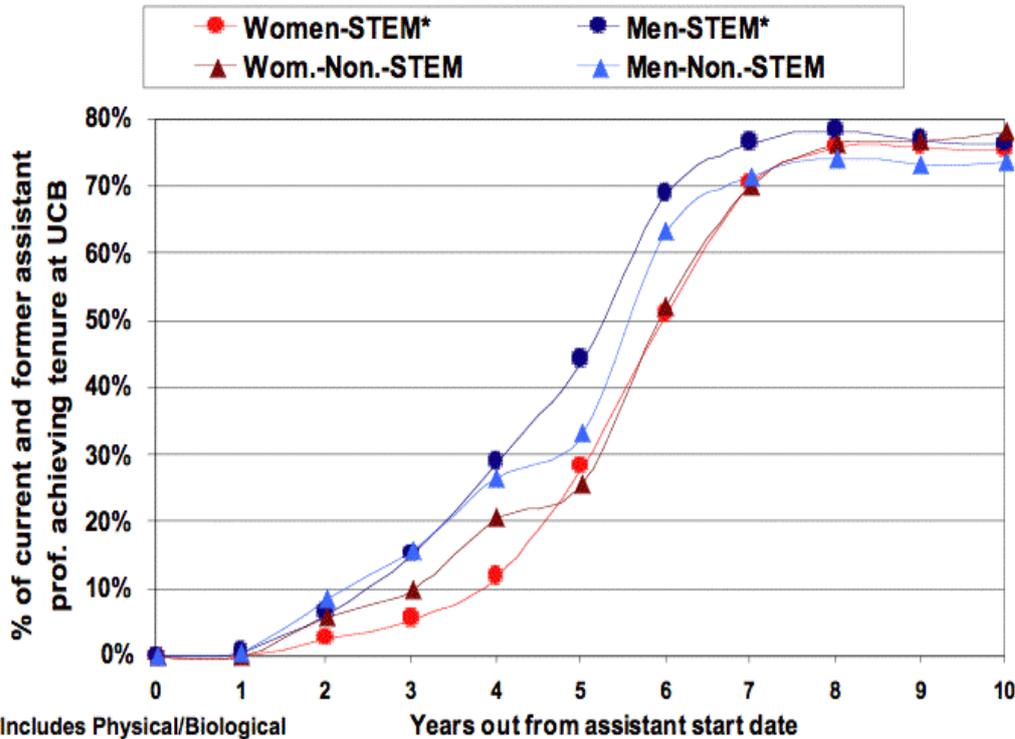


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C. Longitudinal Views of Selected UC Berkeley Academic Populations by Selected Gender Equity Benchmarks

Slide 5: Achieving Tenure at UCB by Gender and STEM*/Non-STEM
 (Includes All Current and Former UCB Faculty with Assistant Start Dates July 1985-2007)



*Includes Physical/Biological Sciences, Math., & Technology.

Source: UCB Faculty Personnel Records, 1985-2007

Total N= Wom.-STEM, 86 to 45; Men-STEM., 315 to 178; Wom.-Non.-STEM , 229 to 119; Men.-Non.-STEM , 292 to 163.

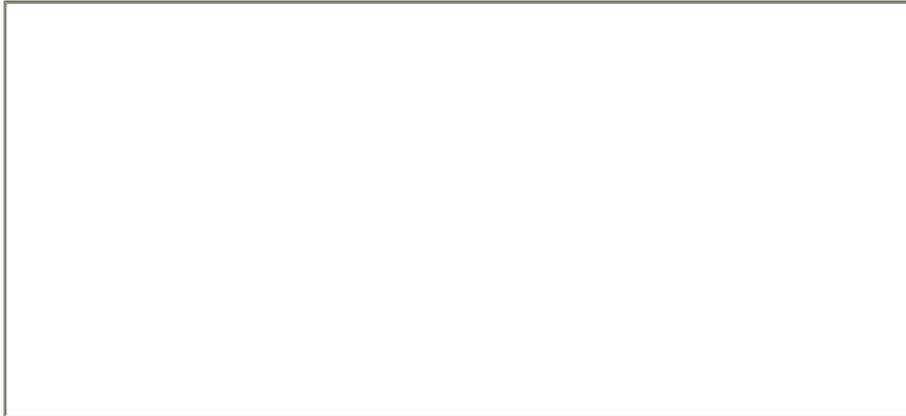
Notes: Slide 5 represents the percentage of new UCB assistant professors from 1985 to the present who have achieved tenure by years out from assistant professor start date, gender, and broad disciplinary grouping.

- At UC Berkeley, assistant professors are allowed eight years to achieve tenure but this time period may be extended by one year in the case of the birth/adoption of a new child (with a maximum of two years extended for two or more birth/adoption events--[click here](#) for more information).
- Because faculty in the STEM fields (science, technology, engineering, and mathematics) tend to have faster career progression than faculty in other fields and women are disproportionately represented in the non-STEM fields, we have displayed the data by both gender and STEM/non-STEM.
- By eight years out from assistant start date (regardless of whether they still reside at Berkeley), tenure rates for these four different UCB assistant professor groups are remarkably similar, hovering around a 75% tenure rate. From 3 to 7 years out from assistant professor start date, discrepancies are evident, with Men in the STEM fields showing higher initial tenuring rates and women showing lower rates relative to men.

5. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop a similar version of this data representation (*Slide 5*) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Micro- or individual-level faculty data (stored at the individual faculty member level or FTE level and including faculty rank status) spanning multiple years (<i>preferably more than 10 years of consistent data</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Micro- or individual-level faculty data (for multiple years) that is linked to gender (male, female, decline to state, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Micro- or individual-level faculty data (for multiple years) that is linked to generally agreed upon broad disciplinary field groupings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. The ability to convert or analyze micro- or individual-level data sets stored by specified calendar increments (2000, 2001, etc.) to micro- or individual-level data sets stored at the time-out-from initial-event level (e.g. assistant professor start date is year 0 for an individual . . . 3 years out from start date, 8 years out from start date, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
e. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

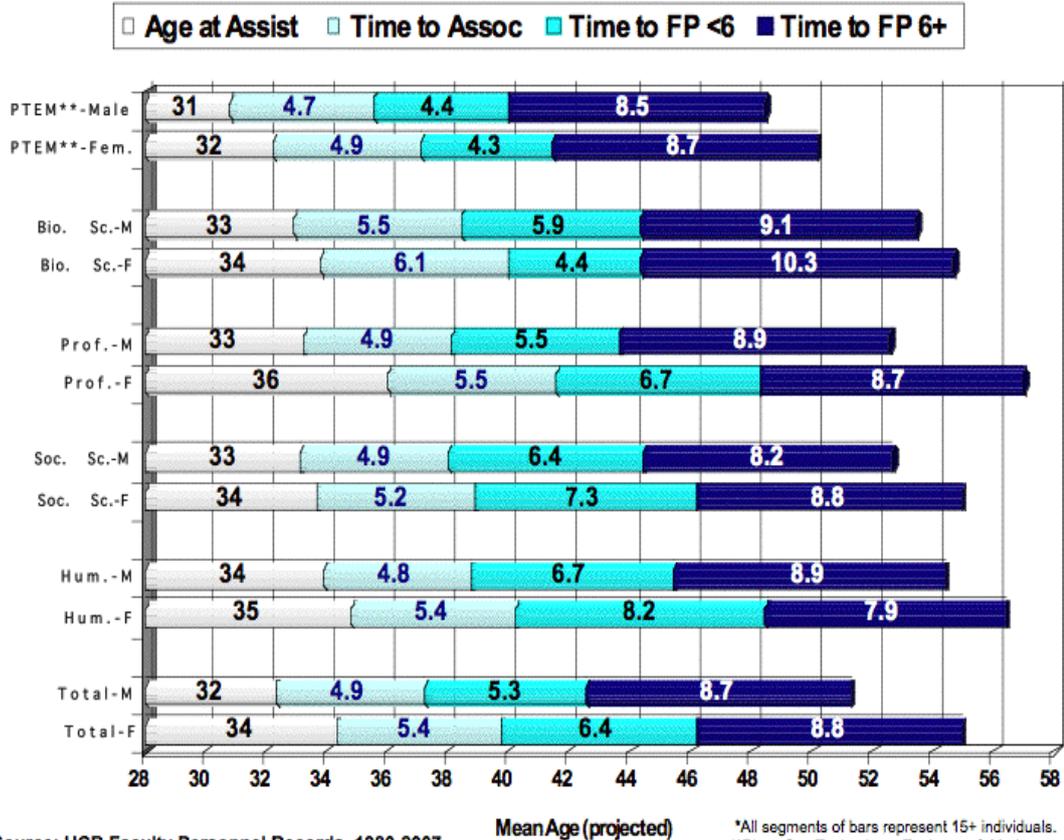
Please use the text box below to provide any other comments you might have regarding the possibility of developing a similar data representation at your institution:



Based on the above, do you currently possess the necessary capacity to develop a similar data representation for your institution and, if yes, would you be willing to do so and bring it to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar version of this representation at the upcoming meeting
- Other response (*specify*) 

Slide 6: Advancing Through the Ranks (mean age/time) : UCB Faculty by Gender*



Notes: Slide 6 represents the average age-at-start of UCB assistant professors who were hired from July 1980 to July 2007 and the average time-to-promotion events (e.g. assistant-to-associate, associate-to-full professor, etc.) for all UCB faculty undergoing these transitions during the same period by gender and broad disciplinary field.

- Because yearly rates of promotion are generally associated with broad disciplinary field and women and men are disproportionately represented in these various groupings, the data is classified by broad field.
- This data only reflects the mean time-to-events and does not, therefore, reflect rates of promotion (as did Slide 5).
- Age at various promotions is projected based on age-at-assistant start plus mean time-to-events (it does not represent actual mean age at events).
- Across all disciplinary groupings (see total bars at bottom of slide), women are on average older than men at start of assistant professor position and take longer to advance to associate professor and full professor (below step vi). This general pattern has been observed at other institutions and by researchers who make use of national (U.S.) longitudinal datasets.

6. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop a similar version of this data representation (Slide 6) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Generally agreed upon faculty rank advancement structures/expectations (e.g. assistant to associate, associate to full)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Micro- or individual-level faculty data (stored at the individual faculty member level or FTE level and including faculty rank status) spanning multiple years (<i>preferably more than 10 years of consistent data</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Micro- or individual-level faculty data (for multiple years) that is linked to gender (male, female, decline to state, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. Micro- or individual-level faculty data (for multiple years) that is linked to generally agreed upon broad disciplinary field groupings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
e. Appropriately structured multi-year datasets that allow for the calculation of mean-time-to-events (assistant start to associate start) and/or average-age-at-events (assistant professor start).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
f. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing a similar data representation at your institution:



Based on the above, do you currently possess the necessary capacity to develop a similar data representation for your institution and, if yes, would you be willing to do so and bring it to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar version of this representation at the upcoming meeting
- Other response (*specify*) 

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D. Cross-Sectional Survey Respondent Data, Selected UC Berkeley Academic Populations and Selected Scaled/Ranked Items

Slide 7: Significant Differences* in the % of UCB Faculty in the Sciences Satisfied with Various Elements of Their Position, by Gender**

	STEM		Bio. Sc.		Soc. Sc.		All Science	
	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men
Teaching Responsib.	71%	87%	84%	95%	75%	80%	77%	88%
Committee Respons.	81%	87%	66%	83%	70%	81%	72%	85%
Welcome to Berkeley	61%	74%	58%	59%	61%	80%	60%	71%
Balance Personal/Prof.	29%	45%	43%	57%	30%	51%	34%	50%
Time for Scholarly Work	21%	38%	37%	54%	23%	43%	27%	44%
Time for Self	14%	34%	37%	46%	23%	46%	26%	40%

*Yellow shading denotes that gender differences are significant (p<.05) when controlling for rank and sub-groups in the sciences.
 **Includes very satisfied and somewhat satisfied vs. somewhat dissatisfied and very dissatisfied.
 Note: Other elements of satisfaction surveyed included: current rank, current salary, advising respons., quantity/quality of research space, res. and library fac., computer fac., \$ for new ventures, number & quality of grad. students, opp. to collaborate w. faculty, intellectual stimulation, clerical/admin. supp., parking, housing, & commute time.

Source: UCB Faculty Climate Survey, 2003.

Total N, Women=109+, Men=383+

Notes: Slide 7 presents data drawn from the UC Berkeley 2003 faculty climate survey ([click here](#) to see a copy of the instrument), selected to only include items in which there were significant differences in the degree of satisfaction among men and women faculty in the sciences.

- The survey was a web-based, confidential survey that received the clearance of our campus' Committee for Protection of Human Subjects ([click here](#) to learn more about the protection of human subjects at the Berkeley campus) and achieved a 60% response rate.
- The Likert-scaled data has been parsed, displaying percentage of faculty who indicated that they were very satisfied and somewhat satisfied vs. somewhat dissatisfied and very dissatisfied in regard to selected items (respondents who indicated the select item was not applicable were excluded from the data analysis).
- Logistic regression was used to test for significance of any observed gender differences in response to the dependent variables (each of the separate items related to satisfaction), with faculty rank, gender, and science subgroups included in all of the models as independent variables.
- In all cases where there were confirmed significant differences, women faculty in the sciences were in the aggregate less likely to have indicated they were satisfied (very or somewhat) than were men faculty in the sciences.

Slide 8: % of UCB Faculty Citing Selected Job Factors* as Weighing Heavily in Their Decision to Stay or Leave UCB, by Gender & Race/Ethnicity

Rank	Selected Job Factors	Total	Men	Wom.	White	Asian	URM**
1	Annual salary	43%	47%	34%	39%	33%	63%
2	Geographical location	38%	37%	43%	41%	42%	21%
3	Collegial interaction	34%	33%	38%	33%	17%	37%
4	Spouse/partner employ.	32%	28%	43%	32%	42%	37%
5	Total compensation	31%	32%	27%	32%	42%	26%
6	Dep./univ. reputation	24%	30%	13%	26%	8%	16%
7	Overall program quality	24%	26%	21%	24%	17%	26%
8	\$ for new ventures	24%	23%	25%	21%	42%	32%
9	Housing avail./cost	22%	24%	18%	20%	17%	26%
10	Opp. to collaborate	21%	22%	16%	21%	17%	21%
11	Teaching resp./opp.	21%	17%	29%	21%	8%	26%
12	Research facilities	20%	20%	21%	19%	25%	26%
18	Comm. to diversity	5%	2%	13%	1%	17%	32%

*Prior to any counteroffer by UCB. Faculty could choose up to 5 different factors. N=185 N=126 N=56 N=140 N=12 N=19

**Individuals of African, Hispanic, or American Indian origins.

Source: UCB Faculty Retention Survey,

Green shading=sig. diff. at .10 level from ref. group (male or white).

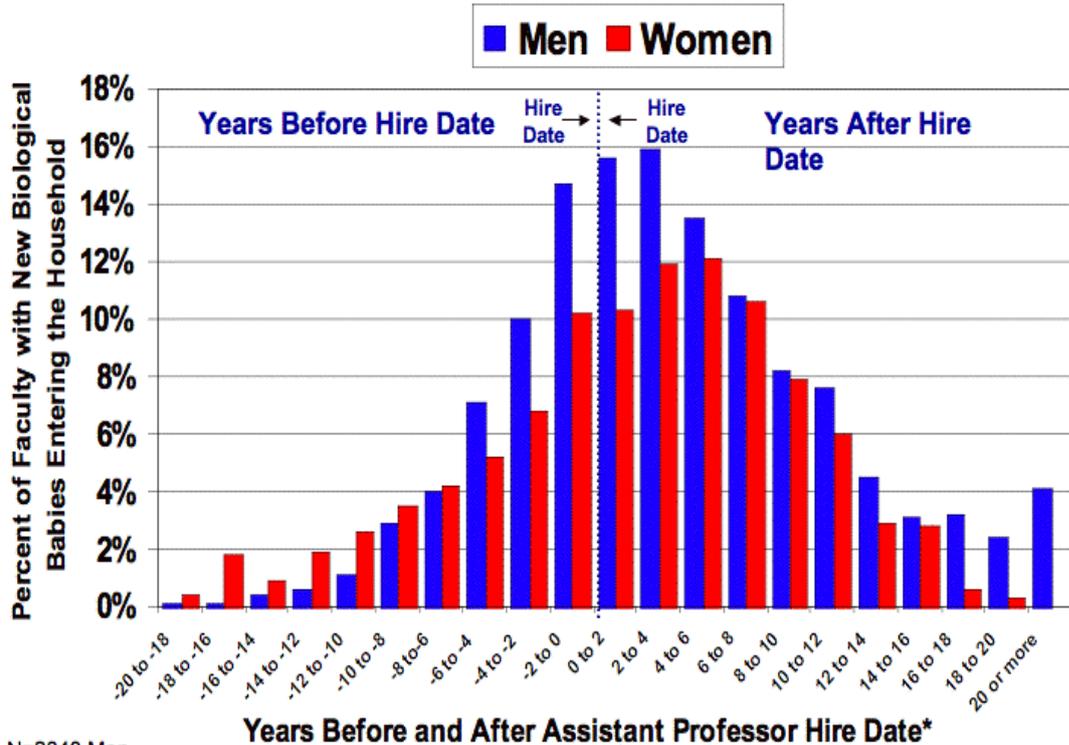
Yellow shading indicates significant difference at .05 level.

Blue shading indicates significant difference at .01 level.

Notes: Slide 8 presents data from the UC Berkeley 2007 faculty retention survey ([click here](#) to see a copy of the instrument) on the factors most commonly cited among various group (i.e. men vs. women) as critical in decision to stay at or leave UC Berkeley among UCB faculty (current and former) with one or more outside offers since 1995.

- The survey was a web-based, confidential survey that received the clearance of our campus' Committee for Protection of Human Subjects ([click here](#) to learn more about the protection of human subjects at the Berkeley campus) and achieved a 65% response rate among current UC Berkeley faculty who had received outside job offers since late 1990s but chose to stay and a 59% response rate among former UC Berkeley faculty who received outside job offers and chose to leave.
- Respondents were asked to pick up to five different listed factors that were weighing most heavily in their decision to stay or leave UC Berkeley at the time of the outside offer and prior to any counteroffer by UC Berkeley.
- Logistic regression was used to test for significance of any observed gender or race/ethnicity differences in the citing of various factors, with faculty rank, gender, race/ethnicity, and broad disciplinary field included in all of the models as independent variables.
- Since the data supplied by individuals was by definition retrospective (referring to specific times in the past), the accuracy of the information is open to challenge. Our findings, however, are similar to those of studies conducted within the University of California system using different less-retrospective methods.

Slide 9: The Baby Lag for Univ. of Calif. (UC) Women Faculty in Pursuit of Tenure



N=2340 Men
982 Women

Years Before and After Assistant Professor Hire Date*
*Year 0 represents Assistant Professor Hire Date

Source: Mason, Mary Ann, Angelica Stacy, and Marc Goulden. 2003. "The UC Faculty Work and Family Survey." (<http://ucfamilyedge.berkeley.edu>).

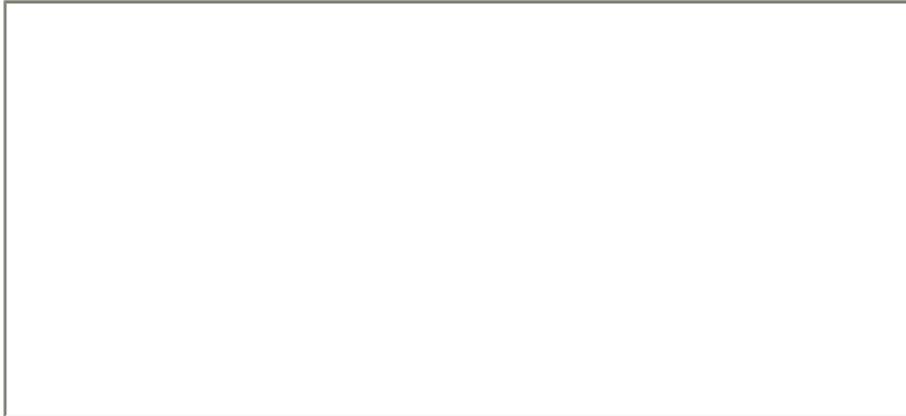
Notes: Slide 9 presents retrospective fertility history data by gender drawn from the University of California Faculty Work and Family Survey ([click here](#) to see a copy of the instrument) and reconfigured to display the timing of birth events relative to the timing assistant professor start date.

- The survey was a web-based, confidential survey that received the clearance of our campus' Committee for Protection of Human Subjects ([click here](#) and to learn more about the protection of human subjects at the Berkeley campus) and the other campuses and achieved an overall 50% response rate across the 9 universities.
- Since the data supplied by individuals was by definition retrospective (hiring/birth event timing), the accuracy of the information is open to challenge. The data patterns are similar, however, to other analysis we have conducted using both the national Survey of Doctorate Recipients ([click here](#) for more information) and the U.S. Census 2000 5% PUMS ([click here](#) for more information).
- Based on the UC data, our male faculty report more babies around the time they were hired as an assistant professor, whereas our female faculty appear to delay fertility until they are well into their assistant professor years (near, at, or after the time of tenure).
- Data from this survey was used in the framing of a UC-wide initiative that eventually resulted in significant changes to our family friendly policies ([click here](#) for more information).

7. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop similar types of data representation (Slides 7-9) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. Generally agreed upon academic populations who would be appropriate to survey in regard to salient employment issues (e.g. satisfaction with work environment, career/family balance issues, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Necessary contact information to identify potential respondents and solicit their voluntary participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Expertise in the design of survey instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. Expertise in the protection of human subjects (i.e. protecting the privacy of individual respondents and minimizing any potential risk associated with responding to university-sponsored surveys)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
e. Expertise with the analysis of survey data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
f. The ability to link respondent data to gender (male, female, decline to state, etc.--either by asking for voluntary disclosure on the survey or by linking response data to an underlying survey respondent database with preexisting data on gender)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
g. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing similar types of data representation at your institution:



Based on the above, do you currently possess the necessary capacity to develop similar types of data representation for your institution and, if yes, would you be willing to do so and bring an example to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar type of representation at the upcoming meeting
- Other response (*specify*) 

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E. Cross-Sectional Survey Departmental Data, Selected Scaled Data for UC Berkeley Academic Departments

Slide 10: Methods Used by UCB Departments to Enhance/Diversify Faculty Pool

Rank Order	Possible Methods Used by Departments to Enhance Pool (percent using particular method by self-evaluation of success)	Self-Evaluation of Success at Hiring Women*		All Dep. (n=59)
		Excellent (n=25)	Not Exc. (n=29)	
1	Listed faculty positions in multiple venues	96%	97%	96%
2	Job descrip. made clear women/minorities were encourg. to apply	76%	90%	84%
3	Made personal calls to encourage potential candidates to apply	84%	86%	84%
4	Selected diverse search committees	92%	79%	84%
5	Included graduate student input in search process	92%	72%	82%
6	Made calls to colleag. asking them to enc. wom./minor. to apply	80%	83%	80%
7	Circulated job descr. among networks wom./minority educators	88%	72%	79%
8	Designated an affirmative action officer to serve on search	64%	90%	77%
9	Approached or interviewed applicants at professional meetings	72%	72%	73%
10	Established relationships with local/national women/minority org.	68%	52%	59%
11	Educated search committee members on div./equity/affirm.	52%	55%	54%
12	Discounted care-giving related resume gaps	32%	41%	36%
13	Prioritized sub-disciplines with high diversity	36%	31%	32%
14	Encouraged UC President's Postdoctoral Fellows to apply	36%	31%	32%
15	Interviewed candidates at a variety of conferences	36%	21%	27%

Note: Yellow shading denotes p<.05 significant difference based on chi-square.

*Please Note: Departmental self-evaluation of success was highly correlated with our independent analysis of actual success.

Note: Light Green shading denotes p<.10 significant difference based on chi-square.

Source: UCB Departmental Faculty Recruitment Survey, 2005.

Notes: Slide 10 presents data drawn from the UC Berkeley Departmental Faculty Recruitment Self-Study, 2004-2005 ([click here](#) to see a copy of the instrument), on percentage of departments employing different possible methods to enhance the diversity of their faculty applicant pools by self-evaluated success at hiring women to fill faculty positions during the preceding 5 years.

- The self-study was posted on the web and department chairs were required by the Academic Senate to respond on behalf of their department as part of the process whereby departmental requests for future faculty positions were evaluated and subsequently granted/denied by the central administration (not surprisingly, the response rate to this biennial assessment has been close to 100%).
- The instrument asks department chairs to provide specific demographic statistics on who they interviewed, offered positions to, and hired in the recent past (last 5 years) and to evaluate their success in regard to faculty recruitment/hiring and diversity-related issues. Data from the evaluation provide the central administration with a general sense of the methods typically employed by departments in their efforts to enhance faculty pools and hire first-choice candidates and accordant effectiveness at doing so.
- The departmental self-evaluation of their success at hiring women was highly correlated with our independent analysis/assessment of their success (in likelihood due to the fact that we ask departments to quantify their recent hiring record). A large proportion (42%) of the departments evaluated their success at hiring women over the preceding 5 years as "excellent." In contrast, few departments (8%) evaluated their success at hiring underrepresented minorities (URM) as "excellent."
- Interestingly, departments who self-evaluated their success at hiring women as "excellent" were less likely to have designated affirmative action officers to serve on their search committees (p<.05), essentially a specific individual charged to monitor diversity-related issues throughout the hiring process, but more likely to have included graduate student input in search process (p<.10).

8. The following questions seek to ascertain whether your institution currently possesses the necessary capacity to develop similar types of data representation (Slide 10) for your university. Please note whether or not you currently have in place the following necessary component parts and provide any comments you might have in regard to the query.

Necessary Component Parts:	Possess necessary capacity/component part?					Please provide any comment/explanation you might have in regard to this specific query:
	Yes	No	Partial	Not sure	Not applicable	
a. A generally agreed upon departmental/unit process (e.g. faculty hiring, faculty review, graduate-student admissions) that could be self-evaluated by departments/units in regard to equity issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
b. Necessary contact information and departmental-level administrator (e.g. department chairs) to contact regarding responding to the instrument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
c. Necessary centralized authority to request/require departmental/unit response to the evaluation instrument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
d. Expertise with the analysis of survey/evaluation data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
e. The ability to compare departmental self-assessment data to systematic central-level data sets (e.g. in regard to recent faculty hiring at the departmental/unit level)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
f. Other necessary component parts missing from the above list (please describe in comment field)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Please use the text box below to provide any other comments you might have regarding the possibility of developing similar types of data representation at your institution:

Based on the above, do you currently possess the necessary capacity to develop similar types of data representation for your institution and, if yes, would you be willing to do so and bring an example to the upcoming IARU meeting?

- No, we do not currently possess the necessary capacity
- Yes, we possess the necessary capacity and will develop and share a similar type of representation at the upcoming meeting
- Other response (*specify*) —————↓

If you would like to save your work, please click the save button now.

F. Final Comments

- 9. If you have any other comments you would like to make regarding issues of gender equity and institutional research capacity, please make them in the below box:**

Women and Men in the Globalizing University

Intervening: What Works, What Doesn't, and How Do We Know? (*Material related to Session II*)

Transforming Science and Engineering ADVANCING ACADEMIC WOMEN

*Abigail J. Stewart, Janet E. Malley,
& Danielle LaVaque-Manty*

EDITORS

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Analyzing the Problem of Women in Science and Engineering

WHY DO WE NEED INSTITUTIONAL TRANSFORMATION?

Abigail J. Stewart, Janet E. Malley, & Danielle LaVaque-Manty

ACADEMIC SCIENCE and engineering suffer from a peculiar sort of brain drain in the United States: they persistently lose highly accomplished women, not to other countries, but to industry and unrelated careers. Increases in the proportion of women faculty in tenured or tenure-track positions at research universities lag far behind the increases in the proportion of science and engineering doctorates that have been awarded to women in recent decades. The problem is clearly not that women cannot (or do not want to) conduct scientific research at the highest levels. What, then, is it?

When the National Science Foundation (NSF) announced the ADVANCE Institutional Transformation program, an NSF program designed to cultivate the success of women in academic science and engineering, it stated that “women scientists and engineers continue to be significantly underrepresented in some science and engineering fields and proportionately under-advanced in science and engineering in the Nation’s colleges and universities. There is increasing recognition that the lack of women’s full participation at the senior level of academe is often a systemic consequence of academic culture. To catalyze change that will transform academic environments in ways that enhance the participation and advancement of women in science and engineering, NSF seeks proposals for institutional transformation” (National Science Foundation 2001). This statement expressed concisely a perspective that shifted attention away from remedying real or imagined deficits in

women (e.g., lack of suitable ability, personality, ambition, or willingness to work) as the cause of women's relatively low participation in science and engineering, and toward problems at the institutional level. This was not the first time a call for "institutional transformation" with respect to colleges and universities had been issued (see, e.g., Bleier 1984; Hubbard 1990; Schiebinger 1989), but it was a very significant one, in that it focused on the faculty, on science and engineering, and came from a federal funding agency. Though the problematic climate for women (students and faculty) in science and engineering had been discussed for decades (see, e.g., Hall and Sandler 1982, 1984), NSF's new program both legitimated the importance of that discussion as an explanation for the continued low representation of women scientists and engineers on college and university faculties, and called for action. Moreover, it backed that call with funding resources. In short, NSF not only changed the conversation about this issue, but also provided significant incentives for institutions to make serious efforts to change.

In order to make a serious effort to change, though, institutions needed to develop analyses of the problem. The funded institutions represented in this volume (and no doubt many that were not funded, or were funded in later rounds of the program) drew on a wide range of theories of organizational change, and human behavior, as well as many empirical studies, in developing their own analyses. They began searching for ideas in isolated social scientific studies of science (see, e.g., Sonert and Holton 1995; Zuckerman, Cole, and Bruner 1991), as well as in studies of related issues in nonscience settings (Kanter 1977). Many quickly found that the best place to begin to develop an integrated understanding of the important factors minimizing women faculty's participation in science, or those that might maximize it, was Virginia Valian's volume *Why So Slow?* (1999). Valian brought together a wide range of social science studies of cognitive processes affecting evaluation that might account for women's very slow progress in virtually all professions in the second half of the twentieth century. Her book provided outstanding conceptual tools for many ADVANCE Institutional Transformation project efforts to understand women's experiences in science and engineering.

Perhaps the most central concept in articulating the need for "institutional transformation," at least in the domain of women in science and engineering, is the notion of *underrepresentation* itself (see Kuck 2001; Nelson 2005). This concept can be defined in different ways. For example, it could be argued that women should participate in every activity

in the society in rough proportion to their numbers in the population (thus, about half). Alternatively, it could be argued that women should be expected to participate on university faculties in rough proportion to their attainment of doctoral level degrees (allowing for changes in the rates of that attainment). In the case of women faculty in science and engineering, women are “underrepresented” either way. But because university faculty members in all fields must hold higher degrees, ADVANCE projects have mostly operated from the latter definition. Like NSF itself, they have noted that in virtually all science and engineering fields, there are relatively few tenured women faculty at research institutions (Nelson 2005). But does this constitute underrepresentation? In deciding whether it does, projects also must consider a range of issues: what is the proportion of women students at every level in the present institution? What are the consequences for the students of having the faculty look very different from the student body? What was the proportion of women students getting doctoral degrees in various disciplines both at this institution and nationally five, ten, and twenty years ago? Does the faculty represent those figures or are women underrepresented on the faculty compared with past degree attainment too? (See Hopkins 2006 for a thoughtful discussion of these issues.)

There is no one right way to assess the adequacy of women’s representation on science and engineering faculties, but the process of reviewing the data is an important element in coming to grips with the nature of the problem. When an institution can satisfy itself that the proportion of women on the faculty does mirror national levels of degree attainment (in any particular field or even across the institution, as for example, at Hunter College; see Rabinowitz and Valian, this volume), then the issues facing it are quite different from those facing an institution that draws a different conclusion. If there are too few women on the faculty, then hiring women becomes an important priority—and in many instances so does working harder to recruit more women into the field at earlier educational stages.

What does it actually mean for an institution to have “too few women”? We have noted (like Hopkins 2006) that it may suggest a distortion in past hiring, and it can have implications for students. But how does it affect the women who are actually on the faculty in those fields? At least two concepts have proven extremely important in thinking about this issue: *token* or *solo status*; and lack of *critical mass*. The literature on “solos” or individuals who are the sole representatives of their group (by race, gender, or other defining characteristic) suggests that they are

perceived and treated differently than individuals who share a characteristic with other members of their group in a work setting (Niemann and Dovidio 1998; Yoder and Sinnett 1985). Overall, solos—particularly solos who are members of lower-status groups in the society—are subject to more stereotyping, scrutiny, and negative judgments (Thompson and Sekaquaptewa 2002). Not surprisingly, they also experience greater internal stress. The notion of solo status has been extended, in an attempt to understand the point at which group membership stops being noticed—when “critical mass” is attained (see, e.g., Etzkowitz et al. 1994). Although there is no definite cutoff point, literature suggests that when a group becomes a significant “minority” (perhaps as large as a third of a larger group), individuals are viewed through a more individualistic (less stereotyping) lens. Thus, belonging to a particular socially defined group (e.g., by gender or ethnicity) matters less under these conditions—both to perceivers and to the person being perceived (see Valian 1999, 139ff., for a review).

The second overarching concept underlying institutional transformation efforts is the notion that *features of the institutional environment* itself matter; this concept links the failure of women to thrive in science, technology, engineering, and mathematics (STEM) fields not to their own inadequacies but to features of the workplace in which they operate (Johnsrud and Des Jarlais 1994; Long 2001; Preston 2004; Wright et al. 2003). Particular concepts that have been used to understand and study institutions include the *climate*, *tacit knowledge* (of how the institution, discipline, funding agencies work), *networks* (and exclusionary processes), *schemas* (associated both with gender and with the fields of study), *evaluation bias*, and *accumulation of disadvantage*.

Most of the ADVANCE institutions recognize that whether or not women are underrepresented in science and engineering, the *climate* for their effort is often “chilly” or not welcoming. That is, women are often treated—by students, colleagues, or staff—as in some way unsuitable for the work, and therefore untrustworthy as authorities, undesirable as colleagues, and not fitting in (Ambrose et al. 1997). This perception, when communicated to women, can create and feed self-doubt and alienation. Even when this perception is not directly communicated, it often leads to women being excluded from networks by which important information about how institutions work, as well as opportunities, are communicated (Hitchcock et al. 1995). Equally, being viewed through the lens of gender results in men’s accomplishments in science and engineering being routinely overvalued and women’s undervalued (Banaji and

Hardin 1996; Banaji, Hardin, and Rothman 1993; Steinpreis, Anders, and Ritzke 1999). Annoying but possibly minor in a single instance, this pattern of evaluation bias—multiplied on many different occasions of evaluation of lectures, manuscripts, grant proposals, and so on—results in the *accumulation of significant advantage* to men and disadvantage to women over a lifetime. Valian has identified this as the process of creating mountains (of disadvantage) out of molehills (1999, 4–5). Institutionally the “chilly” workplace environment is communicated through policies and practices that assume that faculty members are not primary caregivers for others, and that they can rely on others to take care of those responsibilities in their lives (Preston 2004; Xie and Shaumann 2003). The gendered career trajectories produced by institutional biases result in a particular dearth of women in leadership roles in STEM fields, which of course symbolically legitimates the gendered system itself, and helps it to reproduce itself.

One important advantage to recognizing the institutional basis of women’s underrepresentation and difficulty thriving in science and engineering (that is, of employing *systems theory* in at least a loose way to understand the problem; see von Bertalanffy 1975; Weick 1976; Weick and Orton 1990) is that it shifts the burden of guilt off of individuals. Just as women cannot be blamed for their own exclusion from science and engineering, men (and the few women on the “inside”) cannot be blamed for it either, as individuals. If the problem reproduces itself unless it is interrupted (an inevitable feature of a system’s self-maintenance once set in motion), then change can be initiated by individuals, but the problem is not individuals’ fault. It is worth noting that the system operates at many levels (particular institutions, higher education as an institution, disciplines themselves, funding agencies, etc.). Given that fact, it is important that actions be considered that would address these issues at multiple levels. Most of the interventions discussed in this volume aim at particular institutions; one (Croson and McGoldrick’s chapter) aims at a discipline (economics), but it is possible to imagine interventions (including, for example, the use of Title IX advocated by Senator Wyden; Mervis 2002) that would aim at other, broader levels, and that might be equally or more important. Indeed, the ADVANCE program itself is a national-level “intervention.”

Many of the institutional transformation efforts described in this volume are based on analyses that rely on the concepts outlined above. Four key elements of their efforts are directly aimed at many of the obstacles already outlined. These include (1) identifying *norms or practices*

in science and engineering generally, in a particular field, or in their institution that tend to exclude women; (2) *educating* individual faculty (women and/or men) or *raising their awareness* of the nature of the problems facing women in STEM fields; (3) *altering the representation of women* in STEM fields by increasing their numbers; (4) taking deliberate actions to *counter gender schemas and evaluation bias*.

In creating interventions that have these goals, projects rely on a range of different kinds of approaches or strategies. For example, many programs—implicitly recognizing women scientists’ and engineers’ isolation from one another, small numbers in many locations, and exposure to unwelcoming environments—aim to *create and support the development of women scientists and engineers’ positive collective identity*. These efforts draw on what is known about the creation of groups or movements that can advocate on their own behalf and provide positive support for one another (Apfelbaum 1979).

Other interventions make direct *connections between individuals’ personal experiences and policies and practices* in the institution. Thus, if women faculty are much more likely than men to carry a “second shift” of caregiving responsibilities, then institutional policies and resources need to be directed to recognizing that fact and supporting women faculty as well as their male colleagues with different household demands (Rapoport et al. 2002; Williams 2000).

Because men are colleagues and bosses of the women scientists and engineers, it is important to include men—both as leaders and as allies—in the process of institutional transformation. Many of the institutional change efforts rely on this recognition and attempt to foster and support *change-focused alliances of women and men* (Bolman and Deal 1991; Smith 1989; Chesler 1981). It is very important that these alliances be able to identify actions they can take to improve the situation; one critical aspect of intervention is *creating meaningful avenues for concrete action*, for alliances, but also for individuals and for the institution. When individuals’ awareness of a problem is increased, but they are not helped to identify things they can do to address the problem, they can simply feel paralyzed by their new knowledge.

In the context of many of the interventions that have been identified, three broad principles are frequently noted to be helpful. First, many faculty and administrators assume that practices that enhance diversity will compromise excellence. It is critical to address this assumption, and to show how any given intervention designed to enhance diversity is compatible with high standards and the maintenance of excellent qual-

ity. Second, many of the actions taken to improve the environment for women have *benefits for most or all of the faculty*. If this is not explicitly stated, faculty are prone to viewing benefits in zero-sum terms, assuming that if things get better for women faculty, they will inevitably get worse for men. Third, progress (or its absence) cannot be assessed without *systematic monitoring of indicators*. It is very important to collect and use data to identify where progress is more and less substantial. These data need to be sensitive to the different levels at which change is wanted and may be occurring: in the women scientists themselves (their representation and the climate for them; their collective identity, raised consciousness, perceived linkage of personal experience to policy); in their male colleagues (in their raised awareness, concrete actions, and new alliances); in departmental and institutional leaders (in their awareness and actions); in institutional policies (for example, in their linkage of the personal to policy; in efforts to counter evaluation bias, and to assess and monitor indicators); and in organizational change leaders or “organizational catalysts” (who are identifying norms and practices that need adjustment and identifying avenues for action; see Sturm, this volume).

This volume, then, is intended as an inevitably partial compendium of institutional transformation efforts in the area of women faculty in science and engineering. Because it includes projects from a wide range of types and sizes of institutions, we believe it will be useful to individuals in an equally wide range of types and sizes of institutions. Of course, all of the institutions represented here both proposed and received “institutional transformation” grants from NSF, and that means they may differ from other institutions in several ways. First, they had committed organizational change agents on campus; second, they had substantial enough institutional support for the effort to make a credible proposal to NSF; and finally, they were provided (by NSF) with significant resources that allowed them to experiment with institutional transformation.

We believe that even without those resources other institutions can benefit from what these institutions have tried. There are, though, some minimum conditions that will make others more able to make successful use of these experiments. First, it is crucial to conduct a local analysis of the nature of the problem at the particular institution. Not only must remedies be designed to ameliorate particular problems, but one remedy will not suit all settings; all remedies require adjustment to local conditions. Second, the institution must have—in some key locations—

faculty and administrative leaders who have a sincere desire to make changes. Finally, there must be some energy and leadership that can be devoted to the transformation effort; it cannot happen without resources of time and leadership. There are, of course, other helpful adjuncts. It is extremely helpful if some financial resources can be made available to the project, and can support staff and others' time. It is also extremely helpful if the leadership of the institution at all levels understands and supports the institutional change effort. But we believe that meaningful change can happen—at least at some levels of the institution—even absent those adjunct conditions.

The book is divided into four parts. The first includes not only this introduction but an interview with the visionary leader of ADVANCE at NSF, Alice Hogan, who explicates the historical and institutional context for this program at a national level. The second part includes accounts of programs that provided enhanced or new institutional supports to women scientists and engineers themselves. These programs “warm up” the climate for women and help them thrive. The third part includes accounts of interventions aimed at transforming practices at the heart of academic institutions—hiring, evaluation, and tenure review. Finally, the fourth part provides analyses of the conditions for successful change. It includes case studies of particular circumstances leading to change (one entire institution and one department), of organizational catalysts and their role in institutional change, of the circumstances associated with institutionalization of change, and an account of the value of assessing different kinds of outcomes. The last chapter addresses a deeply practical question: it surveys the preceding efforts and identifies the ones that are readily adaptable, effective, and attainable at relatively low cost.

Providing Institutional Support to Women Scientists and Engineers

This second part of the book focuses on efforts to provide necessary, but previously missing, institutional supports to women scientists and engineers. These strategies differ from more conventional efforts to “fix the women” (rather than change the institution) because they are grounded in an analysis of an *institutional* failure to provide necessary conditions for women faculty members' successful growth and development. While each of the approaches offered in this part was specifically designed and tailored for the particular institution, because they address problems that arise for women scientists and engineers in many academic institutions,

we believe they have real promise for adaptation in other institutions.

Many ADVANCE Institutional Transformation projects have tried to address one implication of women scientists and engineers' underrepresentation—their isolation from one another, and experience of being “tokens”—by creating stronger communities, or networks, among them. The specific approach offered by Rankin, Nielsen, and Stanley in chapter 3 was developed at the University of Colorado, and is built on the notion that new networks are tools for social change (just as traditional networks maintain the status quo), in part because they can increase members' understanding and capacity to challenge the ordinarily unchallenged assumptions about “how things work” in the institution, as well as how science works more broadly. From their perspective, then, it is important that networking not only shifts women faculty members' experience of themselves as members of a minority and stigmatized group, but more importantly that networking generates both new knowledge and increased ability to critique unquestioned norms, practices, and policies.

Dyer and Montelone, from Kansas State University, provide an account of a networking program with very specific goals for women faculty in STEM fields. Their aim was not to address women's lack of connection to one another on campus, but rather their lack of strong professional networks outside the institution. This program focuses on untenured women faculty—at the most vulnerable and least connected period in their careers—but clearly it could also operate for more senior women. This program provides individual women faculty with resources for creating a new and strong link with distinguished senior scientists from other campuses. In this case the goal is to provide individual women with the opportunity to develop a stronger professional network that in turn will provide increased mentoring, professional visibility, and external opportunities.

“Interconnected networks” are viewed as a critical element in Georgia Tech's institutional change effort. Realf, Colatrella, and Fox argue that it is useful to support a range of different sorts of networks, operating at different levels of the institution. As in the previous chapters, networking is expected to help address some of the consequences of skewed gender ratios in science and engineering fields, because “it allows those who would be excluded to overcome exclusion, connects strivers to role models, and fosters mentoring.” In addition, though, they indicate that the networks fostered by their ADVANCE Institutional Transformation activities have also facilitated changes in faculty

evaluation procedures, and the prevalence of reliance on gender schemas, while catalyzing collective action by women faculty.

While the networking programs outlined in these three chapters all have implications for career advising, Posey, Reimers, and Andronicos in chapter 6 describe a program at the University of Texas at El Paso designed much more focally to improve the mentoring received by women STEM faculty. Building on a recognition of the importance of preventing “the accumulation of disadvantage” in women’s careers, the program experimented with different structures for mentoring, including two (mentors) on one (mentee) and mentoring pairs. Their recommended model is a small-group mentoring model, involving up to six mentees with two senior mentors, with assignments across related fields. As a result, though this program’s explicit goal is mentoring, the structure increases networking too.

Rabinowitz and Valian outline a much more extensive “sponsorship” program initiated at Hunter College. The target group for this program is STEM women faculty of all ranks, who are offered structured support for their career development. Individuals are provided with workshops that offer precisely the sort of tacit knowledge about institutional norms and disciplinary practices that women may normally not have; in addition, resources are provided to ensure expert individual career advice from outside the institution; and a process of goal-setting and goal-monitoring is created. Women are encouraged to think about their careers in the context of their whole lives, and to address obstacles to their career achievement that arise in their personal lives, as well as to maintain a focus on balancing their work and family lives. This is an intensive program that has the capacity to have a major impact on a relatively small number of individual women who are, in turn, expected to become agents of change in the institution more broadly.

A very different kind of program to support women faculty was initiated at the University of Washington. The focus of the program outlined by Riskin, Lange, Quinn, Yen, and Brainard is women faculty members’ occasional but critical need for support through difficult life transitions. The program recognizes both that women normatively engage in more caregiving than men, and that academic career tracks have little “give” to accommodate the disruption imposed by intensive parenting of a newborn, or caregiving for seriously ill family members. Specific resources provided are negotiated based on the faculty members’ needs, as is the size of the award (from \$5,000 to \$38,000). The

chapter provides information about related programs on other campuses, suggesting that this kind of support is widely needed and valued.

Transforming Institutional Processes

Chapters in part 3 report on programs designed to change key academic processes and academic climates. Rather than providing direct support to individual women faculty, these efforts target disciplines, institutional practices, or administrators, but they generally take place concurrently with efforts (like those described in the previous part) to enhance the careers of individual women, with the understanding that women's careers, like men's, will flourish only in institutions with equitable policies and practices and hospitable climates.

Stewart, Malley, and LaVaque-Manty, from the University of Michigan, outline an intervention designed to foster equitable approaches to hiring and recruitment through the creation of STRIDE (Strategies and Tactics for Recruiting to Improve Diversity and Excellence), a highly trained faculty committee that teaches administrators and recruitment committees about gender schemas, evaluation bias, and the accumulation of disadvantage. When the scientists and engineers who participate in STRIDE first came together to develop a new approach to faculty recruitment, they engaged in a sustained period of self-education, a period some of them now describe as "consciousness raising." Because they see themselves as people whose consciousness needed to be raised, STRIDE members are well positioned to explain gender schemas and evaluation bias to others without imputing any sense of blame for these phenomena. Their credibility (as trusted and institutionally supported scientists and scholars who transmit reliable theory and evidence) is crucial to the program's substantial success in developing change-focused alliances among men and women while providing departments with tools that will help them hire enough women faculty to reach critical mass.

In "Scaling the Wall: Helping Female Faculty in Economics Achieve Tenure," Croson and McGoldrick, from the University of Pennsylvania and the University of Richmond, describe an intervention that addresses an important question: what can be done to help women gain access to mentoring and tacit knowledge when they are a small minority within their departments or disciplines? Like Dyer and Montelone, whose chapter appears in part 2, they respond by helping women faculty

develop ties that extend beyond a single institution, but in this case they build a discipline-wide network by holding mentoring workshops at national conferences. They also develop an intriguing concept they call “role activation”—the idea that those who have been mentored learn the value of mentoring and become more willing to adopt the role of “mentor” later when invited to do so. This is a program with the potential to create and sustain clear paths for the transmission of tacit knowledge among women faculty who might otherwise remain isolated as “solos” within their home departments.

Fox, Colatrella, McDowell, and Realff, from Georgia Tech, report on a method of addressing evaluation bias throughout their institution in “Equity in Tenure and Promotion: An Integrated Institutional Approach.” Their program draws attention to the importance of many facets of credibility, from “leadership and organizational climate that signal the importance of equity,” to the collection and presentation of relevant institutional data. Their project began with a comprehensive canvass of tenure and promotion policies across all units and a faculty survey “on issues pertaining to evaluation, including: resource allocation and success; mentoring and networking; perceptions of evaluative methods and procedures; interdisciplinary collaboration; entrepreneurship; and institutional culture.” Based on their findings from this research, they developed a web-based instrument called “ADEPT” (Awareness of Decisions in Evaluating Promotion and Tenure) that not only conveys information about evaluation bias to those evaluating others for tenure and promotion, but also provides them with an opportunity to practice evaluating sample candidates and receive feedback on their reasoning so they will be better prepared to avoid evaluation bias when deciding the fates of real faculty. In addition, ADEPT transmits what would otherwise remain tacit knowledge about tenure and promotion processes to those undergoing evaluation. The ADEPT instrument could be of use to many other institutions and is available online: <http://www.adept.gatech.edu/download.htm>.

In “Executive Coaching: An Effective Strategy for Faculty Development,” Bilimoria, Hopkins, O’Neil, and Perry, from Case Western Reserve University, outline an approach to improving the academic climate for women faculty by providing targeted training—coaching—to actors at many institutional levels. Women faculty are coached toward developing successful academic careers, while deans and department chairs are guided toward promoting a workplace culture “characterized by equality, participation, openness, and accountability,” to create a cli-

mate that is hospitable to all faculty, particularly women. Coaches help deans and chairs understand obstacles for women faculty and attempt to “shift the underlying assumptions of the university culture.” Though these institutional actors are coached one-by-one, the hope is that their changing administrative approaches will have a cumulative effect on the climate university-wide.

In “Interactive Theater: Raising Issues about the Climate with Science Faculty,” LaVaque-Manty, Steiger, and Stewart describe an intervention designed to generate conversations about evaluation bias and departmental climate among faculty and administrators (without using those terms directly) through the use of sketches that present common departmental dynamics involved in gender and hiring, mentoring, and promotion. Though the sketches depend on live performance and facilitation of audience discussions, they share some key characteristics with Georgia Tech’s web-based ADEPT tool, in that both are designed to offer decision makers the opportunity to practice thinking about evaluation bias with respect to hypothetical candidates, and to discuss their reasoning with others and receive feedback. The hope in each case is that those who have been exposed to the concept of evaluation bias and have a chance to practice applying what they’ve learned will be better equipped to avoid or counter bias when making real decisions later. This program has the potential to reduce the chilliness of departmental climates and reduce faculty reliance on gender schemas when evaluating women faculty.

Learning from Change

The typical ADVANCE project involves concurrent interventions taking place at multiple institutional levels. In contrast to chapters in the previous parts that select certain strategies or interventions from a larger set for close analysis, those in this part take a broader look at systemic interactions and conditions that foster transformation across entire departments or universities. They consider, too, means of institutionalizing change and ways of assessing outcomes across a range of different institutions that use incongruent categories, data, and measures. The final chapter in this part surveys a range of interventions tried by many ADVANCE schools and identifies several that might be easily adapted and that generate substantial change at relatively low cost.

Beginning with a focus at the departmental level, Jordan and Bilimoria of Case Western Reserve have conducted a case study of a science

department that has succeeded in developing a workplace that is not only collegial and hospitable for women, but also highly academically productive. Believing with Meyerson and Fletcher (2003) that “gender inequity is rooted in our cultural patterns and therefore in our organizational systems,” their chapter, “Creating a Productive and Inclusive Academic Work Environment,” sets out to answer this guiding question: “How is a cooperative, inclusive, productive work culture created and embedded?” They find that most of the faculty in the department they studied have “belief orientations that supported more gender-integrated conceptions of who a scientist is and what a scientist does.” In other words, they seem unusually free of gender schemas that associate science with men and masculinity. Members of this department also go out of their way to make sure that tacit knowledge is conveyed not only to junior faculty, but also to students and postdocs. Intriguingly, the entire department appears to have a culture of collaboration rather than competition, to promote a collective identity, and even to make having good social skills one of their criteria when hiring new colleagues. This chapter raises the possibility that cultivating better social practices can improve not only gender equity and workplace climate, but also the quality of the scientific research conducted within an academic unit.

Moving to a larger institutional perspective, in “Advancing Women Science Faculty in a Small Hispanic Undergraduate Institution,” Ramos and Benítez ask how women faculty can advance “in an institution where advancing seems difficult for all faculty (including men)?” Constraints that contribute to difficulties for all faculty (but especially women) at the University of Puerto Rico–Humacao (UPRH) include disadvantageous hiring practices in which faculty positions are not publicly advertised, heavier teaching loads than those usually found in larger universities on the U.S. mainland, a lack of financial resources with which to buy equipment, geographic and linguistic isolation that makes it difficult to attract potential faculty from outside Puerto Rico, and a culture that strongly associates women with traditional family roles. This chapter describes a set of interventions designed to address all of these difficulties simultaneously, by offering grants and release time for individual women faculty, employing a legal advisor who educates faculty and administrators about gender issues, cultivating networks of women faculty and research collaborations between women faculty and their male colleagues, and developing an internal pipeline of future women faculty through a program called Faculty in Training, or FIT, in which undergraduate women serve as research assistants to women faculty at

UPRH and are helped through the graduate school application process, with the hope that they might be hired as UPRH faculty members after they complete their doctorates.

In “Gender Equity as Institutional Transformation: The Pivotal Role of ‘Organizational Catalysts,’” Susan Sturm argues that “the building blocks of systemic change are present in many institutions” and that “systemic change occurs through connecting the knowledge and action of . . . engaged participants.” Based on her findings from a case study conducted at the University of Michigan, Sturm believes that NSF ADVANCE programs have put key actors whom she calls *organizational catalysts*—principal investigators on ADVANCE projects, among others—in positions that allow them to intersect multiple systems and bring influence and resources together to enable change. In addition to mobilizing varied forms of knowledge—ranging from data-gathering methods, to social science theories about gender, to formal and informal institutional policies and practices—organizational catalysts are able to develop collaborations in strategic locations and create and maintain pressure and support for action. Her chapter concludes with the suggestion that organizational catalysts could become a significant element of other change initiatives, and an examination of the risks and promises of attempting to institutionalize the organizational catalyst’s role, a possibility Sturm regards as being “essentially an institutional design problem” that might, with care, be overcome.

In “Institutionalization, Sustainability, and Repeatability of ADVANCE for Institutional Transformation,” Rosser and Chameau from Georgia Tech provide a set of questions designed to help readers considering organizational change projects think about their institutions in systemic and strategic terms, to determine whether conditions that would foster and support change are present at their universities. The compatibility of a project’s goals with institutional values and leadership and the nature of the resources that would be available to support the change effort must be considered in order to decide whether the project is viable in the long term. “Honest, serious answers to these questions,” they believe, “will help institutional leaders and potential principal investigators determine their readiness to develop a project in terms of scope, timeliness, and financial practice changes that ultimately will be sustained and institutionalized.”

Frehill, Jeser-Cannavale, and Malley investigate the progress the first round of nine ADVANCE awardees made in hiring women faculty during their first few years of NSF funding in “Measuring Outcomes:

Intermediate Indicators of Institutional Transformation.” They first discuss not only how to compare these institutions to one another across differences in size and geography, but also how to assess their progress against national data. The chapter offers an insightful review of ways to determine relevant levels of analysis when trying to understand whether women are in positions similar to men in various fields, and how to choose appropriate comparison groups when attempting to discern whether an institution is doing better or worse than its peers with respect to hiring and retaining women. Their analysis is a useful example of how to begin assessing the impact of attempts at institutional transformation while those attempts are still ongoing.

Lee Harle’s chapter, “Maximizing Impact: Low-Cost Transformations,” written while Harle was an AAAS/NSF Science and Engineering Policy Fellow at the National Science Foundation, should be particularly useful to those who wish to improve their institutions on small budgets. Sections of Harle’s chapter address programs directed to faculty; programs designed to help administrators increase their understanding of gender and science so they might improve the climate for women faculty at their universities; and programs that can be implemented institution-wide. The chapter offers brief descriptions of each type of program, and in many cases, directions for how to find more information or gain access to web publications and other resources that various ADVANCE institutions have made available.

The interview with NSF program officer Alice Hogan that follows this introduction presents some of NSF’s hopes and intentions for the programs described in this book. As Hogan notes there, readers “may be able to use this book very effectively by discussing these chapters and determining which elements they can use directly and which they might want to modify . . . The book allows all of us to trace ADVANCE’s learning curve.”

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Women and Men in the Globalizing University

Equality and Excellence in the Globalizing University

(Material related to Session III)

In this session we explore what a robust commitment to substantive equality looks like in a global research university and what role IARU plays in realizing such commitments.

One aspect of this inquiry centers gender, as a subject matter of theory, scholarship, and teaching across the current disciplinary inquiries within universities. The term “gender” is deployed to underscore that both women and men have “gendered” identities, and that it is social, cultural, and political systems (rather than nature) that construct the meaning, import, and attention paid to distinctions based on sex. Yet, as the readings for this session make plain, “gender” is often used not in this rich sense but rather in a narrow frame as another way of talking about women.

The first reading, excerpts of Joan W. Scott’s classic 1986 essay *Gender: A Useful Category of Historical Analysis*, takes up these issues by arguing the intellectual import and potential of an engendered approach in social sciences. Using examples from political history, Scott insists that such utility can only be realized if gender is “redefined and restructured” to include its intersections with race and class.

Locating Globalization: Feminist (Re)readings of the Subjects and Spaces of Globalization, a 2002 essay co-authored by one of our commentators, Linda McDowell, expressly invokes Scott’s work as it addresses these issues in the context of the culture, politics, and economics of globalization. Its premise is that “discourses of modern capitalism . . . position women, minorities, and the poor . . . as passive,” thereby creating an intellectual metastructure that impoverishes an understanding of the phenomenon of globalization. Sites of research and analysis are lost, including forms of networks, relevant places, and kinds of work. Moreover, the nation-state is over-inscribed as the frame, thus missing hierarchical and gendered political and capital structures.

Restore, Reform but do not Transform: The Gender Politics of Higher Education in Africa, a 2003 essay by another of our commentators, Amina Mama, turns our attention specifically to higher education in a particular place – Africa – as she considers women as participants in universities’ institutional life. Given the centrality of education in postcolonial settings, Mama brings into focus the significance of funding and the relationship between universities and the national political life in which they sit. Further, Mama shows how “inequitable legacies” in which gendered roles reinforced through education continue to have impacts, as she provides a demographic account of enrollment, courses of study, and employment, as well as an evaluation of the ways in which women “carry out much of the informal, invisible, and often feminized work of institutional maintenance and interpersonal services” at universities.

Judith Resnik’s essay, *A Continuous Body: Ongoing Conversations about Women and Legal Education*, also published in 2003, puts the question of professional education on the table, as she analyzes how ideas about the “women’s problem” have changed over time. Using as a benchmark a conference thirty years earlier that addresses the problems of too few women being trained to be lawyers or teaching law, Resnik provides data on how the percentage of women has grown in student bodies and less so in faculty. Resnik argues that one can find relatively little evidence in

legal education of “mainstreaming” gender, the term used by the United Nations, the European Union, and in the Commonwealth to denote that questions of gender are engaged across all subject matters. Rather, “intellectual segregation” persists in that courses that put gender at the forefront are disproportionately populated by women students and faculty, and moreover that rich interdisciplinary engendered theoretical work is not well integrated across the curriculum. On the other hand, globalization and transnational law are increasingly a force in legal education, raising new challenges for those who aspire to have women and men as equal participants in law.

Catharine Stimpson’s 2008 essay, *Going Global and Gender*, specifically takes up the questions of our discussion. She defines gender equity in higher education to include “a genuine equality of opportunity” in hiring and promotion of faculty; relationships between institutions of higher education and the other parts of the “education spectrum;” research and teaching about women and gender as categories and the interaction between gender and other economic, raced, and cultural structures. She then asks how globalization – entailing the mobility of capital and persons, as well as the immobility of some people – affects these goals, as she explores models (such as “franchises” by well-resourced universities seeking worldwide attention) and the impact of the diversity of funding and governance models of universities across nations.

Barrie Thorne’s provision of a 2008 proposal from UC Berkeley to create an M.A. and Ph.D program in Transnational Gender and Women’s Studies offers one response to the problems set forth in the other materials. The ambition is to cut across national and disciplinary boundaries to consider migration, labor, art, science, technology, and the media, in the context of gender and globalization.

Overview of Materials April 15, 2008

Please note that the articles will be available on the IARU website with all meeting materials from May 1 2008.



Institutional Review of IARU Funding Proposals

The 2007 meetings of IARU Presidents and of Senior Officers have given staged approvals to research proposals in selected areas. Two of these proposals have been developed to the point where the proponents now seek “IARU sign-off” with a view towards fund-raising.

“IARU sign-off” represents a significant commitment by the Members and Presidents. Not only will IARU itself be seen to endorse the proposal, but also each Member will be seen to give its endorsement. Accordingly, Presidents will require a recommendation from their advisers that the project is worthy of their university’s support. The 2007 Senior Officers’ meeting agreed to develop a template that could assist IARU member universities to provide a recommendation to the respective Presidents.

Principles

The following extracts from IARU’s Principles provide guidance on the matters that would be included in a recommendation to a President:

- That the Alliance will bring a new dimension to Members’ international activities, including new opportunities for international research, teaching and learning;
- That the Alliance will (in the medium term) invite participants to utilise the complementary research capability of Members to address issues of central importance;
- That the Alliance will provide a framework within which a range of protocols and templates can be developed to promote collaboration and allow cooperative activities to be undertaken more easily;
- That each Member will determine the extent of its involvement in each of the activities of the Alliance to suit its particular objectives and constraints;
- That Alliance activities will build on and strengthen existing relationships;
- That Membership of the Alliance will in no way preclude or limit activities with partners outside the Alliance.

Assessment Template

The Assessment Template is a checklist of factors that will be frequently considered in evaluating a request for the President of an IARU Member to approve a research project proposal. Members may wish to add other factors, depending on local practice or the specific program.

It is expected that research participants will work at all times under the Codes and Conditions that apply to their employing university and also to any IARU university at which they are a visitor. A program agreement may be executed to govern conditions for, and conduct of, a research program.

It is anticipated that each Member will evaluate the opportunity from the perspective of the Member, as well as from the perspective of IARU as an Association.

Assessment Template

1. Research Program

- Is the research program sufficiently novel and are the potential outcomes of great importance?
- Is the scale of effort large enough, and is it commensurate with the scope of the program and its sharpness of focus?
- Is the approach to the problem coherent and are the research timelines plausible and appropriate?

2. Exploiting the IARU advantages

- Does the program require international and/or regional perspectives that are illuminated by IARU's international dimensions?
- Are IARU's research breadth and depth across disciplines captured with sufficient intensity in the program?
- Does IARU participation add evident value to the program?
- Does the program exploit special facilities and infrastructure available within the Alliance?
- Will the program enhance the reputations of IARU and the participating Members?

3. Educational Opportunities

- Does the program induce engagement with undergraduate education?
- Do opportunities for graduate coursework studies arise from the program, especially as cross-institutional study opportunities?
- Will the program open opportunities for PhD students, especially across campuses?

4. Leadership and Management of the Project

- Does the experience and commitment of the research leaders inspire confidence?
- Are there adequate formal and informal collaborative arrangements in place to deal with planning, reporting, funding, intellectual property, and so forth?
- Is the governance clear and appropriate, and are the accountabilities of researchers to their universities and to IARU agreed?

5. Funding

- Is the financial plan adequate when considered against the project aims?
- Are the proposed funding sources, including the timing and scale of requests, appropriate for the program, and are they compatible with other aims and activities of IARU and Members?

6. Risk Mitigation

- Are the program plans adequately developed and sufficiently complete?
- Has a risk assessment been conducted?
- Is the overall quality of the program, and especially the quality of specific funding proposals, adequate to justify IARU and Member support?
- Are the roles and responsibilities of the participants (Members, Researchers) clear and agreed?

Lawrence Cram

ANU

Wednesday, 9 April 2008



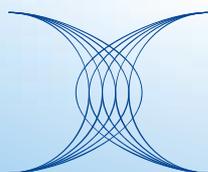
INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

Report on the IARU Research Project

Ageing, Longevity and Health



April 2008



INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

Report on the IARU Research Project

Ageing, Longevity and Health

The research project *Ageing, Longevity and Health* was first presented at the Presidents' Meeting in spring 2007, and on the basis of fruitful and relevant recommendations from the Presidents, it was decided to further elaborate the project. This process resulted in the consolidation of the initially proposed six sub-projects into the following three sub-projects:

- Health Policy Challenges of Ageing Populations
- Neurodegeneration: The Role of Oxidative Stress, Life Course Issues
- Evolutionary Medicine

In September 2007, Dean Ulla Wewer, Faculty of Health Sciences, University of Copenhagen, presented the new project outline at the Senior Officials' Meeting in Tokyo. The project was formally approved by all member universities, with a consensus that the next step was to start the development of a funding strategy with the purpose of approaching large national and international funding agencies.

After the Tokyo meeting, the *Ageing, Longevity and Health Project* research teams have been engaged in a number of project related activities, e.g. workshops and preparation of draft funding applications. For further details, please see below.

Furthermore, the Faculty of Health Sciences, University of Copenhagen, hosts a website related to the project, and the Faculty has also published a newsletter to increase awareness of the project among researchers and students at the IARU universities. Finally, the *Ageing, Longevity and Health Project* also performs a number of activities directed at the general public, with the purpose of increasing public awareness of the issues covered by the *Ageing, Longevity and Health Project*. These activities are also described in detail below.

Progress of the Sub-projects

1) Policy Challenges of Ageing Populations: Changing Needs for Health and Long-term Care

The Policy Challenges group held a two day workshop hosted by the Oxford Institute of Ageing on the 28th and 29th of January

2008. It was attended by representatives from Singapore, Tokyo, Peking, Copenhagen, and Oxford. Although ANU was unable to be present, they sent a contribution, which was incorporated in the discussions. It was not expected that the workshop would be able to produce a detailed proposal ready for submission to a grant-giving organisation at this point. Rather, the purposes were to secure consensus on the objectives of the research and how to achieve them, to agree on the division of the project into separate work streams, and to agree on the next steps and a timetable.

The group fixed on a working title: Policy Challenges of the Ageing of Older Populations: Changing Needs for Health and Long-term Care. Three key questions were identified:

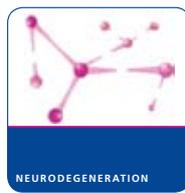
- What are the social and health challenges arising in different countries in the light of changing demography and epidemiology?
- How do capacities for providing long term care adjust/respond to changing demands and needs?
- What are the emerging national policy configurations addressing ageing populations?

These are to be pursued through four analytical themes:

- Explaining the impact of differences and inequalities;
- Understanding ideology and culture as drivers/mediators of adjustment;
- Exploring the adjustment of formal and informal health care systems to changing demands and needs;
- Exploring and understanding individual engagement.

Responsibilities for developing these questions and analytical themes were assigned. It was agreed that country case studies will build on existing data sets at this stage, and that the common questions and themes will add theoretical value to the comparative country cases. In considering the kinds of contextual contrasts to be explored in the case studies, it was evident that it would be desirable to identify a US partner as well. If no IARU partners are interested, other possibilities can be explored.

It was agreed that Singapore will host the next workshop in June 2008, where methodological issues in the study of changing



The *Ageing, Longevity and Health* project embraces three subprojects and an exhibition.

demography and epidemiology will be explored. Copenhagen and Oxford will prepare a draft paper on 'policy challenges'.

In order to further explore common interests, Professor Susan Whyte from Copenhagen paid a half-day visit to the Institute of Population Research at Peking University on 16 March, where she met members of the staff and discussed research activities.

2) Neurodegeneration:

The Role of Oxidative Stress. Life course issues

Chronic diseases in ageing such as neurodegenerative disorders are characterized by multiple interacting causes related to genes, exposures early in life as well as later behavioral and environmental causes.

In addition to our earlier proposal we will now have access to materials from a large epidemiological longitudinal cohort-study and database at the University of Copenhagen. The plan is to establish a mid-life biobank with a focus on biological, cognitive and social variables in order to study ageing processes over the entire life course that can provide new aspects to the projects at the IARU universities. The data collection will include blood tests, clinical examinations (e.g., height, weight, waist measurements, blood pressure, hand grip strength, physical performance tests), computer administered cognitive tests, and a postal questionnaire on health, health behaviour, depressive mood, social factors. A clinical oral examination will be conducted on a subsample of at least 3000 participants.

In May 2008 the IARU research group at University of Copenhagen will be hosting a workshop on "Ageing - From Molecules to Population" to be held near Copenhagen, Denmark.

At the workshop, there will be representatives from several IARU universities (Yale, Australia, Singapore, Oxford and Tokyo), and we will discuss how we can transform the different methodologies and databases from the clinical cohort studies into hypothesis-driven basic, translational and clinical studies. A major focus will be on the mechanisms of age associated neurodegeneration and oxidative stress, mitochondrial function in neurodegeneration and the use and further development of assays applicable on the clinical cohorts and on the understand-

ing of mechanisms involved in neurodegenerative processes and energy metabolism in age-related diseases - understanding and preventing dementia, brain diseases in late life. At this workshop we have assembled the relevant IARU collaborators in this area, and networks, collaborations and future collaborative IARU-research projects will be developed.

3) Evolutionary Medicine

Overall, 2007 and early 2008 have seen substantial international activity to promote evolutionary medicine. Professor Randolph Nesse is spending a sabbatical in Berlin with a group of scholars, and he inventoried recent progress at a 26-29 February 2008 workshop, at which Professor Jacobus Boomsma was an invited participant. Professor Stephen Stearns organized two one-day symposia at Yale (21 February and 17 April 2008; <http://www.yale.edu/evomedSYMPOSIA/>). The major challenge will be to support and improve the science that underpins the field, and it is to this goal that we intend to contribute through both the International Talent Recruitment grant and the IARU initiative. To produce an application for a research-training network in Evolutionary Medicine that lives up to the goals of relevant scientific excellence, the Evolutionary Medicine program is planning a grant-writing workshop in Copenhagen on 10-13 November 2008. The organization of this workshop is coordinated by Professor Jacobus Boomsma and Professor Stephen Stearns. We expect to have a research grant proposal ready by February 2009.

Professor Stephen Stearns will spend a sabbatical of three months (mid August to mid November 2008) with the Centre for Social Evolution and will teach the first course in Evolutionary Medicine in Copenhagen in that period. The one page description of the course has now been submitted and is currently going through its final editing by the relevant study boards. The second edition of Stearns' edited volume *Evolution in Health and Disease* has just come out and will serve as textbook for the course.

Strategy for Science Communication and Public Engagement with Ageing Research

The current best practice in web-based science communication is to encourage synergy between internal communication platforms and public engagement with science media.

The main purpose of the IARU website on ageing (<http://ageing.iaru.ku.dk>) is to draw attention to the *Ageing, Longevity and Health* project among researchers, pre- and postgraduate students, other interested parties, and the general public. Portions of the website will in the future serve as a common working platform, which can be used for exchange of documents among researchers. An active website on this professional level will need science-trained communication staff at the PhD level (cf. Nature Network).

The first issue of the IARU Newsletter (IARU News; <http://ageing.iaru.ku.dk/content/us/project/news>), published by the Faculty of Health Sciences, University of Copenhagen in January 2008, focused specifically on the *Ageing, Longevity and Health* project. Future issues of IARU News will also contain news about the project in addition to news about other IARU projects.

The promotion of public engagement with the problems and results of ageing research is a priority of all three subprojects of the *Ageing, Longevity and Health* project. We wish to develop the following communication initiatives for the public engagement with ageing research:

- 1) a systematic review and revision of current ageing-related articles on Wikipedia (the most used web-based encyclopedia) in all areas of the project.
- 2) a program to stimulate researchers within the project to learn from the burgeoning science and medical blog genre and start individual blogs on ageing.
- 3) a web version of the current exhibition 'Oldetopia', now shown at Medical Museion, University of Copenhagen (<http://www.museion.ku.dk/udstillinger/saerudstillinger/oldetopia.aspx>) to promote a cultural and historical perspective on current research into age and ageing. There have also been preliminary discussions between Professor Randolph Nesse and Medical Museion (Univ. of Copenhagen) about the possibilities of creating a combined physical and web exhibition on evolutionary medicine.

Questions to the Presidents regarding the Projects

Project 1: Policy Challenges of Ageing Populations: Changing Needs for Health and Long-term Care

Please, provide suggestions about where to apply for grants. We expect that the budget frame will be approx 600.000 US dollars/group/per year for 5 years.

Project 2: Neurodegeneration: The Role of Oxidative Stress. Life Course Issues.

Please, agree on where to apply for grants and then the researchers will design the application(s) accordingly. We expect to have a research grant ready this summer. The budget frame is approx 600.000 US dollars/group/per year for 5 years, i.e. 3 million US Dollars per group times 6 groups i.e. a total of 18 million US Dollars.

Project 3: Evolutionary Medicine

Please, suggest where to apply for grants. Budget plans not yet developed.

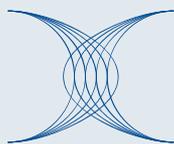
Questions regarding Strategy for Science Communication and Public Engagement with Ageing Research

- a) Please, discuss and outline a communication strategy for all IARU projects, including the *Ageing, Longevity and Age* project
- b) Please, suggest funding possibilities for a science communication and web 2.0.-specialist, who can serve as website editor, coordinate Wikipedia-articles, and promote blogs on ageing.
- c) Please, find an international corporate sponsor for a web version of 'Oldetopia', and suggest funding for a possible exhibition of evolutionary medicine.

With best regards,



Ulla Wewer, Professor, DM.Sci
Dean of the Faculty of Health Sciences
University of Copenhagen, Denmark



Energy, Resources and Environment Towards Sustainable Cities: Comparative International Study

Proposal for a Demonstration Project on Sustainable Cities

Background

Three IARU partners (University of Tokyo, The Australian National University and the University of Copenhagen) have been developing an interdisciplinary partnership and research proposal as a demonstration pilot for a larger and broader IARU collaborative project in the Energy, Resources and Environment (ERE) theme. Discussions are also currently underway with a fourth IARU partner, National University of Singapore, to explore ways in which they might become involved. The project follows the requirements set at the March 2007 Presidents meeting for short term projects where progress can be made quickly, but which can grow to include other research questions, and other IARU partner involvement. The project is to develop operational frameworks for future IARU collaboration, as well as generate important research findings on the IARU priority topic entitled 'Towards Sustainable Cities: A Comparative International Study'.

Proposal

The research proposes three interlinked collaborative studies; "Low Carbon Cities" (lead by UT), Food Flows (lead jointly by ANU and UoC) and Land Use and Ecosystem Function (to be developed by UoC and ANU). Each university will be responsible for research methodology, data analysis and reporting of the study that they are leading. Each university will provide data on its home city as requested by respective lead university of each study. In turn, each university will request data from the other participants on the study that it is leading. For this demonstration project the data is limited to that which is publically available, already held or otherwise obtainable with limited effort.

Demonstration Project One: "Low Carbon Cities"

Shifting from the energy-demanding society to a low carbon society in urban areas is a long-term target to achieve sustainable development. This study, lead by UT, will analyse the characteristics of carbon dioxide emission of cities including Tokyo, Canberra and Copenhagen, and elucidate possible reduction policies such as demand control, utilization of energy with low carbon intensity or renewable energy, and changing the structure of urban area, by comparing those policies.

The same methodology will be used to analyse data of the target cities. By utilizing the basic data of carbon dioxide emission from various sectors as well as information which shows the activity of the city (e.g. population, industrial activity, climate, human habitat and transportation system), UT will first calculate indicators such as per capita and per GDP CO₂ emission and its breakdown in terms of sector for each target city. The results will be compared in consideration of characteristics of each city with a view to presenting possible reduction policies to be considered by other cities.

Demonstration Project Two: “Food Flows”

Is a city carbon neutral or a carbon emitter for its food supply system? Can it become a carbon store? How can urban food consumers know the carbon consequences of the purchases they make? Is a city shopper able to make “carbon wise” shopping choices? This demonstration project aims to research these questions for the cities of Canberra, Copenhagen and Tokyo and their surrounding regions and their links to global food systems. The project will conduct a comparative study of the food systems of three global cities of greatly different sizes – with food systems defined as the production, distribution and marketing and consumption of food. The three chosen cities are ideal for this study as they cover the scale of city population size from 300,000 persons (Canberra), via 3,000,000 people (Greater Copenhagen) to 12,500,000 people (Greater Tokyo). The parameters for comparison will include: estimation of the use of and effect on ecosystem services by the food system; local and global interactions in the city food system; food product miles, energy consumption and emissions; the effect of changes in production and consumption habits; and trade-offs between variables such as land areas, water use, input dependence, and economic value.

The basic methodology to start the research plan would be to analyse and compare the cities using uniform sustainability indicators that can be divided into (1) energy and global warming, (2) material flows including food and water, and (3) land use and ecosystem functions.

Demonstration Project Three: “Land Use and Ecosystem Function”

This project will develop out of demonstration project two and will learn from that collaboration. The project focuses on how the dynamic changes of peri-urban landscapes impact a range of functions, spanning from agricultural production to residential and recreational areas. It investigates the impact of urbanization of agricultural areas, i.e. the resilience of structural components (land use and landscape elements) in the face of change in the socio-economic system (declining number of full-time farmers and increasing number of owners with other gainful activities).

It will specifically address the human-environment interactions and the ecological function in urban and agricultural landscapes and the ecological services that cities draw from those landscapes. It is particularly concerned with how those services are valued, economically and otherwise, and with how changes in these values are reflected in changing land use. The methodology of this project will draw on established practices in agroecology, landscape ecology, landscape planning and the policy and governance related disciplines. Workshops at which the details of this project will be finalized are planned for later this year.

Synthesis

Although it is likely other IARU collaborations within the ERE theme will have commenced by the time these demonstration projects are complete, the project leaders will produce a final synthesis report in which the outcomes of all three projects are drawn together in a single systemic framework. This framework will provide a model through which other IARU collaborative research efforts in ERE can be integrated.

Outcomes

Key outcomes of the demonstration projects will be to:

- develop analytic tools to evaluate integrated options to enhance the sustainability of cities against a number of different key indicators for urban vulnerability;
- test the power of the analytic tools by their ability to provide a useful common framework in a range of very unlike social and ecological settings;
- extend the approach to other IARU member cities in a more extensive project;
- seek major sponsorship from an international body with an interest in *Sustainable Cities* as ongoing and expanded research program on this theme; and
- fold research findings back into teaching and learning at the respective universities, building on the courses on Sustainability being run by participating universities, including their shared Summer School Programs.

Budget

Each participant assembles and funds its own research team - including academic, PhD students and other contributors - for the project that it is leading.

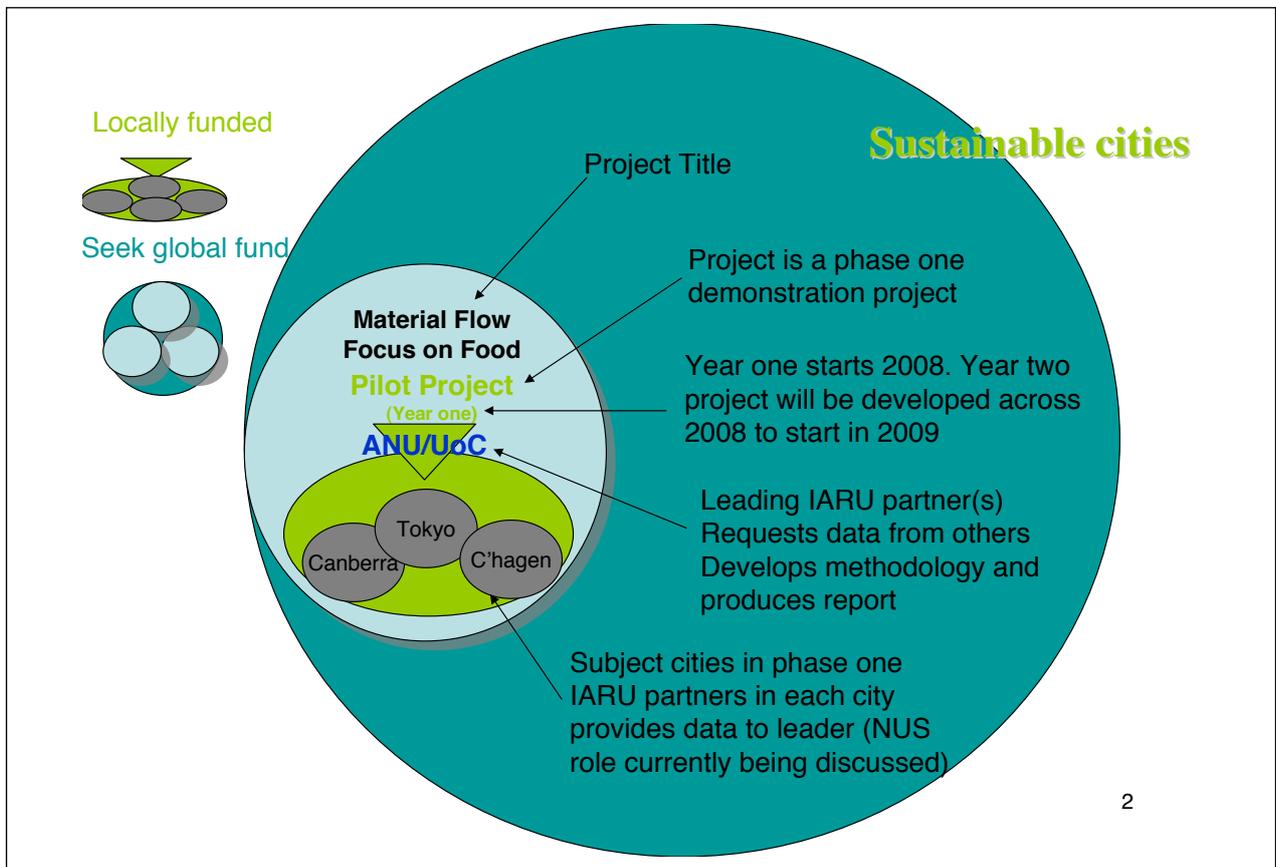
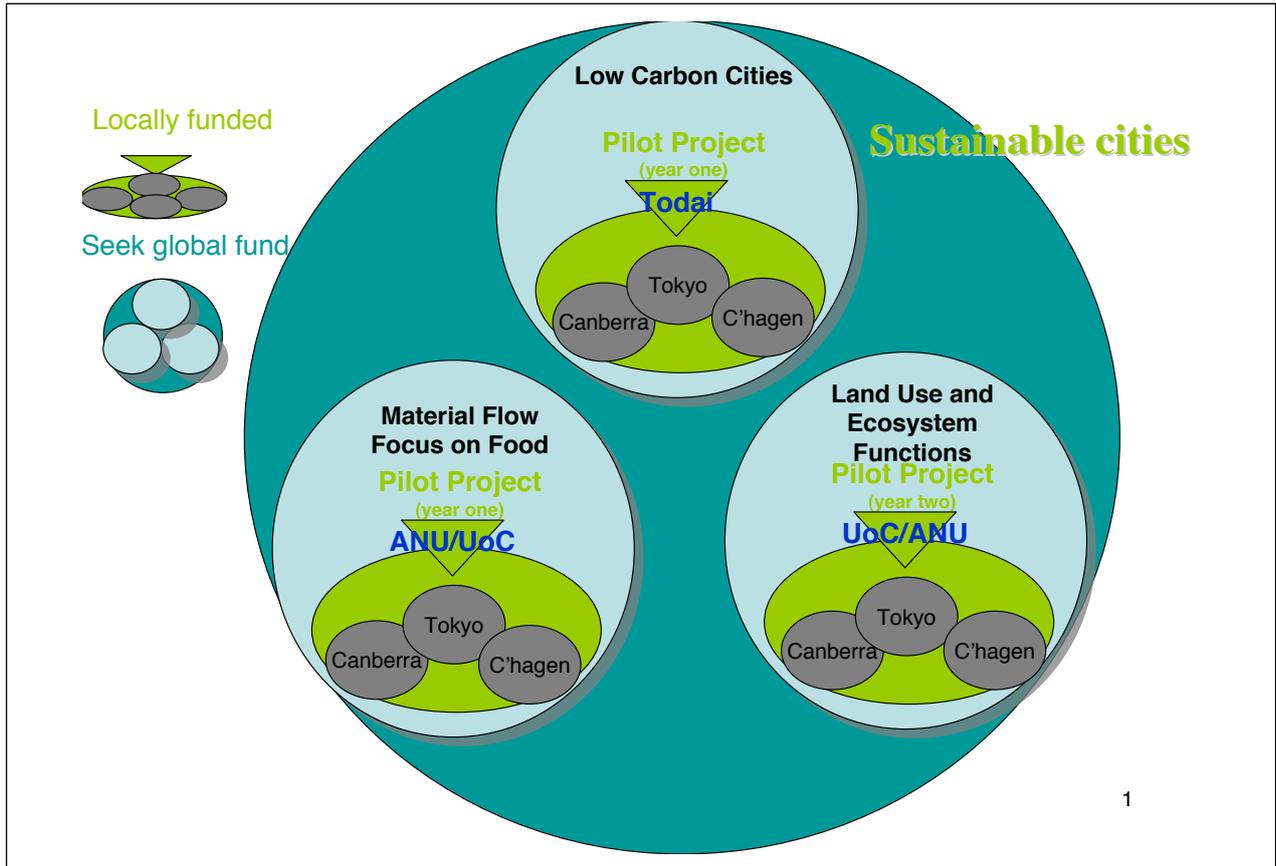
Each participant must as a minimum have a research assistant or similar contact able to provide data requested by the other project leaders, whilst noting that this data is expected to be publicly available or simple to retrieve from existing sources. The pilot project does not intend to undertake major new research at this stage. Gaps in data sets will have to be accommodated in phase one and become part of a fully costed proposal for later phases.

Project leaders are expected to fund workshops and report publication costs but not travel costs for partners to attend.

Timeline

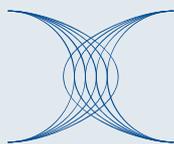
March 2008	ANU, UoC, UT meeting in Canberra to finalize DP proposal
April 2008	Additional meeting with NUS to discuss NUS participation in DP
April 2008	Report DP proposal to Presidents meeting
To August 2008	Undertake collaboration on DP 1 and 2. ANU and UoC to develop and initiate DP 3
September 2008	Progress report to Senior Officers Meeting
Jan 2009	Round of workshops and prepare preliminary reports
March 2009	Present emerging findings to World Congress on Climate Change
May 2009	Present preliminary report to Presidents Meeting and revised ERE/ Sustainable Cities research theme
September 2009	Progress under revised plan discussed at Senior Officers Meeting
December 2009	Second round of workshops and compilation of final report
April 2010	Presidents meeting presented with final ERE research framework
2010-2014	Implementation of ERE across all IARU participants

This timeline does not preclude other IARU members joining or expanding demonstration projects (DP) at any time. External funding opportunities will be sought when DP proof of value is available.



Suggested Demonstration Project Collaboration

- Proposal is that three IARU partners collaborate on linked pilot projects to demonstrate value of IARU concept (NUS role currently being discussed)
- Projects are not intended to be comprehensive and other projects and other IARU partners can be added at a later date
- Each participant assembles and funds its own research team for the project that it is leading
- Each participant must as a minimum have a research assistant or similar contact able to provide data requested by the other project leaders
- This data is expected to be publicly available or simple to retrieve from existing sources. The pilot project does not intend to undertake major new research at this stage. Gaps in data sets will have to be accommodated in phase one and become part of a fully costed proposal for later phases
- Project leaders are expected to fund workshops and report publication costs but not travel costs for partners to attend
- ANU and UoC intend to jointly lead 'Material Flows Focus on Food' and to progressively develop 'Land Use and Ecosystem Function'. Consequently, Land Use and Ecosystem Function project will not report within the same time frame as the others.



International Symposium on Sustainability Science



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

To the Chairman of the
Internat. Alliance of Research Univ. IARU
Prof. Dr Ian Chubb
The Australian National University
Lower Ground Floor, Pauline Griffin Building 11
Canberra ACT 0200
Australia

February 11, 2008 RE/NG

The President

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Joint project *International Symposium on Sustainability Science (ISSS)*

Distinguished President and Chairman Chubb

I am writing you after consultation with President Komiyama, University of Tokyo, and President Shih, National University of Singapore, for reasons of our joint project *International Symposium on Sustainability Science (ISSS)*, observant of the status report and decision points we have communicated to IARU in September 2007 (enclosed).

To raise funds for ISSS, we have interacted with and received truly sympathetic and thoughtful responses from Rolf Soiron, Chairman of the Board of HOLCIM, Siegfried Dais, Head of Research of Bosch Corporation, Jan-Eric Sundgren, Vice President of Volvo and responsible for Public & Environmental Affairs. They all go in the same direction – no support – and to our regret make us face the conclusions that

1. the timing of ISSS is wrong;
2. the concept of ISSS is insufficient.

We propose to accept this counsel and to shelve ISSS. But let us elaborate briefly following the cogent argumentation of our industry partners:

Wrong Timing

The IPCC has done a marvelous job with its latest climate report, and it deserves our emphatic congratulation for the Nobel Peace Prize. Its report and the global response to it completely dominate minds and thoughts. We may speculate how the general theme of Sustainability will develop given the preponderance of CO₂ and climate change. Either climate change eclipses the bigger theme or proves an inroad for it. Time will tell, and the IARU universities can contribute actively.

Insufficient Concept

- A. The success of IPCC partly hinges on the fact that it has adhered to the strategic dimension. In proposing ISSS and striving to enhance its attractiveness, we stressed solution orientation, i.e. the tactical dimension. In discussing with our partners from the corporate world, we had to realize that universities are not up to corporations when it comes to solutions and that they were better advised to remain with the strategic dimension.
- B. The idea of asking several corporations engaged in related areas to support ISSS is not truly viable. Holcim (Awards for Sustainable Construction) and Volvo (Volvo Environment Prize) have their own prominent prizes and have reasons to fear a loss of clarity and profile. This is also true for Bosch, if to a lesser extent. Other corporations can be expected to react in much the same way.

I regret not having better news, and look forward to our personal meeting at the IARU meeting in March.

With my best and sincerest regards,



Ralph Eichler, President

cc.:

Prof. Hiroshi Komiyama, President University of Tokyo
Prof. Choon Fong Shih, President National University of Singapore
Prof. Olaf Kübler, President's Delegate ISSS, ETH Zurich

Encl.: ISSS Status Report and decision points for IARU, September 2007

ISSS Status Report and decision points by Olaf Kübler for the attention of Amelia Whitelaw, IARU, Sept. 11, 2007

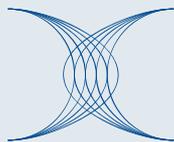
ISSS is in the fundraising and thus a latency phase. The goal is to obtain commitments for a total of 10 Mio. EURO by the end of this year. The organization of ISSS itself shall start when the fundraising looks successful.

We have contacted several companies and received cautious responses. These indicate we should approach the research responsables to get their judgment and involvement towards early "ownership".

The strategem of propagating a "grand challenge" and making an international conference cycle respond to it appears attractive. But for involvement of multinational corporations (intellectually and financially), the conference cycle must distinguish itself clearly from existing ones, and the probability for useful results must be significant. Formulating the "grand challenge" is the central, decisive task and must be done jointly with global industrial partners. We had proposed "Intelligent Energy and Resource Use for Future Cities", and will proceed from that.

Meetings with heads of Corporate Research and Development of a few selected companies are being arranged. A report on the fundraising effort is due for 31 December 2007. This will mark the decision point whether to continue with ISSS or to abandon it.

Olaf Kübler, Zurich, September 2007



Synopsis of Regional Perspectives on Global Security Project Proposal

This synopsis outlines the current design for the IARU 'Regional Perspectives on Global Security' Project; and seeks a formal endorsement and funding by the Presidents' Meeting. It also aims to coordinate next steps to solicit additional Project funding. A more extensive version of the proposal is attached. This document has been prepared under the direction of William T. Tow, Project Leader and Professor of International Relations, ANU.

Executive Summary

Project Title: Regional Perspectives on Global Security

Project Focus: Investigates international security as it expands and deepens within the *regional-global nexus*. Incorporates multidisciplinary approaches, human security as a policy dynamic, order-building and rising powers, and asymmetrical security.

Major Research Question: Is existing theoretical and empirical research applicable to understanding ongoing and rapid changes in international security or does such research inherently fall short in anticipating and responding to such change? How can *inter-regional* perspectives enhance security policy formation at the global level?

Sub-Projects

Multidisciplinary Approaches to International Security Theory

Led by Professor Ole Waever at the University of Copenhagen, this research will develop theory that addresses new threats, responses to those threats and the need to broaden the 'language of security' in ways that will facilitate better policy formulation.

Human Security

Professor Kiichi Fujiwara at the University of Tokyo will spearhead enquiries on how security must increasingly be perceived as a 'people-oriented' issue rather than merely a problem reflecting predominantly state-centric survival.

Order-Building and Rising Powers

Professor William Tow of the Australian National University will direct work on how rising powers will shape regional dynamics of global power transitions and what collective policy approaches will be most effective in responding to such shifts.

Asymmetrical Security

Professor Bilveer Singh of the National University of Singapore will manage an enquiry into how sub-state threats and conflicts impact upon both regional and global security theory and policy-planning.

IARU Action Requested for Proposal Implementation

- Presidents' Meeting Endorsement of the Project
- Approval of Budget Requests
- Identification/Clarification of IARU Strategy for Coordinating Funding Approaches to Major Funding Sources

Background

This synopsis and the attached full Project Proposal update the 'The IARU Security Initiative' draft report prepared in early February 2007 and 'The IARU Collaborative Research Program on Security' submitted to the IARU Senior Officers Meeting (SOMS) convened at the University of Tokyo, 19-21 September 2007. It responds to the SOMS request that 'a revised, more refined proposal to be prepared immediately following the [Security Project] workshop planned for March/April 2008'.

Following an initial Project organisational meeting convened at Cambridge University in November 2006, the Security Project group designated the Australian National University, Copenhagen and Tokyo as 'lead institutions' for the Project (Singapore has since been added). Over the ensuing months, Professor William Tow from the ANU's Department of International Relations, Research School of Pacific & Asian Studies was nominated to serve as the initial Project Leader.

Project leaders and representatives of other participating IARU institutions met in Canberra on 2 April 2008. The inaugural Security Project workshop on security architectures clearly demonstrated the value of expanding this precedent to involve policy-makers, postgraduates and leading security experts both within and beyond the IARU community. Dramatic potential for strengthening capacity-building, achieving greater outreach, and realising substantial knowledge dissemination in the international security field was unanimously noted. On this basis, the workshop's participants determined that the Project had advanced to a stage where the IARU Presidents' Meeting could be approached to formally endorse the Project.

Current Project Infrastructure

As recommended by the Tokyo SOMS meeting, Project leaders have assessed and integrated Project resources and capacity to determine how value can be added to current and emerging Security Project research initiatives at IARU institutions. To date, the following initiatives represent key components underpinning sub-project activity and reflect core areas of Project strength:

- Funding was obtained for the convening of an IARU Security Project-branded research event: a workshop on ‘regional security architectures in the Asia-Pacific’ organised by **the Australian National University** during 31 March-3 April 2008 in Canberra and Sydney. The workshop was strongly supported by the public policy sector (various branches of the Australian government and think-tank community), was accessed by ANU postgraduates, and its key papers will be published by the National Bureau of Asian Research’s major journal (*Asian Policy*) that is widely circulated throughout the United States and internationally;
- The **University of Tokyo** has established a major human security studies centre and has secured funding from various Japanese sources to sponsor a second Security Project workshop in 2009;
- The **University of Copenhagen** has been awarded funding to establish a ‘Centre on Advanced Security Theory’ (CAST). The University of Copenhagen is ready to explore how CAST will integrate its activities and programs into an IARU context;
- The **Australian National University** has been funded as one of two institutions by the Australian Research Council to establish a Centre of Excellence for Policing and Security (CEPS). Funded security studies research conducted under the auspices of CEPS will ‘dovetail’ into the IARU Security Project agenda.
- The **National University of Singapore** co-founded the Asian Political and International Studies Association (APISA) Congress which focuses on development-security politics intersections, terrorism, ethnicity and other aspects of broader security politics. It systematically interacts with Singapore’s leading research institutes (including its own Lee Kuan Yew School of Public Policy, the Institute of Southeast Asian Studies and the Rajaratnam School of International Studies) to produce cutting-edge perspectives on asymmetrical security.

Project Strategy and Timetable

Strategy

- **Capacity-Building**

Forging Networks between World-Class Security Research Nodes

- (a) Linking IARU with Leading Security Think Tanks (the International Institute of Strategic Studies, Brookings Institution, RAND Corporation, National Institute for Defense Studies - Tokyo)
- (b) Exchange of Research Personnel/Visiting Professorships
- (c) Strengthening Postgraduate/Postdoctoral Training in Security Studies

- **Outreach**

Creating Systematic Linkages with the Security Policy Community

- (a) Parliamentarians and Legislators
- (b) Policy-makers and Advisors
- (c) Non-Governmental/Inter-Governmental Organisations

Implemented through Workshops, Special Briefings, Seminar Series and 'Round Table' Dialogues

- **Dissemination**

- (a) Publications in Major Journals in the Security Studies Field
- (b) E-Publications via a Project Website
- (c) Security Project Monograph Series
- (d) Briefings by IARU researchers for the policy-making community

Timetable

- **2008**

- (a) Regional Security Architectures Workshop (ANU, Canberra) [**completed**]
- (b) Establish Project Website
- (c) Implement and Expand Project Strategy in Capacity-Building, Outreach and Dissemination Sectors
- (d) Appoint Staff for central Program and sub-program support
- (e) Project planning meeting (Copenhagen – July 2008)

- **2009**
 - (a) Finalise and disseminate initial Project-related publications
 - (b) Inaugurate postgraduate/postdoctoral/Visiting Professor exchanges
 - (c) University of Tokyo workshop on human security (first half of 2009)
 - (d) University of Copenhagen workshop on Advanced Security Theory and Multidimensional Approaches to Security Studies (second half of 2009)
 - (e) Outreach to non-IARU programs/institutions on selective research collaboration
 - (f) Project planning meetings

- **2010**
 - (a) Workshop on Rising Powers, Order-Building and Arms Control (at the University of Peking and co-hosted by UC Berkeley) [first half of 2010]
 - (b) Comparing European and Asian Order-Building: Multidisciplinary Dimensions (either at Oxford or Cambridge and co-hosted by both institutions second half of 2010)
 - (c) Project planning meetings

- **2011**
 - (a) Workshop on Asymmetrical and Non-Traditional Security Challenges (hosted by the National University of Singapore)
 - (b) Project planning meetings

Outcomes

- Bridging the gap between global and regional-domestic security studies and policy formation;
- Innovation in security studies through creation of a regional approach to global security issues, and global implications for regional security frameworks;
- Consolidating dispersed security studies expertise to address new research questions involving inter-disciplinary approaches;
- Capacity-building for emerging researchers in IARU institutions, and amongst security policy makers in respective countries;
- Outreach to wider security-studies field internationally, and to the security policy community in several countries;
- Dissemination of a monograph series, and policy papers via the Project website.

NOTE: Each Sub-Project Leader will be responsible for Identifying Sub-Project Funding Sources from national and international funding bodies. We ask for IARU support in identifying, approaching and lobbying international funding bodies. See the full Project Proposal for details on interactions with funding bodies.

Indicative Budget 2008-2011

Total requested from IARU for Project Activities:

- 2008: **US\$22,500**
- 2009: **US\$62,500**

Funding Request from 2008 Presidents' Meeting: US\$85,000

- 2010: **US\$62,500**
- 2011: **US\$62,500**

To Be Requested at 2009 Presidents' Meeting: US\$125,000

For details on budget please refer to the Full Proposal of the Project.

The Security Project requests that IARU Presidents approve funding for 2008 and 2009 at the Yale meeting. Subsequent funding will be requested upon presentation of progress reports and satisfactory Project performance.

Projected Sub-project Outlays

Multidisciplinary Approaches:	US\$850,000	between 2008-2011
Human Security:	US\$50,000	(for 2008)
	US\$800,000	between 2009-2011
Order-Building/Rising Powers:	US\$850,000	between 2008-2011
Asymmetrical Security:	US\$850,000	between 2008-2011

NOTE: It is anticipated that other participating IARU institutions will allocate funding to those projects in which their own scholars are participating.

William T. Tow on behalf of the Security Project Team
17 April 2008

Full Proposal IARU Collaborative Research Program: Regional Perspectives on Global Security

Prepared for the IARU Presidents' Meeting, Yale University, 28 April 2008

The Australian National University
The University of Copenhagen
The University of Tokyo
The National University of Singapore

Preamble

This document updates the 2007 'The IARU Security Initiative' draft report prepared in early February 2007 and the 'Proposal for The IARU Collaborative Research Program on Security' submitted to the IARU Senior Officers Meeting (SOM) convened at the University of Tokyo, 19-21 September. The 'Project' refers to the 'IARU Regional Perspectives on Global Security' Project initiated at Cambridge University in November 2006. The purpose of this document is *to justify a formal endorsement by the Presidents' Meeting for the Project and as a next step for soliciting Project funding*. It responds to the September 2007 Senior Officers Meeting (SOM) request that 'a revised, more refined proposal to be prepared immediately following the [Security Project] workshop planned for March/April 2008', reporting on the outcomes of the workshop and seeking a small amount of IARU funding to maintain momentum.'. The SOM meeting noted that this document 'would be considered by the Presidents at Yale in late April and contributions sought from interested members'. A funding request for the Project is included in this proposal. The document has been prepared under the direction of the Project Leader, Professor William T. Tow, Department of International Relations, ANU.

Project Background, Benefits and Evolution

An initial Project document emanated from deliberations conducted at Cambridge University in November 2006 attended by twenty delegates from the Australian National University, ETH Zurich, National University of Singapore, University of Cambridge, University of Copenhagen, University of Oxford, University of Tokyo, and Yale University (UC Berkeley and Peking University did not attend this session but have participated in subsequent meetings). An overarching Program theme of **Regional Perspectives on Global Security** was identified. This theme was justified by noting that contemporary security threats differ widely 'from region to region and from society to society' and that the participating IARU institutions are uniquely placed to draw upon the regional expertise of their member institutions and to generate comparative research projects that are grounded in a regional context'.

Two broad strategies were identified at Cambridge for harnessing the Project's inherent multi-regional strengths: (1) focusing on 'cross-national' security problems which constitute a 'global-regional gap' that has characterised much of the recent scholarly work on international security; and (2) adopting a comparative regional approach to understand how the designated thematic areas correlate with security concerns that transcend single states or regions. Applying well-considered multidisciplinary approaches to overcome existing theoretical, empirical and methodological divisions in security studies will constitute a major breakthrough in the conduct of research in this field. Project benefits derived from the IARU security scholars undertaking this effort can be summarized by the following points:

- *The global range of IARU* allows Project participants to realise the goal of generating comparative regional and cross-regional security studies. IARU scholars are equipped with the linguistic and cultural knowledge to access local bibliographical sources and policy-makers, allowing them to incorporate regional perspectives in our work.
- *The multidisciplinary background of IARU security scholars* will overcome previously blurred demarcations between international security and domestic security – a process which has intensified in recent years. Security studies must increasingly incorporate insights from sociology, criminology, anthropology and law. The IARU cooperative framework provides the right forum for establishing such interdisciplinary cooperation.
- *IARU countries are located in different regions*, with a variety of historical experiences, security concerns and intellectual means for addressing their problems. This provides us with a ready platform to engage in comparative analysis of differences and similarities (comparative regional security studies), as well as to analyze how these issues are linked across regions.

Project Evolution

Following the Cambridge meeting, the Security Project group designated the Australian National University, Copenhagen and Tokyo as 'lead institutions' for the Project. The National University of Singapore was subsequently nominated as a 'lead institution' to manage the Project's asymmetrical security component. After consultations with key participants at the Cambridge meeting and with the IARU Secretariat during early 2007 Professor William Tow from the ANU's Department of International Relations was nominated to serve as Project Leader. A comprehensive Project research plan was drafted for presentation to the September 2007 SOM meeting in Tokyo. The administrative design contained in this proposal was extensive and included a full-time Program Director, a full-time Senior Administrator and a full-time Director of Studies.

Discussion at the Tokyo SOMS, however, made it clear that the IARU preferred a revised, more streamlined, blueprint for taking the Project forward. Administratively, it was determined that Project momentum could be best established by security scholars in affiliate universities initially pursuing their own research projects, but 'grafting' components of such research under the IARU banner, and developing joint multi-university sub-projects around such core areas of strength. Applications for smaller-scale projects would be made under the 'IARU badge' to demonstrate to potential funding bodies that the consortium was already actively engaged in the type of Project capacity-building, outreach and dissemination required subsequently to pursue more substantial funding support for larger-scale projects.

The ANU Regional Architectures Workshop

This strategy was successfully applied to obtaining funding for the first major IARU Security Project-branded research event: a workshop on ‘regional security architectures in the Asia-Pacific’ hosted by the ANU during 31 March-3 April 2008 in Canberra and Sydney. This event actually *exceeded the scope and depth anticipated by the grafting approach*. Co-sponsored by the Australian Department of Foreign Affairs and Trade’s (DFAT’s) Australia-Japan Foundation and the Lowy Institute for International Policy (Australia’s top international relations think tank), this workshop incorporated a designated theme area of the Security Project research – Order-Building and Rising Powers (see below for a thematic description) - into a program that achieved significant community and policy-making outreach (with the Australian Parliament, Department of Foreign Affairs and Trade and the Defence Department all participating in briefings for workshop participants) and dissemination (findings of the workshop will be published in a major American policy journal).

The workshop attracted approximately A\$50,000 from various funding sources to sponsor the event. Eight out of ten IARU institutions were represented at this event and most representatives either delivered presentations or served as panel discussants. The workshop attracted the DFAT’s Acting Secretary (who delivered an opening keynote address) and the U.S. Assistant Deputy Secretary of State for East Asia and the Pacific (Thomas Christensen) who delivered a three-hour briefing to workshop participants at the workshop’s Sydney component.

An IARU ‘business meeting’ was convened at the workshop on Wednesday, 2 April to discuss the Project’s progress and future directions. The ANU’s Deputy Vice-Chancellor, Professor Lawrence Cram, attended the meeting, along with IARU institutional representatives and selected academic colleagues from the ANU and Griffith University’s Centre of Excellence for Policing and Security (CEPS). Deliberations lasted most of the morning. Major outcomes of the meeting were:

- The ‘IARU Security Initiative Document’ drawn up at the November 2006 Cambridge meeting was reaffirmed as the key foundation document for conceptual research to be undertaken by this Project;
- The thematic areas initially demarcated at Cambridge, however, were refined to reflect Project evolution. They are: (1) defining the substance of emerging *multidisciplinary* approaches to international security; (2) the pursuit of *human security* as a policy objective; (3) the integration of academic and applied policy approaches to regional and international *order-building* with special emphasis on the impact of *rising powers*; and (4) the examination of *asymmetrical security* issues. Each of these thematic areas will be discussed in more detail below.
- Each participating IARU institution would share in the responsibility of developing the thematic areas.
- A senior full-time research assistant/administrator, based in the ANU’s Department of International Relations, will be hired by 1 July 2008 to support the Security Project.
- Agreement in principle was reached to establish appropriate Project outlets such as a website, a monograph series and public events. Such outlets are to be designed to connect Project researchers to the broader policy community.

- General agreement was also reached on the commencement of an IARU Security Project short-term Visiting Fellows program and postgraduate training.
- An organizational session of key Project colleagues is to convene during early July to assess feedback from the President's Meeting and to plan future Project initiatives.
- A strategy of consolidating 'bottom up' phases of Project research with larger-scale Project activities to be seeking funding from major international funding sources was approved.

Additional Progress Since the Tokyo SOM

There has been additional, *capacity-building*, progress in the Security Project since the Tokyo SOM session:

- The University of Tokyo has established a major human security studies centre and has secured funding from various Japanese sources to sponsor a second Project workshop during the first part of 2009;
- The University of Copenhagen has been awarded one of that University's five year grants under a new program of excellence of around 19 million Danish kroner or about US\$4.1 million to establish an interdisciplinary 'Centre on Advanced Security Theory (CAST). Professor Ole Waever and his University of Copenhagen colleagues are prepared to integrate at least some of CAST's programs into an IARU context;
- The Australian National University, along with Griffith University, has been awarded \$A10 million by the Australian Research Council to establish a Centre of Excellence for Policing and Security (CEPS). Security-related projects conducted by the ANU will receive over A\$200,000 between 2008-2012 and these will be integrated into the IARU Security Project agenda.

Accordingly, the Security Project *already has established access to Australian, Danish and Japanese funding and infrastructural sources*. A representative of the Japan Foundation attended the Regional Architectures workshop and IARU business meeting and expressed the Foundation's interest in providing additional funding for the 2009 Tokyo workshop and other Project components upon receipt of application. The Project has also received expressions of interest for possible collaboration from the Ford Foundation for a workshop on arms control to convene in 2010 at Peking University. The University of Queensland's new Disarmament Centre has just received funding from the Norwegian Government and will earmark a portion of this funding for collaboration on Asia-Pacific arms control issues.

Where to From Here?

Program Themes

With greater focus on the research interests and strengths of prospective IARU participants, the overall theme of **Regional Perspectives on Global Security** remains the overarching conceptual framework for the Project. Individual thematic areas, however, have evolved significantly since the Project organizational meeting convened at Cambridge University in November 2006. Brief summaries of the four thematic areas are offered below:

- **Multidisciplinary Approaches to International Security:** This thematic area aims at contributing to the development of new theory relevant to understanding ongoing transformations of actual security policy practices. Security theory is to be deepened in three specific areas:
 - (1) *changing criteria for threat assessment* that better reflect the diversity of emerging challenges to international security such as infrastructure vulnerability, health, climate, epidemics, crime, economic risk assessments in finance, insurance, technology assessments and military threat analysis and better integrate the conceptual framework of various academic disciplines into translating interdisciplinary approaches to the security problematique;
 - (2) *exploring the procedural dynamics* underlying these challenges that flow from legal, ethical and political theory and that facilitate stronger conceptual apparatus for managing the dilemmas and dangers inherent to expanding forms of international security politics;
 - (3) *reconciling the local practices, cultures and perceptions of 'security' with a deeper understanding of 'big picture' security agendas* dominating regional and global politics by applying multidisciplinary and multi-layered theories and practices to illuminate linkages at the regional and global levels of analysis.

From a base in Copenhagen, which has a strong position in the international security studies field due to the work and world-class reputation of the so-called 'Copenhagen School' (that has focused on 'securitization theory'), *solid research networks are being established by CAST with leading scholars in the various disciplines dedicated to strengthening international security studies*. Postgraduate training opportunities will enhance the output and dissemination aspects of this sub-project's activities. The multidisciplinary studies sub-project will provide a solid foundation for analysis in the other three sub-projects.

- **Human Security:** The pursuit of human security - as opposed to more 'traditional' concepts of international security, has become an increasingly central agenda within the security studies field. Japan, in particular, has assumed a lead role in converting human security theory to actual policy practice, as illustrated by Madame Sadako Ogata's recent term as UN High Commissioner for Refugees. The University of Tokyo has been active in the pursuit of human security by establishing a Graduate Program on Human Security (Human Security Program, HSP) in 2004 which highlights the output and dissemination potential achievable by this sub-project. In pursuing this line of intellectual enquiry and training, the IARU Security Project is now planning to convene a workshop on Human Security in Tokyo, with the HSP as the host institution. The HSP will also initiate a series of related studies that will appear in key journals, in Project monographs and in its agendas for interacting with key policy-makers and policy

analysts. *Areas of focus will include failed governance and development assistance; aid programs for international refugees forced peoples' movements; international cooperation in police activities; and assessment of regional and international disaster relief programs.* This workshop will complement the more traditional approaches to order-building and regional-global security linkages that were covered in the March/April 2008 Canberra/Sydney workshop.

- ***The Politics of Order-Building and Rising Powers:*** The Canberra/Sydney workshop was an inaugural component of this sub-project. It involves reflecting on whether our understanding of 'power' in the international system and the way rising powers, in particular, exert their influence is commensurate to more stable or turbulent processes of change. This sub-project will assess different regional approaches to shifts in the global distribution of power as the implications and perceptions of what these shifts mean by applying both inter-disciplinary and inter-regional analytical frameworks to derive greater Project capacity-building. *The geography of participating IARU institutions in the Project will provide us with a unique opportunity to undertake comparative analysis of why these variations take place.* Output in this Project sector will be achieved via the production of special journal issues (the National Bureau of Asian Research has already agreed to publish key papers from the Canberra/Sydney workshop in its widely circulated journal *Asian Policy*) and other extensive collaborative studies (monographs, jointly authored/edited academic volumes and Internet venues). Further output and dissemination will be generated in this sub-project and in the other three research components by offering seminar opportunities to IARU postgraduates via such centres at the ANU's Strategic and Defence Studies Centre.
- ***Asymmetrical Security:*** How can states deter or defeat adversaries that rely on asymmetric force assets? This has become a critical enquiry for international security relations. While states have traditionally adopted policies of countering asymmetrical security challenges through applying the means of force or other 'hard power' components, such challenges are nevertheless intensifying in the Asia-Pacific region and internationally. They are widely prevalent in the forms of civil war, ethnic conflict, guerrilla insurgency and terrorism. Since 9/11, the Asia-Pacific region, particularly South and Southeast Asia have been highlighted as theaters of Islamist terrorism and extremism. History, geography, demography and various social-cultural imperatives have played critical roles in compounding the asymmetrical security phenomena and its resilience has become a major preoccupation of security planners and theorists alike. *The sub-project's research focus will be predominantly on deriving theoretical and policy responses to non-conventional security concerns such as terrorism and on the incorporation of so-called 'positive security' avenues to overcome them.* The National University of Singapore will lead IARU research collaboration in this area. It can readily tap into other various institutions in Singapore that specialize in asymmetrical security studies (including S. Rajaratnam School of International Studies at Nanyang Technological University and the International Institute of Strategic Studies Singapore office that convenes the prestigious annual 'Shangri-la Dialogue' on security and defence issues. It can also facilitate systematic networking of IARU scholars and postgraduates into more systematic collaboration within this rising area of international security studies.

Program Development

Project collaborators have now devised a comprehensive strategy to build on the 'IARU Security Initiative Document' by developing program infrastructure and pursuing significant national and international funding agencies.

Infrastructural Development

- **Thematic Sub-Projects** Copenhagen will take the lead in designing and implementing the multidisciplinary research component; Tokyo will spearhead the human security program; Peking and UC Berkeley will work with the ANU to shape the order-building research sector and Singapore will head up the asymmetrical security component with assistance from Cambridge. Oxford will work with Tokyo, Copenhagen and the ANU to identify Project linkages and interfaces, review and refine IARU funding proposal drafts (in consultation with other participants), and work on consolidating a 'directory of experts' from IARU and other Project affiliated institutions to secure viable Project participation and resource infrastructure.
- **Project Administration** The Project will work as a collegial body in which scholars throughout the IARU infrastructure will be encouraged to innovate and cultivate their own preferred research designs within the Project's general conceptual framework. The current Project Leader, however, will serve in a 'quasi' liaison (not 'Director') capacity for the remainder of 2008 and all of 2009. He will relinquish this task if the IARU Secretariat shifts from the ANU in 2010. His duties nominally include:
 - Ensuring organizational continuity between the April 2008 workshop and ensuring subsequent Project activities;
 - Serving as the Program's 'public face', working with the IARU Secretariat and other appropriate IARU administrators to generate publicity, ensuring that IARU 'badging' of research products occurs relative to various and appropriate outlets/channels (academic publications, public seminars, seminar series, possible op-ed articles, etc.)
 - Working in conjunction with IARU associates to generate Project funding through foundations and government agencies, and networking to achieve resource distribution as Project funding proposals are successful; and
 - Encouraging postgraduate and postdoctoral participation in the Project via exchange programs (the IARU already has initiated a summer school program and it may be this could be utilized to create internships to work on various Project-related research tasks)

The Project Leader will have access to a full-time 'Level 6' research assistant/administrator who can earmark a large proportion of his or her time to IARU-related business. CEPS funding will underwrite this position which will command US\$70,000 salary per annum. The administrator will work under the direction of the temporary Project Leader. He or she will manage day-in, day-out Project communications (including maintaining a Project web site), coordinate Project publication initiatives, facilitate project workshop organization, and assist the Project Leader in liaising with key Program research node participants at various IARU Security Institutions.

- **Scholarly Exchanges** Dr Philip Towle from Cambridge University commenced a short-term Visiting Professorship at the ANU's Department of International Relations in March 2008 as an inaugural IARU Security Project exchange scholar. CEPS funding is available for supporting other IARU scholars visits to the ANU and Griffith University during 2008 and 2009 and CEPS can work with the IARU Security Project to help underwrite postgraduate students exchanges and to pursue additional funding for this purpose. A program specifically targeting academic exchanges will be drawn up for approval at the July 2008 Security project organizational meeting.
- **Future Project Workshops** Planning is well under way for a workshop on the Project's human security theme to convene at the University of Tokyo in 2009. This event will follow the Canberra/Sydney workshop model of involving key officials from the Japanese government sector responsible for formulating Japan's human security policies and, given sufficient funding, we anticipate that additional officials will be invited from Norway and Canada – two other countries that have been leaders in this policy sector. ANU Professor Rikki Kersten will be in Japan during May-June 2009 and will liaison with the University of Tokyo's workshop organizing committee and with additional funding sources (i.e. the Japan Foundation) to build additional capacity for cutting-edge human security research under Project auspices. Planning is underway for additional workshops to be held in Copenhagen on multidisciplinary approaches to international security and in Beijing on arms control and comparative regional approaches to order-building and international stabilization. Peking University will coordinate the latter event and its representative to the Canberra/Sydney workshop is now working with his university's administration to pursue funding sources. Ford Foundation Beijing office representatives are also aware of this initiative and have expressed interest in receiving an IARU funding proposal for this event. The National University of Singapore is now investigating avenues for funding a major workshop on asymmetrical security in 2011 or 2012. The current Project Leader will be spending several months based in Singapore during the second half of 2008 and will collaborate with the NUS on this initiative.

Up to two workshops per year would assist in targeting Security Project research agendas. They would not, however, restrict ongoing research efforts from evolving independently under the badge of IARU-related research. One could surmise that work undertaken as part of the 2008 workshop on Regional Architectures, for example, could lead to the formation of informal teams of Japanese, North American, European and Australian scholars and analysts to work in both academic and applied settings to generate advanced research in that particular cluster over the Project's duration. Indeed, it is likely that the publication of research results will often not occur until well after a particular research phase has been completed.

A workshop timetable is envisioned as follows:

- 2008** – Regional Security Architectures (ANU) completed
- 2009** – Advanced Security Theory and Multidimensional Approaches to Security Studies (U/Copenhagen)
 - Human Security (U/Tokyo)
- 2010** – Rising Powers, Order-Building and Arms Control(U/Peking and co-hosted UC Berkeley)
 - Comparing European and Asian Order-Building: Multidisciplinary Dimensions (either at Oxford or Cambridge and co-hosted by both institutions)
- 2011** – Asymmetrical and Non-Traditional Security Challenges (hosted by the National University of Singapore)

The above schedule is tentative but conforms to the thematic leadership responsibilities assumed at the Canberra/Sydney workshop.

Project Output

The Security Project is designed to be a predominantly collaborative venture, facilitating the research output of both individual colleagues involved in the Program and of those centres wishing to participate. It is anticipated that the Project will eventually generate a substantial level of research output under IARU badging. Over the short-term, those colleagues and postgraduates who have benefited from associating with its research streams will be strongly encouraged to acknowledge a Project role in their own publications and related work.

The Canberra IARU Project meeting identified four short-term measures for generating Project output and coordinating Project-related research. First, a Project website will be created over the next few months to facilitate both research interaction and public engagement with the four major Project areas of enquiry. We anticipate that this outlet will be particularly effective in generating multidisciplinary discourse and debates about the context and substance of contemporary international security and will attract widespread interest in the comparative regional approach to security studies. Project outputs appearing in refereed journals, book compendiums and international conference proceedings can be centralized at the site.

Second, it is intended to commence a Security Project monograph series on regional security studies as they develop within the Project's four designated research components. The monograph publication series can be disseminated electronically and in hardcover, with the latter targeted to reach relevant sectors of the international security research community and their policy-making or policy analysis equivalents in government and independent think tanks. The production of between four to six high-quality monographs annually (one to two from each of the four research sectors) appears to be a reasonable production level without sacrificing quality control.

Third, a convergence will be encouraged between research opportunities generated by Security Project research and the exploitation of those opportunities by the IARU institutions' relevant postgraduate programs. This will facilitate the Project's multidisciplinary research component. Ways will be investigated to participate systematically in the IARU's Global Summer Program and organise postgraduate students' exposure to policy-making sectors via the organization of briefing sessions similar to those undertaken in the Canberra/Sydney workshop.

Fourth, the Project Leader and those directing the sub-projects will actively network with policy-making sectors to create maximum opportunities for interaction between IARU institutions and appropriate analysts in applied (and particularly government) settings. The Canberra/Sydney workshop set a strong precedent for this practice and there is clearly substantial potential to build on this format in all four sub-projects. IARU Security Project workshops will routinely involve briefings from official policy sectors on those research areas under deliberation at a particular event. In between workshops, interaction between the IARU scholarly community and its policy counterparts can become embedded in special postgraduate seminars created for the Global Summer Program, occasional local symposiums designed to illuminate selected research areas in greater depth and via electronic communication. Media coverage of such activities will be cultivated where appropriate.

Project Funding Sources

The Security Project institutions will provide limited funding for various Project components (workshops, scholarly and postgraduate exchanges, and staff support). A representative of the Japan Foundation attended the 2008 workshop to ascertain the Project's relevance to the Foundation's agendas and is willing to entertain a grant application from the IARU to underwrite Project workshop activities in Tokyo and beyond. The Ford Foundation has been contacted to solicit its interest in helping underwrite costs of a 2010 workshop at Peking University. The potential is high that other Project components that involve Peking University will be given serious consideration. In consultation with Professor Waever, it may be judicious to apply for European Union funding to support multidisciplinary security projects. The UK's Economic and Social Research Council (ESRC) is interested in funding linkage projects involving both China's and India's inter-regional ties. Funding proposals will be prepared for submission to all of these sources and to other major foundations. Suggestions from the President's Meeting on where else to apply for grants will be welcomed. As has been the case for the Regional Security Architectures workshop, multiple funding sources from 'host countries' can be sought for each 'local event' as well as to support the production of related research projects.

Projected Budget

2008

General Project Administrative Outlays

US\$34,700 – Project administrator based at the ANU (1 July-31 December 2008) and already funded by Center of Excellence for Policing and Security (CEPS).

US\$11,580 – Project Leader stipend for workshop organisation and overall Security Project Coordination **(this comes from the ANU Alliances area - using funding from the ANU VC to support ANU involvement in IARU activities).**

US\$15,000 – Project Leader/Thematic Leaders (Fujiwara/Singh/Tow) to fund travel/accommodations allowance for July Security Project organizational meeting in Copenhagen **(requested from IARU for Project activities).**

US\$ \$7,500 per year for indirect costs (web site development; phone and fax; limited, specific-project, administrative assistance apart from the Level 6 administrator) at ANU's Department of International Relations **(request from IARU for Project activities).**

Total Requested from the IARU for Security Project Operations in 2008: \$US22,500.

2009

US\$73,000– Project administrator based at the ANU (1 July-31 December 2008) and already funded by CEPS.

US\$20,000 – Project Leader stipend for workshop organisation and overall Security Project Coordination **(requested from IARU for Project activities).**

US\$30,000 – Project Leader/Thematic Leaders travel/accommodations allowance for Security Project meetings and workshops **(requested from IARU for Project activities).**

US\$7,500 for indirect costs (web site maintenance; phone and fax; limited, specific-project, administrative assistance apart from the Level 6 administrator) at ANU's Department of International Relations **(requested from IARU for Project activities).**

US\$5,000 for outreach (seminars, briefings, roundtables, etc.)

Note: It is envisaged that funding support for postdoctoral and Visiting Professor exchanges will be recovered from existing funding schemes at IARU institutions.

Total Requested from the IARU for Security Project Operations in 2009: US\$62,500.

2010

US\$77,000 – Project administrator based either at the ANU if the IARU Secretariat remains at that institution and CEPS funded. If the Secretariat moves to another IARU institution, that institution would fund the administrator from independent funds.

US\$20,000 – Project Leader (from ANU or another institution) stipend for workshop organisation and overall Security Project Coordination (**requested from IARU for Project activities to be approved**).

US\$30,000 – Project Leader/Thematic Leaders travel/accommodations allowance for organizational meetings and workshops (**requested from IARU for Project activities to be approved**).

US\$7,500 per year for indirect costs (web site development; phone and fax; limited, specific-project, administrative assistance apart from the Level 6 administrator) at ANU's Department of International Relations (**requested from IARU for Project activities to be approved**).

US\$5,000 for outreach [seminars, briefings, roundtables, etc.] (**requested from IARU for to be approved Project activities**)

Total Requested from the IARU in 2009 for Security Project Operations in 2010: US\$62,500.

2011

US\$80,000 – Project administrator based either at the ANU if the IARU Secretariat remains at that institution and CEPS funded. If the Secretariat moves to another IARU institution, that institution would fund the administrator from independent funds.

US\$20,000 – Project Leader (from ANU or another institution) stipend for workshop organisation and overall Security Project Coordination (**requested from IARU for Project activities to be approved**).

US\$30,000 – Project Leader/Thematic Leaders travel/accommodations allowance for organizational meetings and workshops (**requested from IARU for Project activities to be approved**).

US\$7,500 per year for indirect costs (web site development; phone and fax; limited, specific-project, administrative assistance apart from the Level 6 administrator) at ANU's Department of International Relations (**requested from IARU for Project activities to be approved**).

US\$5,000 for outreach [seminars, briefings, roundtables, etc.] (**requested from IARU for to be approved Project activities**)

Total Requested from the IARU in 2010 for Security Project Operations in 2011: US\$62,500.

Multidisciplinary Approaches to International Security (To Be Funded by CAST and/or other external funding sources).

US\$50,000 - Multidisciplinary Security Theory Workshop in Copenhagen (2009).

US\$500,000 – release time for senior researchers to work on publications targeted for completion by 2011 by workshops in Singapore/Tokyo and Berkeley.

US\$200,000 – research assistance/post-graduate student exchange to IARU universities.

US\$100,000 – administrative support (salaries related to workshop organization and related administrative costs).

Human Security (To Be Funded by the University of Tokyo - additional external funding sources will be solicited by the University of Tokyo and/or other IARU institutions working on this sub-project and a target of \$US800,000 is projected for sub-project work between 2009-2011)

US\$30,000 – Three year JSPS (Japan Society for the Promotion of Science) grant for New Concepts on Security, granted to the University of Tokyo, as both research grants and partial source of funding for the 2009 Human Security Workshop.

US\$10,000 – Administrative support from the Human Security Program, University of Tokyo, for the 2009 Human Security Workshop.

US\$10,000 – Administrative support and research assistance from the Graduate School of Public Policy, the University of Tokyo for 2009.

US\$800,00 projected funding for 2009-2011.

Politics of Order-Building and Rising Powers

US\$45,000-50,000 – Regional Security Architectures Workshop – Canberra/Sydney 31 March/3 April 2008 (**Already Expended**)

\$US500,000 release times for Senior Researchers to work on publications targeted for completion by 2010 workshops in Beijing and Oxford or Cambridge (**to be solicited from the Australian Research Council, various Australian and U.S. government agencies**)

\$US200,000 research assistance/postgraduate student exchanges to IARU universities (ANU, Cambridge, Oxford, Peking, UC Berkeley) leading this Project sector (**to be solicited from the UK's Economic and Social Research Council, 'Endeavour' and other various educational exchange programs sponsoring Chinese and Indian scholars study abroad**)

\$US100,000 administrative support (salaries related to workshop organization and related administrative costs) [**To be solicited from CEPS program funding, ESRC Funding, European Community Funding, etc.**]

Asymmetrical Security (2008-2011)

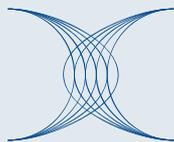
US\$50,000 - Asymmetrical Security Workshop (2011) [**Solicited from NUS Internal Funding – possible ‘piggybacking’ with the Singapore Institute of International Affairs, RSIS, Institute of Southeast Asian Studies and other research centres**].

US\$500,000 – release time for senior researchers to work on publications targeted for completion by 2011 by workshops in Singapore and Canberra/Sydney [**Solicited from Singapore Government and ASEAN sources, corporate sources in Asia, etc. – possible research collaboration packages with Low Kuan Yew Public Policy Institute, RSIS, Institute of Southeast Asia Studies, etc.**].

US\$200,000 – research assistance/post-graduate student exchange to IARU universities leading this Project Sector (**to be solicited from various regional defence agencies in the Asia-Pacific and educational exchange programs sponsoring Europe-Asia exchanges**)

US\$100,000 – administrative support (salaries related to workshop organization and related administrative costs) [**supported by the NUS/Singapore institutional sources over a 3 ½ year period**]

NOTE: It is anticipated that other participating IARU institutions will allocate funding to those projects in which their own scholars are participating and this should be considered as part of the total outlay.



International Migration Institute
James Martin 21st Century School
University of Oxford



25 March 2008

Note to the IARU Presidents' meeting April 2008

SUBJECT: outline research proposal on

**Rethinking Human Mobility:
New Opportunities, Inequalities and Challenges to Human Security**

In September 2006, the International Migration Institute hosted a meeting at Oxford University of IARU researchers working on international migration topics. The aim agreed at the meeting was to develop a joint research proposal on the topic mentioned above.

This outline proposal was prepared and submitted to the IARU Presidents' Meeting in March 2007. Several IARU universities were actively involved in this work – notably Tokyo, Singapore, ANU, ETH, Copenhagen and Oxford. However, in order to include all the IARU researchers who wished to participate, the proposal was rather broad and complex. The IARU Presidents felt – rightly in my view – that a more focused and perhaps more modest proposal would be desirable.

IME was asked to coordinate a new draft proposal for the forthcoming meeting. However, by February this year it became clear to us that pressure of other urgent tasks did not permit us to free up enough time to do this adequately. We therefore informed the other interested IARU partners with our email of 13 February that we would have to postpone this task for the time being.

We remain committed to this work, and hope it can be done for the next planned Presidents' Meeting. However, in view of current pressures of work, we would be very pleased if another University could take the lead role for the next round.

Yours sincerely,

Stephen Castles
Professor of Migration and Refugee Studies



Global Change Projects: Initiating New Themes

The Global Change reports considered by Presidents at this meeting under item 4.1 were prepared, as requested, as updates for consideration by Presidents to allow them to evaluate the potential for the IARU to add a dimension to the research that would not otherwise be possible.

The four original proposals are now at different stages of maturity, and are evolving in quite different ways. While it remains too early to judge ultimate success, productive discussions between IARU researchers have occurred in areas that would not have previously met, and ambitious plans are emerging. Lessons have been learned in this process, and it is timely to consider the merits of soliciting a small number (2-3, say) of additional proposals.

The Secretariat has received an initial proposal in the field of “Culture and Citizenship”. Arguably, it may not be appropriate as a new Theme, but suggests the potential value of exploring new Themes under the broad heading of “Global Change and Culture”. The Presidents might consider inviting proposals in this or other fields (perhaps the Economic/International Finance field) to supplement the four original Themes.

Initial proposals could describe:

- An assessment of the capacity of IARU to undertake the research;
- Initial scale and costing;
- A statement explaining the value that the IARU can add to the proposed research;
- Outcomes that might come from the research and how it might be relevant to major global issues;
- A management plan over a five year time frame; and
- Ways in which the research might be structured/managed that make best use of the combined capacity of IARU partners.

The following mechanisms might be considered to action this:

- Appoint a senior and well regarded academic(s) as project leader (or “academic champion”) to both attract interest from researchers and lead discussion on research directions;
- Appoint an administrator/manager (or “bid manager”) to assist the project leader and take charge of the process, organise workshops, convene meetings, prepare documentation etc;

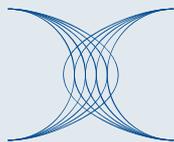
- Convene planning workshops over the next twelve months to bring together interested academics to refine ideas, build assessments of capacities and develop costings:
 - these workshops might be at the topic level or include a higher level workshop that looks at how the various topics might come together in a coherent approach to global change;
 - at the conclusion of the first workshops, leaders might be appointed to carry on the project development;

Any of the above approaches would require seed funding. This funding might come from:

- the annual contributions by IARU members;
- contributions (perhaps on an agreed shared basis) from those partners who choose to participate in each project; or
- a one-off levy on IARU members in 2008.

It is envisioned that IARU member funding would be used to leverage external funding.

Presidents may also like to consider establishing a “board” of some kind to oversee and coordinate the IARU research agenda. Directors of each project might report to this board (or they might comprise the board), which would have responsibility for determining priorities, approving funding allocations and applications, ensuring coherence and consistency across projects etc.



Proposal for an IARU Program: Culture and Citizenship: Towards a New Civic Pluralism

Proposers:

Professor Amin Saikal and Professor James Piscatori, Centre for Arab and Islamic Studies,
Faculty of Arts (ANU)

Rationale

A notable feature of the modern experience is the increasing and permanent presence of various minorities in the West. Whether in the United Kingdom, France, Germany, America, or Australia, they are adapting to life in these societies and challenging some of their social and political assumptions. In the process, they are shaping their own concepts of pluralism and helping to reformulate the nature of citizenship in democracies where communal – and religious – rights have not traditionally been central to civic order.

The challenge for all liberal governments is how to advance the liberty of the individual while securing the prosperity of the general community. But, in seeking to accomplish this, multiculturalism has come under attack since at least the Madrid bombings in 2004 and especially the London bombings of 2005. The spectre of not just terrorism, but home-grown terrorism, has fired urgent public concern over how societies should accommodate difference and frame citizenship in a rapidly shifting security milieu. The debate is particularly acute at a time when Western societies are, through migration, facing the most momentous population shift since Asian tribes pushed westward in the first Christian millennium.

Great advances have been made, and most Western societies are both more cosmopolitan and fairer today. The vibrant notions of egalitarianism and multiculturalism that have prevailed in Canada or Australia, for example, have helped to promote co-operative relations, but there and elsewhere, racist and discriminatory reactions have also been defining. As the Runnymede Trust has argued, “Islamophobia” has blighted British society, as it certainly has others. Immigrants may come to seem “hooded hordes”, in T S Eliot’s haunting phrase, and nationalism may become nativised and exclusionary – as with the National Front in France or similar movements in the United States, Britain, and Germany. Moreover, at a time when the security of society and state has become a paramount consideration and anti-terrorism legislation has grown extensive, minorities may come to feel targeted and their loyalty suspect, even if this is not the intention. The consequence of an unwelcoming society, for whatever the reason, may be an understandable defensiveness among some minorities, a confrontational posture among others.

Minority members, especially youth, may thus pose a double challenge: to the leadership of their own community to demonstrate their relevance and understanding of the changing society in which they live; and, at times indirectly and at other times directly, to the guardians of the liberal state to demonstrate their conviction.

In the process, the concept of citizenship, as traditionally understood, is being altered. The Western political order has conventionally been predicated on several assumptions: secularism, individual freedom, equality of rights and the rule of law. To take one example, Muslims in the West are by and large not rejecting these norms; in fact, they have steadily come to demand that they be applied to themselves. Proponents of the *hijab* or headscarf in France, for instance, have routinely invoked the notion of individual liberty and freedom of speech, and British Muslims, upset by the Rushdie Affair and urging that the law against blasphemy should apply to Islam and other religions, have built their case on equality of rights.

Many, in fact, seek to extend the traditional notion of citizenship. Why, they ask, cannot the principle of secularism really mean that in eschewing a state religion there is a tolerance of all religions as public phenomena? Why must religion necessarily be circumscribed to the private domain? Moreover, it is wondered, does the recognition of communal rights, particularly those based on such primordial affiliations as race, ethnicity, and religion, negate individual freedom?

However citizenship is redrawn in this process, the relevance of one of the great issues of the day – immigration – often remains understated. If human capital is an asset and globalisation can provide both freedoms and opportunities, how open should our borders be, and, to put it crudely, how much liberty is to be extended to migrants? Despite the entirely laudable goal of inclusiveness that is often repeated, exclusion remains a fact of life and how it is managed has direct implications for the domestic harmony and international position of each country.

Workshops

We propose to collaborate with other members of the IARU to explore this topic in some depth. Four themes would be highlighted:

1. Lessons from the multicultural experience
2. Balancing individual and communal rights
3. Citizens in a world of minorities and migrants
4. Cultural and religious influences on citizenship.

As this would suggest, the discussions would naturally be inter-disciplinary and would draw on the knowledge of experts in the social sciences and humanities. The different country experiences that IARU members represent would be an added advantage. While there has been individual work on aspects of the topic in the past, it has gained urgency in the new environment where citizenship and minorities have taken on hard security implications. In addition, researchers at each of the consortium universities who work in this area may have few opportunities to come together and exchange their ideas in a focused way.

In order to facilitate this cross-fertilisation, we propose an initial workshop to be held at the Australian National University (tentatively in April 2009) that would bring together scholars, particularly including early-career researchers, whom we have identified as working on this general topic at member universities. We suggest a second workshop one year later at the University of Copenhagen, home university of Professor Jørgen Nielsen, a noted expert on Muslim minorities. The workshops would:

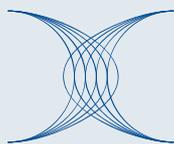
- document the lessons of such multicultural societies as the United States, Britain, Denmark, and Australia;
- challenge scholars to consider how culturally distinct minorities are to be accommodated in mature liberal societies;
- stimulate future collaboration among IARU scholars on a topic that is likely to grow in importance; and
- encourage researchers to share their findings with pertinent policy-makers.

Outcome

We propose as outputs one edited volume of the best workshop papers, and a small monograph written by the two proposers distilling the most important dimensions of the debate. The project would also, more generally, provide opportunities to develop new research directions in this area of inquiry.

Costs

It is envisaged that initial costs will be limited to travel and met by participating Institutions which will also fund local costs for meetings which they host.



A Proposal for an IARU Early Career Researcher Partnership Programme

Background

At the 2007 Senior Officers' meeting there were discussions around the engagement of younger staff in IARU research activities. Professor Mike Gregory raised the Cambridge-MIT "Partnership Programme", as an example of a low cost program targeted at early career researchers which facilitated collaboration. (Case study provided in appendix 1.)

There may be potential, therefore, for IARU to grow and strengthen the "Global Change" communities using a coordinated and 'bottom-up' version of existing IARU mechanisms, in particular research workshops and faculty/student exchange. A further "planning grant" mechanism¹, could also be proposed, aimed at enhancing the sustainability of the research community by facilitating early career researchers pursue external joint-funding opportunities within the "Global Change" themes.

The IARU Secretariat (in consultation with Dr Eoin Sullivan, Department of Engineering, Cambridge) has prepared a brief proposal for discussion.

Early Career Researcher Partnership Programme

It is proposed that IARU launch a competition for "partnership building" awards aimed at facilitating early career researchers from IARU partner's to build meaningful, sustainable research partnerships within the IARU "Global Change" research themes.

This programme would be strongly based on existing IARU workshop and exchange processes, but would also have the following characteristics:

- Prioritise **early career** researchers. It is worth noting that modest additional travel and networking funding can make a significant difference for early career researchers, who may have less discretionary resources for such activities. Furthermore, the opportunity to gain international experience and visibility early on in a research career can be invaluable

¹ Planning, workshop and exchange mechanisms, are used by a range of international organizations engaged in establishing and nurturing research communities, for example: US National Science Foundation's International Materials Institutes, US National Institutes of Health Developing Center (P20) Grants, US-Ireland R&D Initiative, etc. An example of a successful university-driven initiative using all three mechanisms in a coordinated fashion – the Cambridge-MIT Institute "Partnership Programme" – is described in an Appendix to this paper.

- A “**bottom-up**” approach, whereby all early career faculty (with identified IARU universities) would be eligible to apply. Casting a wide net in this way can be effective in uncovering relevant existing relationships and potential multidisciplinary opportunities that might not be immediately apparent to the more senior research leaders within the IARU universities. Prioritise proposals that being used to prepare for identified external funding opportunities. Participation in externally funded joint projects can both strengthen new and existing partnerships, as well as provide resources to support the sustainability of the community as a whole.

Approach

It is proposed that the IARU Partnership Program be a competitive process involving three different “bottom-up” grant opportunities:

- **Exchange Grants** designed to strengthen relationships and facilitate the exchange of scientific knowledge, expertise and practice between groups. In particular these grants might facilitate researchers’ PhD students to spend time in partner laboratories to engage in cooperative activities and study. Such exchanges offer not only enhanced educational and training experiences for students themselves, but can act as “glue” between partners. The PhD students location at partner universities helps build individual relationships.
- **Planning Grants** designed to facilitate the coordination and development of joint research activities, in particular the preparation of joint-proposals for external funding opportunities, or coordinated proposals to national funding agencies (involving partners as named international collaborators)
- **Workshop Grants** designed to allow researchers to meet together as a community which allows for productive discussion between IARU researchers. The Planning and Exchange mechanisms (outlined above) could be used to follow-up immediately on particular opportunities identified at workshops while there is still enthusiasm and momentum.

IARU Secretariat Support

It is proposed that, as part of the partnership building process, the IARU Secretariat would identify and pro-actively promote *external* funding opportunities for which IARU members would be eligible, and where the partnership building mechanisms (as described above) would facilitate preparation and enhance the competitiveness of IARU researchers. The Secretariat would undertake this in cooperation with the relevant research support departments at IARU universities.

Application & Review

Eligible proposals to the Partnership Programme would have to be truly joint-activities with comparable levels of participation from three or more partner institutions. All proposals should demonstrate significant mutual benefit to all the universities within the selected thematic area.

In particular, it is recommended that priority should be given to those proposals which had some or all of the following characteristics:

- Involvement of **early career** researchers
- Involvement of **graduate students**
- Proposals addressing **complex, multidisciplinary** research problems
- Proposals associated with preparation for **external funding opportunities**
- **History of collaboration** between the host departments
- **Cost-share** on the proposed activity from other sources

The application process be designed to be as straightforward as possible with short and simple application forms and a review process which results in applicants being informed of decisions within a small number of weeks. It is proposed that such the review process involves a panel made up of generalists from the relevant universities, who would prioritise proposals on the basis of their partnership building potential (largely the criteria outlined above). Further provision could be made to call upon specialist research expertise, if the scrutiny of the quality of the researchers or proposed activity was considered necessary.

Funding

IARU partners would invest modest funds to cover the participation of researchers **from their universities** in bottom-up “Partnership Building” mechanisms such as the Exchange, Planning, and Workshop grants (as described above).

Case Study – The Cambridge-MIT “Partnership Programme”

Introduction

When, in 2006, the Cambridge-MIT Institute (CMI) moved beyond the grant-giving phase of its original funding, the two Universities – keen to maintain a strong platform on which to grow new opportunities and relationships – developed a set of “partnership building” activities to facilitate ongoing engagement between the two academic communities. This CMI “Partnership Programme” proved particularly successful in encouraging research collaborations between younger faculty members. At the beginning of 2007, therefore, under the banner of the “CMI Partnership Programme”, the CMI launched a set of modest grant opportunities aimed at facilitating Cambridge and MIT academics build meaningful, sustainable research and education partnerships in areas related to science, technology & innovation.

The CMIPP Mechanisms

The CMI Partnership Programme competition involved three different “**bottom-up**” grant opportunities:

- **Planning Grants** designed to facilitate the coordination and development of joint research activities, in particular preparation of joint-proposals for external funding
- **Workshop Grants** aimed at helping academics explore and identify multi-disciplinary and complementary activities that could form the basis of joint projects
- **Exchange Grants** designed to strengthen relationships and facilitate the exchange of scientific knowledge, expertise and practice between groups

Further details about the CMI Partnership Programme, including details of the application and review processes, can be found on the CMI “Partnership Programme” website.

In addition to the modest financial support (grants were typically £5k-£10k), the CMIPP secretariat also offered support to help PIs follow-up on specific opportunities identified during the course of their funded activity. If, for example, new collaborative opportunities were identified during a Workshop, investigators were eligible to apply for follow-up Planning and/or Exchange Grants to pursue these opportunities while there was still enthusiasm and momentum. The CMIPP team also helped identify *external* funding opportunities of potential interest to Cambridge and MIT PIs.

CMI Partnership Programme Outcomes

CMI awarded 32 grants in 2007. These awards involved approximately 100 faculty members directly (including workshop co-applicants), but with many more researchers participating in and benefiting from workshops and other activities. Faculty members came from a wide range of departments, including: engineering, biochemistry, genetics, architecture, economics, physics, medicine, computer laboratory, chemical engineering, and earth science. Similarly the activities themselves spanned a wide variety of multi-disciplinary domains, including: systems biology, nanotechnology, biotechnology, and sustainability. It is worth noting that, even through the CMIPP competition was very much “bottom-up” (with no particular themes identified or prioritized by CMI), many of the awards were clustered within a small number of multidisciplinary areas where both universities have complementary strengths and interests, e.g. materials research at the life sciences-physical sciences interface.

CMIPP & Early Career Researchers

CMI had two “Calls for Proposals” and received approximately 50 joint-submissions from groups of Cambridge and MIT researchers (with many more registering an “expression of interest” in participating in future competitions). A significant number of the applicants were early-career researchers. Of the approximately 30 proposals funded, half of these awards involved lead-applicants who had received their PhDs within the previous five years. Furthermore, almost all awards involved the active participation of PhD students and post doctoral researchers.

Informal feedback from the younger applicants suggests that modest grants of this type are extremely useful for early career researchers, who tend to have less discretionary resources for travel and networking. Furthermore, the younger awardees felt that such grants are particularly helpful in, not only establishing new international partnerships and connections, but also in providing valuable international experience and visibility.



Proposal for an IARU Programme on Industrial Innovation

Making the Most of Ideas!

This paper sets out a preliminary proposal to IARU for a programme to explore the roles of modern research universities in transforming ideas and opportunities into products and services.

Aims

- Map and interpret key international industrial developments
- Share leading practices in Industry/University/Government engagement
- Explore new approaches to the rapid exploitation of ideas and opportunities

Background

It is now widely recognised that research, design, production and service are increasingly globally distributed and networked. The role and potential of universities in these activities is attracting growing attention. While few Universities see their primary role as to 'serve' industry many now recognise the intellectual challenges as well as commercial opportunities in closer engagement with industry and commerce.

There are many examples of successful industry-academic partnerships but traditional university structures can sometimes inhibit integrated multi-disciplinary engagements. It can be difficult for the full potential of the wide range of academic expertise to be brought to bear despite the increasing industrial and commercial demand for larger scale and more integrated academic engagement.

IARU is particularly well placed to address some of these issues representing as it does leading research universities around the world with wide and diverse experiences of industrial, commercial and government engagement. This proposal sets out a two year international programme to develop an improved understanding of industry trends, good practices in engagement with industry and potential links between IARU partners in what we are calling 'industrial innovation'.

Approach

The proposed approach envisages a series of three annual meetings each with a specific agenda and tangible output to address the aims set out above. The meetings are also intended to stimulate 'bottom up' networking and to identify specific sub-projects as priorities emerge.

The overarching theme is the role of universities in industrial innovation in the context of the emerging structures of global industries. Initial sub-projects might include lessons from engaging industrial partners and other stakeholders in multi-disciplinary projects and the role of embedded professionals with industry/business expertise to facilitate the interpretation, translation and application of research findings into an industrial context.

Outline Programme

A two year programme is envisaged.

Phase 1 – Network Development (June-December 2008)

Activities

- Identification of potential participants in each institution
- Exploratory meeting in UK – July '08
- Development of conference themes and 'work packages'

Outcomes

- Network and communications
- Conference programme and organisation

Phase 2 – Work Programme and Conference (January-December 2009)

Activities

- Mapping of industrial trends in partner countries
- Establishment of industrial partnerships
- Collection of University/Industry/Government engagement practices

Outcomes

- Conference to share findings and establish networks – potentially summer '09
- Facilitation of 'bottom up' projects
- Preparation for 'good practice' guidelines on industrial engagement
- Establishment of standing 'industrial futures' group if agreed

Phase 3 – Dissemination and review (January-June 2010)

Activities

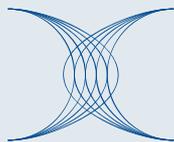
- Publication of findings
- Workshops for 'bottom up' projects
- Analysis of effectiveness of the approach

Outcomes

- Continuing relationships as appropriate
- IARU 'Manual of Good Practices' in industrial, commercial and government engagement.

It is envisaged that initial costs will be limited to travel and met by participating Institutions which will also fund local costs for meetings which they host.

Professor Mike Gregory, Cambridge University



Global Summer Program (GSP)

Status Report, April, 2008

This report is based on the recent outcomes of the IARU Global Summer Program workshop held at Madingley Hall, Cambridge University, from 11-13 February, 2008.

Following the meeting of senior officers at the University of Tokyo in September, 2007, it was determined that a follow-on meeting of summer school practitioners was necessary to discuss the many complexities of such an undertaking, and that it should take the form of an intensive workshop. This workshop was attended by representatives from 8 of the 10 member institutions and concentrated its efforts on inaugurating the GSP in the summer of 2008. As such, it attempted to clarify the many administrative processes necessary to launch the GSP in very short order, as well as to identify some of the guiding principles for 2009 and beyond.

Initial discussions focused on the Program's mission. The following principles, some found in previous documents, were deemed fundamental to defining the GSP:

- Academically ambitious, intensive summer courses of consistently high quality, providing opportunities not available elsewhere
- Emphasis on educating future global leaders and researchers
- Institutional support for student and faculty mobility across GSP institutions
- Flexible approach to structure and content of courses, allowing institutions to use models that represent their own pedagogical philosophy

Seen another way, a mission statement from a student's perspective would include the following characteristics:

- Participate in intensive summer study at another world class university
- Join an academic community of global citizens and future leaders
- Learn and live in another culture

For summer 2008, 6 of 10 universities will host a program, defined as one or more courses available exclusively to members of IARU. These programs vary in size and scope, but they all represent a unique aspect of the hosting institution's academic focus. A total of 14 courses will be offered, with the potential to enroll more than 200 students. Each university has created a website for its GSP courses, and IARU has a central site with all courses listed and linked. Details of promotion,

application, admission, cost, and credit were discussed at some length, with compromise and flexibility the hallmarks of attempts to gain consensus. Given the short time available, many more details will be worked out collegially as the need arises.

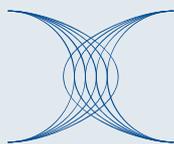
Looking forward to 2009 and beyond, it is anticipated that all institutions will host a program of one kind or another. Innovative and unique programs can be built with the support of all member universities. For example, a Global Leadership Institute could be fashioned that would engage many aspects of the GSP as a whole, but that would rotate amongst the various universities, with a focus on certain generic aspects of global leadership in the twenty-first century. We will gain experience with administration and education, and each program can change and evolve to meet student needs. Our common goal will be to make it possible for members of our universities to take advantage of the (northern hemisphere) summer months to travel and study within IARU in a way that alleviates most of the challenges associated with study away, while creating an exciting array of opportunities to experience unique, global learning communities.

To insure the success of the GSP for many years to come, IARU and each university member will have to meet two key challenges:

1. **Credit.** While credit means different things at different universities, it should be a fundamental principle that summer courses offered through GSP should be credit granting throughout IARU. As members gain confidence in each others' quality of intensive education, mechanisms should be created that account for summer credit transfer from one institution to another.
2. **Cost.** Students, faculty, and organizations must be supported financially to the extent that cost does not represent a deterrent to participation. Each member university should commit resources that will support the creation and sustainment of courses and programs, that will make it possible for students to pay for their GSP experience, and that will allow faculty to teach at member universities over the summer. A firm financial commitment from each institution will secure these goals.

Nominations accepted by universities for 2008 IARU GSP (as at 13 April 2008)

ANU	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
Great Power Politics in Asia	4				1					
International Environmental Policy					2	1		1	1	2
Southeast Asian Frontiers	4				1	1				
NUS	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
Field Studies in Biodiversity	3									
South East Asia in Context	2			1		1				
University of Tokyo	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
Sustainable Urban Management	2		5		6	1	1	1		2
Nanoscience	3		1		1	1	1			
Cambridge	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
Cambridge Connections	4		1		4				2	1
Oxford	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
History, Politics and Global Leadership	4				1					1
Yale	ANU	ETH Zurich	NUS	Peking	UC Berkeley	Cambridge	KPU	Oxford	UT	Yale
Moral Foundations in Politics	3	1	2	2	2	2	2	3	1	TBD
Courses not offered in 2008	Notes									
Artificial Intelligence (ANU)	One student applied. Offered a place in Cambridge Connections (Cambridge)									
Business Project Planning and Management (ANU)	No students applied									
Energy Resources and Renewable Technologies (ANU)	Two students applied. each offered a place in International Environmental Policy (ANU)									
Sustainability Down Under (ANU)	Two students applied. each offered a place in International Environmental Policy (ANU)									



IARU and Research-led¹ teaching and learning

A recent report to the UK Higher Education Academy highlights the importance of the link between teaching and research:

“While Wilhelm von Humboldt is credited with the founding principle of the university as a collaboration between learning and research, the underlying goal of education as developing the enquiring mind is very much older: “the mind is not a vessel to be filled, but a fire to be kindled” (Plutarch, c46–127 AD). Never has the educational philosophy behind this belief been more important: the changing world to be faced by today’s students will demand unprecedented skills of intellectual flexibility, analysis and enquiry. Teaching students to be enquiring or research based in their approach is not just a throwback to quaint notions of enlightenment or liberal education but central to the hard-nosed skills required of the future graduate workforce.” (Jenkins et al 2007:3)²

In the case of the IARU universities, the link between teaching and research forms the very *raison d’être* of our alliance. The world’s best research intensive universities have something special to offer in terms of the creation and sharing of knowledge. The IARU alliance is uniquely positioned to offer our students a radically enhanced learning experience by clarifying and articulating our approach to the research-teaching nexus and sharing teaching resources on the issue. This paper proposes that IARU partners explore together our concepts of research-based learning and create a IARU-wide community of learning for students and academics, based on our shared ideas.

Boyer’s ideas on “scholarship” as a way to conceptualise the links (rather than the distance) between teaching and research are pertinent to our task. Seeing the creation and sharing of knowledge as linked enterprises is an important first step in kindling “Plutach’s fire” in both students and academics. Scott sums up the imperatives to link research and teaching as follows (2002, 13)³:

1 We use this term as a short hand to cover a wide range of concepts describing how the research-teaching nexus can be used to enhance student learning eg ‘research-based’, ‘inquiry-based’, ‘research-enhanced learning and teaching’, ‘research-aligned teaching’ and ‘research-informed’. We would argue it is most important to focus on the enhancement of student learning via this range of approaches rather than debate what ‘research-led’ education is or is not.

2 <http://www.heacademy.ac.uk/ourwork/research/teaching> Linking Teaching and Research in Disciplines and Departments - April 2007 Alan Jenkins, Mick Healey and Roger Zetter

3 Scott, P. (2002) A lot to learn: we are all researchers now, *Education Guardian*, January 8th, p13. Available at: education.guardian.co.uk/egweekly/story/0,,628918,00.html

“In a “knowledge society” all students - certainly all graduates - have to be researchers. Not only are they engaged in the production of knowledge; they must also be educated to cope with the risks and uncertainties generated by the advance of science. In other words, education and research co-mingle in ways that make their artificial separation destructive of the highest standards in both.”

Research skills, and an understanding of the nature of research, are fundamental not only to those students who will go on to become the next generation of researchers and academics, but also to those who will become society’s leaders and who will need to understand how to commission and how to use research.

4 key dimensions

We suggest that IARU explores four key dimensions to the research-teaching nexus:

1. having active researchers teaching who are able to convey to students the excitement of the research they are carrying out, and engage students in deep and active learning.⁴
2. having learning and assessment modes that develop research skills in our students (eg projects, dissertations)
3. teaching in research mode - inquiry-based teaching
4. carrying out research into our teaching and our student’s learning and applying this in action research cycles to constantly enhance our teaching and our students learning.

Proposal for consideration at the President’s meeting

We propose to hold a one day meeting of DVC/PVCs for Education together with the heads of our teaching and learning centres. This meeting would explore each of the four approaches listed above and also involve sharing our existing approaches and student learning outcomes. Themes to explore might include:

- what a student-centred approach to research-led education might be. For example what do students want in relation to research? What do students who experience research-led teaching say about the experience? What is displaced by a research-led approach and what do students think about this?
- research project/benchmarking on best practice amongst IARU partners in terms of the research-teaching nexus

⁴ See for example Ramsden, P. and Moses, I. 1992 “Associations between research and teaching in Australian higher education”, *Higher Education* 23: 273-295 who argue note “the continuing study of and intellectual curiosity about a subject is necessary for effective teaching”.

- initiating a project to build up shared resources for our students to explore key issues around the nature of research. A shared web resource of video or audio broadcasts from outstanding IARU researchers might be created. Courses that our respective universities offer on research methods would be greatly enhanced by having access to such resources.
- embedding a strong research-led focus in the IARU summer programs
- collaborative teaching of research methods courses using the web or as a global summer school? The rapidly emerging social networking capabilities of the Web 2.0 could be used to encourage dialogue/group assignments between students at our respective universities on topics such as research ethics and contrasting perspectives between disciplines and cultures on research
- a clear recognition and explanation of the ways in which different forms of teaching by active researchers can contribute to the research-teaching nexus.
- a strategy for the integration of teaching and research at the institutional and organisational levels of our universities.

Richard Baker (ANU) and Elizabeth Fallaize (Oxford)

April 3rd 2008



IARU: 28 Months Later

This paper provides an overview of IARU activity since January 2006.

1. The Global Change Research Program

In Singapore 2006 the IARU Presidents' agreed to pursue four separate research themes within a Global Change research framework; IARU partners self-nominated to be responsible for taking each project forward:

- Ageing, Longevity and Health (Copenhagen and Peking)
- Energy, Resources and Environment (UT, NUS and ETH Zurich)
- Security (Cambridge and ANU)
- Movement of People (Oxford and Berkeley)

Initially researchers from IARU partners were encouraged to participate in thematically organised workshops in order to define specific research projects.

The four original proposals are now at different stages of maturity, and are evolving in quite different ways. While it remains too early to judge ultimate success, productive discussions between IARU researchers have occurred in areas that would not have previously met, and ambitious plans are emerging. Below is a summary of activity under the 'Global Change' research framework.

1.1. Ageing, Longevity and Health

Professor Ulla Wewer from the Faculty of Health Sciences, University of Copenhagen has taken the leadership of the *Ageing, Longevity and Health Project* that has evolved with three subprojects: Health Policy Challenges of Ageing Populations, including Life Course Issues and Methods; Neurodegeneration: The Role of Oxidative Stress; and Evolutionary Medicine.

The Faculty of Health Sciences, University of Copenhagen, hosts a website related to the project, and the Faculty has also published a newsletter to increase awareness of the project among researchers and students at the IARU universities.

The *Ageing, Longevity and Health Project* also performs a number of activities directed at the general public, with the purpose of increasing public awareness of the issues covered by the *Ageing, Longevity and Health Project*. The Medical museum at the Faculty of Health Sciences, University of Copenhagen opened an exhibition called 'Oldetopia' (this exhibition concept has been offered to other IARU partners).

After the Tokyo meeting, the *Ageing, Longevity and Health Project* research teams have been engaged in a number of project related activities, e.g. workshops and preparation of draft funding applications. A project proposal has been prepared (and tabled) for endorsement at the 2008 Presidents' meeting.

1.1.1. Health Policy Challenges of Ageing Populations: Changing Needs for Health and Long-term Care

The Policy Challenges group held a two day workshop hosted by the Oxford Institute of Ageing on the 28th and 29th of January 2008. It was attended by representatives from NUS, UT, PKU, Copenhagen and Oxford. (ANU provided a brief to be included in the discussions).

The group has identified a working title for their research: Policy Challenges of the Ageing of Older Populations: Changing Needs for Health and Long-term Care. The research program would be hoping to include a US partner as well.

NUS, UT, PKU, Copenhagen, Oxford and ANU are actively involved in working towards a consensus on the research objectives. The group is not, yet, at a stage to produce a submission to an external funding body.

NUS will host the next workshop – focused on demography and epidemiology - in June 2008. Copenhagen and Oxford will prepare the draft paper on 'policy challenges'.

1.1.2. Neurodegeneration: The Role of Oxidative Stress

NUS, Yale, ANU, Oxford and UT are developing a proposal for a project to establish a mid-life bio bank in order to study ageing processes over the entire life course. A clinical oral examination will be conducted on a subsample of at least 3000 participants.

In May 2008 the University of Copenhagen will host a workshop on "Ageing -From Molecules to Population". Representatives from Yale, ANU, NUS, Oxford and UT have indicated they will attend.

1.1.3. Evolutionary Medicine

ETH Zurich, Berkeley, Cambridge, Copenhagen, Oxford and Yale are involved. The group has been focusing on activities for the international promotion of evolutionary medicine.

The Evolutionary Medicine program is planning a grant-writing workshop in Copenhagen on 10-13 November 2008.

1.2. Energy Resources and Environment

In January 2007 UT developed a proposal with NUS and ETH Zurich for IARU collaborative research under the theme of ‘Transformation toward Sustainability’, which was further refined as ‘Towards Sustainable Cities: A Comparative International Study’ (endorsed by the 2007 Senior Officers’ meeting). ANU, ETH Zurich, NUS, Copenhagen, PKU and UT confirmed their commitment.

Within this context ANU, UT and Copenhagen have developed a ‘proof of concept’ proposal collaborating on three interlinked collaborative studies; “Low Carbon Cities” (lead by UT), Food Flows (lead jointly by ANU and Copenhagen) and Land Use and Ecosystem Function (to be developed by Copenhagen and ANU) to demonstrate value of the IARU concept. This pilot is not intended to be as comprehensive as the other Global Change research projects.

Current partners involved in the ‘proof of concept’ are ANU, UT and Copenhagen (discussions are currently underway with NUS). It is proposed that other IARU partners will be invited to join the project at a later date. Individual partners participating have committed minimal funding to cover participation costs (for example salary of research assistant to work with the data collation).

1.2.1. International Symposium on Sustainability Science (ISSS)

Proposal for the IARU to establish prizes for sustainability similar to Nobel Prizes. An independent project led by Prof Olaf Kuebler, ETH Zurich, and supported by UT and NUS. ETH Zurich was trying to secure funding for the concept of the ISSS to the extent of 10 million Euros from several companies (including Volvo, HOLCIM and Bosch Corporation).

The IARU Chair has been advised by the ETH Zurich President that the ISSS project will be discontinued due to the lack of external financial commitment and support of the prize concept.

1.3. Global Security

The project proposal ‘Regional Perspectives on Global Security’ was initially developed at the workshop held at Cambridge University November 2006. The 2007 Senior Officers’ Meeting supported this proposal but agreed the project needed to be revised. As a result researchers from ANU, PKU, Copenhagen, NUS, Oxford, Berkeley, Cambridge and UT attended a recent workshop hosted by ANU (April 2, 2008). The project has been revised to include four sub-projects:

- Multidisciplinary Approaches to International Security Theory Led by Professor Ole Waever (Copenhagen)
- Human Security Led by Professor Kiichi Fujiwara (UT)
- Order-Building and Rising Powers Led by Professor William Tow (ANU)
- Asymmetrical Security Professor Led by Bilveer Singh (NUS)

The project will seek formal endorsement for the further development of the proposed Security project at the 2008 Presidents' meeting.

In 2009 Copenhagen is planning on hosting a workshop on 'Advanced Security Theory and Multidimensional Approaches to Security Studies'. The University of Tokyo also plans to host a 'Human Security' workshop.

1.4. Mobility of People

Currently there are no partners willing to take responsibility for the development of a (revised) proposal. At the Senior Officers' meeting it was suggested, as a possible way forward for this project, the sub-project on Human Security may have a synergy with one of the Security project clusters.

In the short-term the project will not progress but this does not preclude one of the IARU partners developing a new proposal at a later stage.

2. IARU Research Activities

2.1. Campus Sustainability Strategy

A discussion paper outlining various options for establishing an IARU Campus Sustainability Strategy was tabled at the 2007 Senior Officers' meeting in Tokyo. It was agreed that the ANU and Yale would coordinate the development of a proposal/paper to go to the 2008 Presidents' meeting. This has been undertaken in consultation with the other IARU members with Universities nominating senior officers to contribute to this process. The consultative process occurred over the period November 2007 - February 2008 and a document has been prepared which presents a strategy that developed from these contributions.

If the approach outlined in the above proposal is accepted - the details surrounding metrics, preparation of greenhouse inventories and setting targets will be the focus at the IARU workshop to be held in October 2008 at UC Berkeley.

2.2. IARU International Scientific Congress on Climate Change

The UN Climate Change Summit (COP15) will be held November 2009 in Copenhagen. As part of the run-up to the Summit, the University of Copenhagen is hosting from 10-12 March an IARU International Scientific Congress on Climate Change, under the heading "Climate Change: Global Risks, Challenges and Decisions". The initiative is strongly supported by the Organisers of COP-15 and a report of the main findings of the congress will be included in the official material for UN Climate Change Conference participants.

A Scientific Steering Committee (SSC) has been established and all IARU Universities have been asked to nominate members. SSC members from ANU, Oxford, Yale, Berkeley, University of Tokyo and University of Copenhagen have

been particularly active in the program planning process. A preliminary program for the congress can be found <http://climatecongress.ku.dk/about/> (a direct link/banner will also be located on the IARU website from May 1). It is proposed that all plenary speeches at the Congress be transmitted to IARU Universities.

The IARU Secretariat has been advised that in order for the congress to be a success, it is absolutely crucial that scientists from IARU Universities and countries are encouraged to participate. IARU Universities are, therefore, asked to disseminate information on the Congress through all suitable channels.

2.3. Understanding Women in universities around the globe

The initial project on benchmarking and best practices for advancing women in the academy has evolved to a research agenda, under the leadership of Yale University.

Preceding the Presidents' meeting, Yale will host a conference on "Women and Men in the Globalizing University" with all IARU partners represented. This conference will be next step of the IARU research project on Women and Higher Education and aims to build on discussions from the first meeting of this group at Cambridge University in September 2006. This colloquium will examine 1) the data collected relating to gender (e.g. faculty entry and promotion data, faculty surveys, and exit interviews) and the possibilities of an IARU data collection initiative, 2) university and governmental policy interventions to improve the representation and advancement of women in universities and possible IARU-sponsored interventions, and 3) the question of what a robust commitment to substantive equality looks like in a global research university.

3. New IARU Projects for Consideration

3.1. Engaging Younger Staff in the IARU

This is a proposal to develop a mechanism to engage younger staff in IARU activities through low cost bids to support IARU conferences and/or workshops with the aim to develop collaborative research proposals across IARU members. This program would be modelled on some aspects of the existing Cambridge – MIT Partnership.

The IARU Secretariat has developed a proposal for discussion at the 2008 Presidents' meeting.

3.2. Industrial Innovation project proposal

A program to explore approaches to the transformation of ideas and opportunities into products and services – internationally.

Cambridge in consultation with ANU, NUS and Copenhagen developed a proposal for discussion at the 2008 Presidents' meeting.

3.3. Research led teaching

2007 Senior Officer Meeting agreed to explore the relationship between teaching and research and the benefits and consequences of “research-led teaching”.

ANU and Oxford (in consultation with Copenhagen and NUS) have developed a draft activity plan to be considered at the 2008 Presidents’ meeting.

4. Education Collaboration

4.1. Global Summer Program

The GSP principles deemed fundamental to defining the GSP are as follows:

- Academically ambitious, intensive summer courses of consistently high quality, providing opportunities not available elsewhere
- Emphasis on educating future global leaders and researchers
- Institutional support for student and faculty mobility across GSP institutions
- Flexible approach to structure and content of courses, allowing institutions to use models that represent their own pedagogical philosophy

The inaugural GSP will be held over the northern summer this year. ANU, NUS, Yale, Oxford, Cambridge, Copenhagen and UT will arrange or host a program. All partners are committed to sending students.

The current challenges identified are:

- Partners unable to accept another IARU partners credit.
- Students, faculty and organizations must be supported financially to the extent that cost does not represent a deterrent in participation,

It is proposed the relevant summer school practitioners meet to review the 2008 program before this December.

4.2. IARU Student Sustainability Fellowship and Exchange

Following discussions at an IARU meeting held at Yale in November 2006, it was agreed to trial a student exchange between Sustainability Offices at ANU and Yale. The intent was to allow selected students to work in the Sustainability Offices on campus sustainability initiatives. This would provide operational experience that complements study.

The initial trial, 2007, was very successful - with 2 Yale students working at ANU and 3 ANU students completing exchanges at Yale.

After discussions at the 2007 Senior Officers’ meeting, it was agreed to expand this trial to involve other IARU members. A paper was forwarded to an IARU representative in late 2007 and Oxford has agreed to participate in the trial in 2008.

Consequently, students from ANU, Yale and Oxford will participate in sustainability exchanges during the year. There are indications that other members will want to participate in 2009.

As this program expands, the administrative demands of coordinating it will increase. A proposal outlining resource needs and funding arrangements for the exchanges will be prepared for discussion at the 2008 Senior Officers' meeting and for consideration at 2009 Presidents' meeting.

4.3. Student Exchange

4 IARU members (ANU, ETH Zurich, Copenhagen and NUS) signed an Agreement for Student Exchange in 2006.

The IARU Secretariat tabled a modified IARU Student exchange agreement for discussion at the 2007 Senior Officers' meeting which envisaged a degree of flexibility, allowing students to participate in an exchange for credit for up to 2 semesters, at postgraduate and undergraduate levels. All activities were proposed under tuition fee waiver arrangements.

The Senior Officers' discussions highlighted a series of challenges involved in such a proposal but it was suggested that the IARU Secretariat prepare a set of guiding principles to be agreed upon at the 2008 Senior Officers' meeting. To assist those discussions it may prove useful to track student flow at graduate and undergraduate level under the current exchange arrangements (both at a bilateral and IARU level).

4.4. Teaching Alliance

In response to discussions at the 2007 Senior Officer meetings, a pilot project, for a teaching alliance, has been established between ANU and NUS (there has also been discussion with UT). This project is based around sharing web-based modules of teaching resources (includes lectures and supporting learning material) that ANU and NUS lecturers draw upon to support existing first year sustainability related courses. An ANU tutor also spent the first four weeks of the NUS semester in Singapore before returning to the ANU as lead tutor in the ANU course.

On the basis of these resources the students in the two countries have collaborated online in small groups sharing responses to this course material. This has provided the students with unique opportunities to form cross cultural perspectives on environmental issues.

At the time of drafting NUS provided their student survey data which indicated that 66% of NUS class strongly agreeing or agreeing with the statement "The collaboration activity enhanced the educational experience of the module". It was also of interest that 78% of NUS students agreed that "Adding other universities into the collaboration would be a good idea".

ANU and NUS hope that other partners will join in the sustainability collaboration in 2009. The same model of sharing course material could also be adopted by other subject areas.

5. IARU Related Activities

5.1. Careers Professional Development Network project

NUS and ANU have proposed the establishment of a network of Career Development Professionals. With the aim to share knowledge and best practices among Careers practitioners from IARU institutions, including information on international employment trends and cultural differences.

Proposal was supported by the 2007 IARU Senior Officers meeting. NUS, ANU, Cambridge, Oxford, PKU, Yale, Berkeley and ETH Zurich have indicated an interest to participate in a 'Global Students Global Careers Forum' in July 2008 hosted by NUS.

5.2. Early career research opportunities

5.2.1. Sustainable Water Management at the Local, Regional and Global Scales workshop

In March 2007, ANU hosted a 10 day workshop, for late PhD and early post-doctorate students where all IARU partners were represented. This workshop was linked to the IARU *Energy, Resources & Environment research theme*. All IARU partners sent students.

5.2.2. Intensive Program on Sustainability (IPoS)

UT initiated a short, intensive, cross-cultural and trans-disciplinary course on sustainability in Furano, Hokkaido, Japan. All IARU partners were invited to send graduate students (Masters or Doctoral) and senior undergraduate students (not aware of which universities participated). Sending institutions were asked to assist with the costs of airfares for the participants however UT covered all other costs.

5.2.3. Nissan Workshop in IPoS 2007

A follow up workshop in December for IPoS participants held in Sajima Marina, Yokosuka. . Sending institutions were asked to assist with the costs of airfares for the participants however UT covered all other costs.

5.3. Office Facilities at the Yale Campus

All IARU partners were offered the use office facilities on the Yale University campus in New Haven, to promote their own interests, forge networks and advance research cooperation.

To date ANU, UT and Copenhagen have established offices/laboratories on the Yale University campus.

6. Previous Proposals

6.1. Summer internships:

In the Presidents' initial discussions in 2006 it was proposed the IARU explore a corporation or government agency providing an internship opportunity for a cohort of students from all IARU partners.

In 2006 Berkeley undertook to approach companies such as Intel and Cisco to gauge interest.

It should be noted that at the proposed July workshop for the careers network a session has been dedicated for discussions about internships. It is possible that this activity may gain momentum from these discussions.

6.2. PhD experience

The main focus of this project has been about finding ways to bring research students from the IARU partners together. NUS and Copenhagen hosted respective workshops in 2006 - the latter was attended by Education Deans (or equivalent) from ANU, NUS, Berkeley, Yale, Oxford, Cambridge, ETH Zurich and Copenhagen.

The group tabled a paper at the 2007 Presidents' meeting identifying the areas of continued interest as:

- Involvement of graduate students in IARU activities through annual graduate research conferences in specific research areas hosted in turn by IARU members.
- Develop a collaborative project for interested universities on various aspects of PhD education (for example exploring PhD completion rates and duration).
- Develop graduate student exchange for interested universities

The IARU Secretariat is not aware of any other developments since discussions at the 2007 Presidents' meeting.

6.3. Undergraduate education

A focus of this project has been about finding ways to involve undergraduates in the IARU research activities and how individual institutions can learn from each other. Copenhagen hosted a workshop in 2006 that was attended by Education Deans (or equivalent) from ANU, NUS, Berkeley, Yale, Cambridge, ETH Zurich and Copenhagen.

The group tabled a paper at the 2007 Presidents' meeting identifying the areas of continued interest as:

- The recognition of teaching and supervision in research-intensive universities. The group proposed a workshop be held at the PVC/DVC level for further discussions around this area of interest.

- Collaboration to develop courses or shared web-based modules of teaching resources (includes lectures and supporting learning material).
- Involving students in IARU activities

The areas of interest tabled at the 2007 Presidents' meeting did not get traction.

6.4. Benchmarking

At the Presidents meeting in 2006, it was agreed that benchmarking should be pursued as one of the activities of the IARU. Issues identified by the IARU secretariat in consultation with all members (in order of most to least preferred) were:

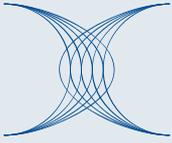
- Internationalisation
- Measuring research quality
- University Planning
- International Admissions
- Student Services

The IARU Secretariat has not initiated work on collecting data on these issues, as it was judged at the 2006 Senior Officer meeting that the level of activity at member universities was already substantial.

6.5. Staff Exchanges/staff shadowing

Initially one of the IARU objectives was to encourage exchange of academic and general staff between member universities.

To date there has been some activity (IARU Secretariat is aware of movement between ETH Zurich/ANU, ANU/ UT and ANU/PKU) but it has proven easier for IARU partners to arrange bilateral short stays which are non-reciprocated.



IARU membership

To: Presidents of IARU institutions
From: Richard C. Levin
Date: April 14, 2008
Re: IARU membership

At the founding of IARU, we agreed that membership expansion would be a topic for consideration in 2008. As you know, when Yale joined, I expressed concern with the geographic “gaps” in our membership if we are going to claim to be an international alliance. In short, I have remained uncomfortable with leaving out large swaths of the world, particularly Africa and Latin America.

I had been contemplating nominating this spring two new members for IARU, one from Africa and one from Latin America. Since many of us are involved in the World Economic Forum, however, we will have an opportunity to engage with African universities next November through that association.

I do hope that we can move forward to invite Tec de Monterrey to join us. Tec is one of the stronger institutions in Latin America and I believe one of the most advanced universities anywhere in terms of innovative use of digitization and online dissemination. Those of us who meet annually with Rafael Rangel know that he is a lively contributor to any discussion. Finally, when a decision is made, Yale’s experience with Tec is that the execution and follow up are exemplary.

I continue to support keeping IARU small. Accordingly, I am not eager to add institutions in unrepresented countries in regions in which we already have members. I hope nonetheless that we can move to add Tec de Monterrey, so we do not continue to have so many parts of the world without IARU representation.



Proposal for Project-based Graduate Student Exchanges

As a unique alliance with abundant educational resources, the IARU provides staff and students with valuable opportunities to engage in research or collaborative projects from a broad-range of academic and vocational fields. So far, research-based co-operation has proved to be a great success in relation to the sharing of knowledge. The co-operation achieved through the alliance has enhanced our professional and academic relationships, greatly contributing towards future academic and cross-cultural development. An underlying dynamic for this cooperation is the growing desire and competitive research ability of students from member institutions that are seeking to work within a diverse academic environment.

Hence, Peking University proposes project-based graduate student exchanges under the umbrella of IARU:

1. As the IARU has endorsed several projects, such as Ageing, Longevity and Health, Climate Change and Security, we believe that not only staff exchanges and workshops are a positive initiative, but that graduate student exchanges should also be further encouraged in these fields. Ideally, graduate students from IARU members will stay on one campus of a member institution for a certain period that will allow for in-depth discussions and exchange of ideas amongst students.

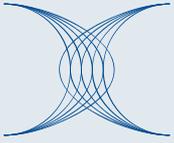
One faculty member from the host university will provide supervision for the students. We realize the difficulties for one faculty member to supervise students from each of the 10 member universities, so instead we would like to initiate graduate exchanges with students from 2 or 3 universities, instead of all 10 at one time. Additional positions could be offered to other members should sufficient resources present themselves.

2. Since 2007, Peking University annually receives 300 scholarships from the China Scholarship Council that support PKU graduate students and allow them to study abroad. The scholarship covers selected students' living expenses and round-trip airfares. Peking University would like to set a fixed quota of these scholarships for PKU graduate students who would like to participate in IARU research projects and study-abroad programs.

Through such a joint research and exchange program, it would effectively promote collaborative, research intensive-based exchange for students studying at an advanced standard. We sincerely hope that exchanges of this nature will underline our commitment to research and co-operation with our partner institutions.

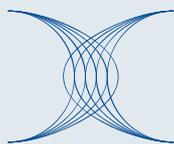
If any IARU member university would be interested in receiving PKU graduate students, please feel free to contact Ms Manli Zhou for more information:

Email: mlzhou@pku.edu.cn Fax: +86-10-6751240 Tel: +86-10-62756326



INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

Other items of interest



IARU workshop on Social and Health Challenges of Population Ageing

Hosted by NUS

This workshop will bring together researchers from the IARU network for one and a half days to present and discuss the social and health challenges of population ageing. The focus will be on the changing needs for health and long term care in countries differing in their levels of economic development, roles of the family and social policies. This workshop is a step towards development of collaborative research among the IARU network, which will focus on the increasing probabilities of survival in later life and the associated ageing of the elderly population, and be guided by four analytical themes: (i) explaining the impact of differences and inequalities, e.g., on patterns of long term care, utilization and outcomes of health care services, (ii) understanding ideology and culture as drivers/mediators of adjustment, (iii) exploring the adjustment of formal and informal health care systems to changing demands and needs and (iv) exploring and understanding individual engagement.

The key emphasis of the present workshop will be to elaborate on the changing demographic and epidemiological context in which the social and health challenges of ageing are arising in different countries, and the methodological issues arising in the conduct of research into this changing context. IARU representatives will present such research from their respective countries, namely China, Denmark, Japan, Singapore, Australia, the United Kingdom, and the United States. In addition, research on evolving health care needs of the elderly resulting from aging and morbidity trends in Indonesia will be presented as an example of a developing country undergoing rapid population aging.

The short term goal of this workshop is to strengthen the IARU network of researchers committed to studying the health policy challenges of aging populations. The medium term goal is to develop a research proposal that involves one or several of these key themes:

- Health inequalities (ethnicity; gender; class; geographical)
- Family care - changes in family structures and the capacity of the family to provide informal care and support for older people
- Life course analysis
- Demographic projections
- Health behaviour/ individual & household production of health
- Changing priorities in health care provision
- Emerging forms of sociality
- The importance of 'ideology' (cultural beliefs and norms)
- Analysis & assessment of policy implications of demographic change



Proposed Meeting of Career Development Professionals

Background

At a recent IARU meeting, it was noted that through the universities' career centres, students could benefit from more information to equip them for careers that are becoming increasingly global. Similarly, employers could also be assisted in their graduate recruitment across the world through inter-agency referrals. A meeting of career development professionals of these universities was therefore proposed. The meeting will discuss areas of collaboration so as to facilitate global career development and employment needs of students and employers.

Objectives of Meeting

1. To establish among the IARU universities, a network of Career Development Professionals.
2. To share knowledge and best practices among the Career Development Professionals, including information on international employment trends and cultural differences
3. To discuss areas of collaboration to enhance the efficacy of this network of Career Development Professionals.

Proposed Programme

Dates: Wed, 23 July to Thurs, 24 July 2008

Venue: National University of Singapore (NUS), Singapore

Tuesday, 22 July 2008

7.00 pm **Dinner Reception**

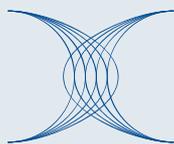
Wednesday, 23 July 2008

9.00 am **Welcome**
Vice President (University & Global Relations) NUS,
Prof Lily Kong

- 9.30 am Tea Break
- 10.00 am **Panel Discussion:**
Global Career Services Delivery –An International Snapshot
(Sharing of ideas/best practices among the Career Development Professionals)
- 12 nn Lunch
- 1.00 pm **Panel Discussion (cont'd):**
Global Career Services Delivery –An International Snapshot
(Sharing of ideas/best practices among the Career Development Professionals)
- 2:15 pm Break
- 2.30 pm **Guest Speaker:**
Understanding Cultural Differences in the Workplace
- 3.30 pm Tea Break
- 4.00 pm **Visit:**
NUS Career Centre, NUS Museum
- 6.00 pm **Dinner on NUS campus (KR 50 Restaurant)**

Thursday, 24 July , 2008

- 9.00 am **Forum:**
Global Recruitment Trends – Employers' Perspectives (I)
- 10.30 am Tea Break
- 11.00 am **Forum:**
Global Recruitment Trends - Employers' Perspectives (II)
- 12 nn Lunch
- 1.00 pm **Round Table Discussion:**
Working Together - Common Goals & Objectives
(Discussion on areas of collaboration, eg internships, production of student resource materials, etc)
- 3.00 pm Tea Break
- 3.30 pm **Round Table Discussion:**
Going Forward
(Identification of future plans)
- 5.00 pm **Summary and Concluding Remarks**
- 5.30 pm End of Meeting



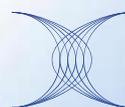
INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

FACULTY OF HEALTH SCIENCES
UNIVERSITY OF COPENHAGEN



IARU News

1 / January 2008



INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

IARU News

Membership of the International Alliance of Research Universities (IARU) has been a milestone for the University of Copenhagen. This newsletter, published by the Faculty of Health Sciences, provides basic information on the Alliance, its purpose and goals and its collaborative activities within research and education. It will also focus specifically on the IARU research project *Ageing, Longevity and Health*, coordinated by the Faculty of Health Sciences.

The IARU Alliance

The International Alliance of Research Universities (IARU) was founded in early 2006 when the presidents of ten of the worlds leading research universities signed a cooperation agreement known as the *Memorandum of Understanding*.

The member universities are: the Australian National University; ETH Zurich; the National University of Singapore; Peking University; the University of California, Berkeley; University of Cambridge; University of Copenhagen; University of Oxford; the University of Tokyo and Yale University.

The IARU Secretariat is based at the Australian National University in Canberra (ANU) and IARU itself is chaired by Vice-Chancellor, Professor Ian Chubb of ANU.

Vision and Goals

The vision of the Alliance is to raise international cooperation between universities to a new level by drawing together a select group of research-intensive universities that have similar values and share a global vision and commitment to educating future world leaders. The Alliance should add value by providing opportunities for international research, teaching and learning that would not otherwise arise, allowing member universities to achieve objectives they would be unable to achieve on their own.

The purpose of the Alliance is to give both researchers and students from member universities the opportunity to participate in globally oriented research and educational programmes, as well as a forum for lobbying for research and for research-based education globally.

More specifically, the Alliance encourages and supports activities such as: joint research programmes, summer internships, summer schools, key conferences with participation/con-

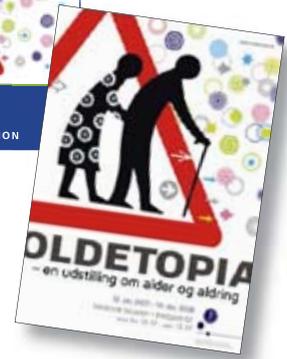
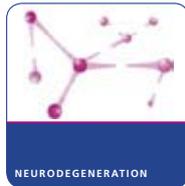
tribution from Alliance academics, student exchange at undergraduate and postgraduate level, development of joint/dual degree arrangements, and arrangements at each university to support faculty exchange.

The Global Change Research Programme

In early 2006, the Alliance established a framework for a joint research programme entitled the *Global Change Programme*. During 2006-2007, IARU researchers participated in thematically organised workshops in order to define research themes within this framework, as well as identifying how to develop these ideas further within specific research projects. As a result of this process, a number of detailed research project proposals have been elaborated and the IARU universities have decided to focus on the following projects:

- Global Security
- Ageing, Longevity and Health
- Energy, Resources and Environment
- Women in Universities

One of these projects – *Ageing, Longevity and Health* – was formally accepted by all member universities at a meeting in Tokyo in September 2007, where it was presented by Dean Ulla Wewer from the University of Copenhagen. The other projects are expected to receive approval during 2008. Once the projects are accepted, the next step is to prepare funding strategies so as to be able to approach the large national and international funding agencies. The expectation is that projects carrying the IARU brand will have a good chance of being funded by wealthy funding agencies, nationally as well as internationally.



The Ageing, Longevity and Health project embraces three subprojects and an exhibition.

The Ageing, Longevity and Health Research Project

The *Ageing, Longevity and Health* project is coordinated by the Faculty of Health Sciences, University of Copenhagen. Researchers from all ten IARU partner universities are represented in this project, which embraces three subprojects:

- Health Policy Challenges of Ageing Populations, including Life Course Issues and Methods
- Neurodegeneration: The Role of Oxidative Stress
- Evolutionary Medicine

Further information on the project and on researchers involved in each of the three subprojects is available on the website <http://ageing.iaru.ku.dk/>

As the *Ageing* project has already been officially approved by the Alliance universities, the Faculty of Health Sciences has started to prepare a fundraising strategy for approaching the national funds. At the same time, each partner university can and is urged to apply for national funding on basis of the approved *Ageing* project outline, using the IARU brand to further the project. With regard to international funding, Yale University will be seeking funding through additional sources.

Future Workshops

The research teams on the *Ageing, Longevity and Health* project are engaged in a number of workshops. Within the field of *Evolutionary Medicine*, three workshops are planned: One in Copenhagen in October 2008, another in Cambridge in connection with the 200th anniversary of the birth of Darwin and finally, a workshop at Yale in 2010.

Within the field of *Health Policy Challenges*, a workshop is to be held in January 2008 at the Oxford Institute of Ageing. Researchers investigating Neurodegeneration are planning a two day workshop in Denmark in 2008.

Public Engagement with Medical Science – the “Oldetopia” Exhibition

The effects of preventive medicine are dependent on the communication of research results to the public at large. To address the need for greater public awareness in the area of *Ageing, Longevity and Health*, Medical Museion at the Faculty of Health Sciences has produced an exhibition called “Oldetopia”, which opened in Copenhagen in October 2007. After closing, the exhibition concept will be offered to other universities in the Alliance. The exhibition provides a cultural and historical perspective on current research into age and ageing, and comprises four interdisciplinary subthemes: The Age of Life, The Long Life, Signs of Age, and Eternally Young or Too Old? The exhibition is supplemented with a richly illustrated catalogue in English and Danish, as well as a website: <http://www.museion.ku.dk/udstillinger/saerudstillinger/oldetopia.aspx>

Educational Collaboration

So far, the Alliance has largely focused on the IARU research projects. However, the IARU Presidents have now decided to expand their activities to include student programmes and, in this way, bring IARU initiatives in global education to attention.

Global Summer Programme

As of this year, IARU will launch the Global Summer Programme (GSP), which is to be the flagship of IARU’s educational activities. At the 2007 IARU meeting in Tokyo, it was agreed that there should be greater flexibility within the existing summer programs, so as to remove unnecessary constraints, expand opportunities for students, and allow staff to work together and simplify management processes. The GSP should be seen as an umbrella, under which a wide variety of courses will be made available to students.

The idea is to identify the GSP with the exclusive IARU brand and it is therefore important that the GSP is unique and offers courses of top quality. The IARU Secretariat will create a central Website, and a meeting will be set up in Cambridge in February 2008 to discuss the future of the GSP and the 2008 offerings. Yale University has taken the lead in the development of the GSP.

Educational Opportunities arising from IARU

Research Projects

The Alliance has also decided to focus on the relationship between teaching and research and the benefits and consequences of “research-led teaching”. Graduate students, including PhDs, should be more involved in the IARU research projects. Accordingly, representatives from a number of member universities – including the University of Copenhagen – are developing a draft activity plan to be considered by the IARU presidents at their annual meeting in 2008. Activities could include a workshop at Berkeley in Autumn 2008.

Educational Initiatives within Sustainability

Another IARU focal point is Sustainability. To demonstrate the educational possibilities within this area, a pilot project will be set up between Australian National University, the National University of Singapore as well as perhaps Tokyo University. Each member university is encouraged to identify researchers who might be interested in participating.

The Alliance has also agreed to establish an exchange programme between sustainability offices at IARU institutions (*Interns for Sustainable Campuses*). At the University of Copenhagen this initiative is coordinated by campus manager Hans Halvorsen. The programme is aimed at staff as well as students, and a paper detailing the program proposal and its financial implications will be prepared for consideration at the President’s annual meeting in 2008.

Other IARU activities

Campus Sustainability

Another issue the Alliance will address in this area is the identification of appropriate sustainability measures (metrics). IARU will develop a sustainability index based on models developed by Yale University and the University of Cambridge. This will recognise that member universities are at different stages in

the development of campus sustainability measures. This programme does not commit the member universities to immediate action, but a flexible approach would be followed, with each university evolving its own action plan. The Australian National University and Yale University will circulate a survey for completion by all IARU members in January 2008.

Office Facilities at the Yale Campus

Owing to a generous offer from Yale University, all IARU partners can use office facilities at Yale to promote their own interests, forge networks and advance research cooperation, e.g. through the posting of academics and/or senior staff for a shorter or longer period of time. The Australian National University has already taken Yale up on this offer and has posted senior managers to Yale to learn about their fundraising and endowment strategies. It has also been suggested that the Yale office facilities could be used to promote international careers, enabling the universities to learn from each others career offices. The University of Copenhagen welcomes the opportunity to take advantage of the office facilities at Yale University, and in 2008 will concentrate on education.

Scientific Conference on Climate Change

As the UN Climate Summit is to be held in Copenhagen in 2009, the University of Copenhagen has been entrusted with the task of convening a planning committee for scientists. The committee will organise a conference in March 2009, in preparation for the Climate Summit. The presidents of IARU universities will form the steering committee, while researchers from IARU will sit on the planning committee. Researchers from all over the world are expected to participate in the conference, preparing their input for the political decision makers.

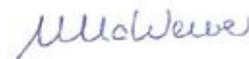
Building Research Capability

The IARU secretariat is drafting a proposal to support the development of research environments at selected universities in developing countries. The draft is to be put forward for consideration at the presidents’ annual meeting in April 2008.

Further information on IARU is available on the Websites:

- www.iaruni.org – official IARU website, including links to member universities
- www.ku.dk/iaru – IARU website at the University of Copenhagen (in Danish only).

With best regards,



Ulla Wewer, Professor, DM.Sci
Dean of the Faculty of Health Sciences
University of Copenhagen, Denmark



UNIVERSITY OF COPENHAGEN



MEMO

25 FEBRUARY 2008

Re: Diversity at the University – More Women in Research and Management

Introduction

At the meeting on 25 september 2007, the University Board commissioned the Rectorate to prepare an action plan with a view to increasing the number of women researchers at the University. After the Board's evaluation, the plan will be incorporated into the Strategic Action Plan to be presented to the Board in September 2008. The plan will also figure on the 2009 Budget (the Board's Strategic Pool).

The action plan has been discussed by the University Management Team (Rectorate, University Director and the 8 Faculty Deans) on several occasions. On 22 February 2008, "women in research" was the subject of a symposium held in the Ceremonial Hall and attended by University employees and students.

Overall, the Rectorate is of the opinion that diversity should be strengthened in all areas of the University. This also applies to the student body, since certain educations are characterised by a large majority of either male or female students.

The Situation at the University in a Wider Context

Most universities in Denmark and abroad have an uneven gender distribution. The higher up the research career ladder people move, the more pronounced the bias becomes (see Box 1).

Box 1: Where are the women? Explanations for the gender bias¹.

- Women are more hesitant to apply
- Uncertain career structure and/or uncertain future prospects
- The working environment at universities is often non-inclusive, i.e. dominated by one gender
- Women have a stronger desire to work with others
- In many cases, jobs are only advertised in narrow forums
- Women have an internationalisation backlog

In an age when competition for research talent is intensified by factors such as internationalisation, the ambition of attracting and retaining more women researchers has become a key focus area – for governments, universities and university alliances. For example, in 2005, the Danish government established a think tank to consider the issue², while the US Ivy League universities joined forces in 2001 to bring this problem into focus.³

In 2006, the heads of the universities in the International Alliance of Research Universities (IARU) decided to make this topic one of the interdisciplinary areas in which these universities share best practice and together develop new initiatives. The name of the project is "Understanding Women in Universities around the Globe".

Besides the need for developing the entire talent pool, the IARU project is based on a shared belief that increased diversity creates a more inclusive and innovative working environment. In a Danish context, this is supported by for example a report published by the Danish Agency for Science,

¹ See e.g.: "Ph.d.uddannedes karrierevalg og -veje" (Career Choices and Paths of PhD Graduates), Kamma Langberg, Svend Ladefoged, Ebbe Krogh Graversen, The Danish Centre for Studies in Research and Research Policy, 2007.

² Alle talenter i spil (All talents in Play), Ministry of Science, Technology and Innovation and Ministry of Gender Equality, 2005.

³ Statement by Ivy League university presidents in 2001: "Institutions of higher education have an obligation, both for themselves and for the nation, to fully develop and utilize all the creative talent available ... We recognize that barriers still exist for women faculty...

To analyze the salaries and proportion of other university resources provided to women faculty,

To work toward a faculty that reflects the diversity of the student body,

...

To recognize that this challenge will require significant review of, and potentially significant change in, the procedures within each university, and within the scientific and engineering establishment as a whole".

Technology and Innovation, which shows that enterprises with an even gender balance are twice as innovative as other enterprises.⁴

Finally, universities, being one of the pillars on which society is built, have a special obligation to reflect the gender distribution in their surroundings. Thus, an uneven gender (or age) distribution may impact the areas researched and, especially, the long-term recruitment base within a scientific area.

Analyses show that Danish universities (including University of Copenhagen) by no means excel at attracting and retaining women research talent. In spite of a high percentage of women among students, Denmark is in the lower third in the most recent EU statistics. A similar negative pattern is seen in an IARU context. Among the IARU universities, University of Copenhagen, with 29% women among its research staff, is somewhere in the middle. The IARU figures vary between 5% and 45%.⁵

An overview of the number of professors and associate professors at the University of Copenhagen (see Table 1) illustrates that, in spite of the Performance Contract and various activities at faculty level, the gender distribution is not improving. The same figures apply to the national level.

Table 1

Professors, associate professors, assistant professors, post docs – overall gender distribution at the University of Copenhagen 2005-2007

PROFESSORS

	Number		Percentage		
	Women	Men	Women	Men	
2005	67	396	14.5	85.5	%
2006	67	427	13.6	86.4	%
2007	68	433	13.6	86.4	%

Notes: Including clinical professors. Excluding visiting professors.

ASSOCIATE PROFESSORS

	Number		Percentage		
	Women	Men	Women	Men	
2005	442	1065	29.3	70.7	%
2006	443	1096	28.8	71.2	%
2007	465	1100	29.7	70.3	%

Notes: Including clinical associate professors. Excluding external associate professors.

⁴ "Innovation og Mangfoldighed" (Innovation and Diversity), report from the Danish Agency for Science, Technology and Innovation, October 2007.

⁵ The extremes are the University of Tokyo (5% women researchers) and Yale University (45% women researchers), respectively.

ASSISTANT PROFESSORS

	Number		Percentage		
	Women	Men	Women	Men	
2005	173	223	43.7	56.3	%
2006	133	153	46.5	53.5	%
2007	107	108	49.8	50.2	%

Notes: The number of assistant professors is falling steadily as they are to a large extent replaced by post docs.

POST DOCS

	Number		Percentage		
	Women	Men	Women	Men	
2005	77	97	44.3	55.7	%
2006	139	189	42.4	57.6	%
2007	186	231	44.6	55.4	%

Notes: The number of post docs is increasing as they replace assistant professors. For post docs and assistant professors taken as one, women account for 44% in 2005, 44% in 2006 and 46% in 2007.

In the period 1 January 2006 to 31 December 2007, only 14.9% of newly appointed professors were women (see Table 2). The underlying figures show that only the Faculty of Health Science has appointed women professors during this period.

Table 2

Newly appointed professors and associate professors at the University of Copenhagen (total) in the period 2006-2007

	Numbers		Percentage		
	Women	Men	Women	Men	
Professors	20	114	14.9	85.1	%
Associate professors	114	228	33.3	66.7	%

Naturally, there are considerable variations between the faculties and especially the departments. Overall, the uneven distribution, however, constitutes a general problem for the University – a problem that will not solve itself. On the contrary, preliminary surveys indicate that the number of women researchers will decline further in the coming years on account of the age distribution. In other words, an extra effort is required simply to retain the status quo.

Experiences from other universities, the business sector etc. show that there is no "quick fix" or "silver bullet" for solving the problem. Visible results require the will to implement a long-term strategy – with many different

points of action, ranging from incentives for women to apply for professorships to updated HR and family policies⁶ to increased awareness that the University in its external activities (Annual Commemoration, honorary doctorates, Day of Research, etc.) should present itself as a workplace with role models for both genders.

Many of these initiatives need to be implemented at faculty and department level, and it is going to be a long haul. To speed up the process of increasing the number of women researchers, and on the basis of a catalogue of ideas presented by a specially appointed task force (see Box 3), the Rectorate has prepared the "3-point plan" described below as a supplement to the local initiatives.

Box 3: Task force on women in research

Birgitte Nauntofte (Chair), Vice-Dean, Professor, Faculty of Health Sciences; Anja Andersen, associate professor, Niels Bohr Institute, Faculty of Science; Sven Frøkjær, Dean, Professor, Faculty of Pharmaceutical Sciences Hanne Foss Hansen, Professor, Department of Political Science, Faculty of Social Sciences; Bente Rosenbeck, associate professor, Department of Scandinavian Studies and Linguistics, Faculty of Humanities; Niels Wendelboe, Vice-Director for HR and Organisational Development. Ingrid Skovsmose has acted as academic secretary to the task force.

The task force was set up by Rector in September 2007. Two meetings have been held, both in October 2007, and the task force has presented its recommendations (report) to the Management Team. The members of the task force have worked with diversity for a number of years and have prepared various analyses and proposals for action to address the gender issue in university employment. The task force thus builds on the experiences of its members regarding barriers etc.

In its work, the task force has included statistics of the gender distribution of students and employed researchers at the University, including assistant professors/post docs, associate professors and professors.

The full report from the task force is appended as Annex 1 (hereinafter "TF")

Besides the catalogue of ideas, the Rectorate has drawn on the experience of business enterprises⁷ and other universities. A recurring theme is that diversity initiatives must not be "silo" solutions, but must be linked to the overall objectives and principles of the enterprise.

⁶ Diversity and gender equality have just been included among the core principles of the University's Human Resources Policy (see <http://personalepolitik.ku.dk/>).

⁷ For example, the issue has been discussed by the University's Competence Panel on the basis of a speech by Henriette Fenger Ellekrog, formerly TDC, now SAS. In addition, Lars Mikkelsen-Jensen, CEO of IBM Danmark A/S, participated in the University's symposium on 22 February 2008.

The proposal from the Rectorate should therefore be seen in the light of the Strategy *Destination 2012* target that the University should become "*a highly esteemed university, and one of the absolute top universities in Europe*". This means that the University must substantially improve its ability to (also) realise the potential of women research talents – without compromising the fundamental principles of free competition and quality of research.

Therefore, the essence of the 3-point plan is *not* that women should be favoured as applicants and offered positions in preference to more qualified male applicants. The aim is to significantly increase the number of qualified women *applicants*.

More specifically, the 3-point plan should ensure that the best talents – of both genders – actually make it to the application stage. Surveys in Denmark show that many university positions are filled by men – for the simple reason that there were no women applicants. Only one in four university positions sees men and women competing directly against each other.⁸ Since most countries in Europe have a considerably higher ratio of women professors, the underlying assumption is that there are many qualified women in Denmark who have not had the opportunity to apply for professorships. In other words, the University of Copenhagen (like other universities in Denmark) is not realising the full researcher potential.

More women applicants should be attracted by

- a) *strengthening* the incentive for managers to identify and develop women talents,
- b) *boosting* the internationalisation of women, and
- c) *motivating* women to apply for researcher and manager positions

More Women in Research and Management at the University of Copenhagen – 3-point plan:

3-point plan (2008-2013):

1. Financial Incentives for Faculties/Departments

The tables show that the University of Copenhagen (like other universities) is faced with a special challenge in relation to the step from associate professor to professor. Against that background, it is proposed that increasing the number of women professors is the first point of the 3-point plan. Since the plan should run for five years, this will also have positive spill-over effects at assistant professor and associate professor level. Faculties/departments can, so to speak, put women in line for professorships.

⁸ Alle Talenter i Spil (All talents in Play), Ministry of Science, Technology and Innovation and Ministry of Gender Equality, 2005, p. 9.

Rather than specifically reserving positions for women, the University wishes to reward faculties that are able to identify and employ qualified women as professors. Two types of rewards are proposed:

a) The University introduces a general *reward principle*, whereby appointment of women professors by a faculty releases an extra professorship (for a man or woman). The extra professorship (for the faculty), which is funded via a central pool for a period of five years, is granted in the following year. The model takes into account the varying sizes of the faculties (see Box 3; TF, p. 9).

Box 4: Reward model in practice

Faculty of Life Sciences, Faculty of Science, and Faculty of Health Sciences:

3-1 – one extra professorship for appointing three woman professors

Faculty of Humanities and Faculty of Social Sciences:

2-1 – one extra professorship for appointing two woman professors

Faculty of Theology, Faculty of Law and Faculty of Pharmaceutical Sciences:

1-1 – one extra professorship for appointing one woman professor

b) The University sets up *a central bonus pool*, so that faculties, increasing the *ratio* of newly appointed women professors by 5 percentage points compared with the period 1 January 2006 to 31 December 2007, receive a bonus. The Faculty of Life Sciences, the Faculty of Health Sciences and the Faculty of Science receive DKK 3 million each; The Faculty of Humanities and the Faculty of Social Sciences DKK 2 million each; and the Faculty of Theology, the Faculty of Law and the Faculty of Pharmaceutical Sciences DKK 1 million each after the end of 2009.

Should a faculty so wish, it may accelerate payments from the bonus pool; however, if the anticipated increase in the appointment ratio (i.e. 5 percentage points) has not been realised by the end of 2009, the funds must be paid back.

2. Internationalisation Scholarships

The second point of the plan is aimed at young researchers (post docs, assistant professors and associate professors with maximum 3 years' seniority) of the underrepresented gender. In a research environment where internationalisation plays an ever greater role, it is increasingly important for women researchers to build international networks early in their careers. Consequently, it is recommended that

16 internationalisation scholarships are established, equivalent to approx. DKK 12 million p.a. for 5 years. It is the idea that these scholarships should be used for sojourns abroad for 6-12

months (full salary and part of the travel costs). Full financing of a 2-year post doc course is also acceptable. The scholarships are to be distributed among the faculties within areas where the underrepresented gender constitutes 40% or less, meaning that every year the Faculty of Life Sciences, the Faculty of Science and the Faculty of Social Sciences can award 3 scholarships each, the Faculty of Humanities and the Faculty of Social Sciences 2 each, and the Faculty of Theology, the Faculty of Law and the Faculty of Pharmaceutical Sciences 1 each. (TF, p. 10).

3. Talent and Leadership Development

The third point concerns women's motivation to pursue a research career (to professor level) – or a university management career (Head of Department, Dean, Head of Faculty, etc.). The latter, that is a better gender distribution at management level, will increase the number of role models and contribute to a more inclusive working environment that appeals to both genders:

- a) An *interdisciplinary mentor programme* is established for women post docs/assistant professors (TF, p. 10). The programme is to be developed by the HR & Organisational Development Division.
- b) The University reserves a *central development pool* of DKK 2 million in 2009, from which faculties/departments can apply for funding for talent development in relation to the underrepresented gender
- c) The University (HR & Organisation Development) establishes *leadership development programmes* for potential women applicants for positions as Head of Department, Dean, Head of Faculty, etc. (TF. pp. 9-10).

In addition, the need for a University Maternity Fund will be analysed.

Follow-up

As part of the Board's Strategic Action Plan, the HR & Organisational Development Division will follow up on developments in the area, starting at the end of 2009. The faculties will prepare overall action plans for the area. In addition, the HR & Organisational Development Division will have meetings with each faculty with a view to following up on the initiatives launched by the faculty and discussing how progress can be made, including any further measures to be taken.

Timeline – and Implementation

The 3-point plan is to be implemented over a 5-year horizon from its adoption by the Board. Points 1a and 1b can be initiated immediately as positions can be advertised from e.g. May 2008, probably with a budgetary effect from the end of 2008. Professors appointed from 1 January 2008 are included in the assessment of whether faculties have met their targets under

points 1a and 1b. Point 2 is implemented from 2009, as no funding has been provided for 2008. Point 3 is implemented from 2008. (In connection with the Q2 budget review it might be considered whether any amendments are to be made to enable the appointment of more professors in 2008).

On the basis of a status memo from HR & Organisational Development, the University's Management Team will discuss the issue annually within the 5-year period.

The results will be assessed after two years. If they prove to be unsatisfactory, the faculty funding model should be reconsidered.

Besides these activities, the University still plans to participate actively in IARU activities.

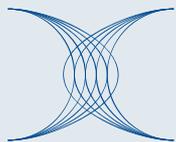
Exemption from the Gender Equality Act/Act on Equal Treatment

The University must apply for an exemption from the Gender Equality Act since the 3-point plan runs for 5 years, and, moreover, most of the initiatives have not been tried out at universities in Denmark.⁹

It should be emphasised, however, that the plan complies with the charter prepared by the Ministry of Gender Equality in cooperation with 10 private and public-sector enterprises, including the University of Southern Denmark (see Box 5). The charter will be published at the end of March.

The background for the charter is that the ratio of women among business managers, professors, etc. has not changed significantly in recent years. This has intensified pressure to adopt e.g. the Norwegian quota model. The charter takes a middle course: the Danish government does not wish to impose quotas; on the other hand, it encourages business enterprises and universities to set their own ambitious targets – using a shared "toolbox". Once the charter has been officially adopted, the University will be encouraged to sign it.

⁹ Like the University of Copenhagen, other Danish universities have intensified their diversity activities. For example, the University of Aarhus now advertises positions to a broader target group, and both genders are represented in appointment committees. Aalborg has set written targets for increasing the number of women in its University Performance Contract. The University of Southern Denmark has decided to increase the ratio of women among associate professors and professors by 2% before the end of 2008.



INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

Outcomes of previous IARU meetings



Outcomes of Second IARU Presidents' Meeting in Canberra on 28-29 March 2007

Agenda item 2.1 Discussion of IARU Global Change projects

Agenda item 2.2 General discussion of IARU research directions in context of Global Change

It was agreed to proceed with the following three topics:

- **Longevity and Health** – Copenhagen and Peking (with support from ANU, Yale and Oxford)
- **Security** – Cambridge and ANU (with support from NUS, Tokyo and Copenhagen (and maybe Oxford and Yale))
- **Energy, Resources and Environment** – ETH, NUS and Tokyo

By end July, with a view to consideration by senior officers at their meeting in September, the institutions leading the three topics will be responsible for producing a more elaborate and more focussed document (perhaps 5-10 pages in length) that includes:

- a coherent and focused research proposal – which should contain three elements:
 - a longer term framework that identifies the big issues and how they should be addressed
 - a short term project where progress can be quickly (within the context of the longer term framework) – perhaps focused on the comparative elements of each project;
 - a timetable with specific milestones
- identification of researchers or research groups at other IARU universities prepared to commit to involvement in the research
- a realistic budget with defensible costings, covering approximately 3-5 years
- a funding plan that details sources of funding (but does not go as far as contacting external funding bodies)

Senior officers will discuss the papers at their meeting in September having discussed with their respective presidents prior to the meeting. They will make recommendations to the IARU Chair, who, based on these recommendations will write to the leaders of each project seeking any necessary revisions. The papers will be returned to the IARU Chair by end October.

These documents would then be tailored for submission to national and international funding agencies early in 2008. This would be done in the context of a coherent IARU approach to each funding body, to ensure that bodies are not approached multiple times. The IARU Chair will be responsible for this process and may consult with his colleagues out of session.

For **Movement of People**, Stephen Castles (Oxford) will be asked to be responsible for producing a similar paper, but for consideration at the next meeting of Presidents in 2008.

Up to US\$20,000 per topic would be made available from IARU funds to support the writing of the papers (and further small workshops if necessary).

The ISSS element of the Energy, Resources and Environment topic would be treated separately. ETH, NUS and Tokyo will be responsible for raising the initial external funds. Other IARU members commit to supporting involvement by their staff in the workshop/symposium element of the proposal.

Agenda item 3.1 Discussion of IARU projects

Understanding women in universities around the globe

The meeting agreed to support the project on benchmarking and best practices for advancing women in the academy. Yale and Cambridge will be responsible for taking this project forward. ANU, Tokyo and Oxford expressed strong interest in being involved. Yale will host a conference in Spring 2008.

It was agreed that the time is not yet ripe for an IARU project on citizenship, equality and opportunity. Yale will host a conference on the topic and other IARU members will advise Yale of their interest in participating.

Graduate Education

This project is principally about finding ways to bring research students together. It was agreed that one mechanism to do this was through annual conferences hosted in turn by IARU members (maybe loosely modeled on the recent water workshop at ANU).

ANU will prepare and circulate (within three months) a brief paper proposing an IARU “chat room” to allow students (and staff) to communicate with each other. These will initially be linked to the research programs and the people directly connected with them. They could be extended to include students in advanced years of undergraduate degrees in related disciplines. We should try to make sure that when these are set up (as happened at the recent water workshop) they are done under IARU auspices.

IARU needs to make sure that staff and students are aware of and understand existing joint programs to allow more rapid development of new initiatives. This will be done individually within each university.

Undergraduate Education

This project involves two streams of activity:

- looking to involve students in IARU research projects and build networks among students at IARU universities; and
- looking at how individual institutions can do better, learn from each other.

The meeting discussed developing a subject/course for mid-program undergraduates on leadership in the global environment. The content would need to be inspiring for students (perhaps with a learn by doing element?). It was agreed that this would be discussed when undergraduate deans and equivalents meet in Tokyo in September.

Agenda item 3.2 New initiatives and directions

Campus sustainability

ANU undertook to prepare a revised version on the principles (removing principle 3 and the reference to gaps in objective 7, perhaps re-ordering the document).

ETH and Yale will convene a workshop (not an academic conference) to bring together the people with operational responsibility for sustainability, facilities, utilities etc to share:

- information on how IARU members measure and implement in this area and agree on how we as a group will measure/report – ie develop a common set of metrics
- best practices

It was agreed that IARU should use campus sustainability to present IARU as providing 'moral leadership' and so pressure others to follow our example. It is an opportunity to show we are determined to do something about these issues in our local contexts. However, we must get the measuring/quantification issues resolved first.

Global Summer College

It was agreed that Yale and ANU will lead on this (with NUS). A teleconference will be held within the next six weeks with a view to convening a one-day workshop in Tokyo in September (attended by UG Deans or equivalents and senior officers). The objective is to offer programs in the summer of 2008.

Global Poverty Alleviation and International Health Scorecard

Berkeley invited those interested in its Global Poverty Alleviation Project to contact John Lie. Berkeley also mentioned that its International Health System Scorecard, which provides a methodology for evaluating health systems, was also available through John Lie. It was noted that the International Health System Scorecard may have relevance to the Longevity and Health research topic. No IARU funding was sought for either of these projects.

Open Access

ANU undertook to prepare an elaborated paper on possibilities in this field and circulate for expressions of interest in taking it further.

Interdisciplinary Integration

Participants did not fully understand what was being proposed. Most were not aware that their academics were involved. It was agreed that this project not be supported in its present form.

Corporate Governance

This was considered in the context of the bigger issue about how IARU should encourage “bottom-up” proposals, add research themes etc and what criteria should apply. It was agreed that proposals would need to be developed via a process similar to that for the existing four Global Change projects, and a scoped project with focused outcomes brought forward for consideration. Any new project would need at least two “champions”. Projects must demonstrate success in obtaining internal funding before qualifying for IARU “badging”

Agenda item 4.1 General discussion on the focus of IARU

Participants discussed the need for IARU to gain a better understanding of how funding agencies, foundations, companies across the world make decisions on funding. Information to guide IARU on how to approach agencies and who within each agency would improve the prospects of obtaining funding. It was agreed that it was not feasible to develop a consolidated database of this information – rather the Chair will seek advice from colleagues through circulating research proposals. The secretariat will be responsible for maintaining a log of contacts with agencies to ensure we avoid reinventing things.

Participants also discussed the funding arrangements for future IARU workshops/symposiums. It was agreed that the following guidelines would apply:

- Participants continue to pay their own costs of travel and accommodation;
- Host universities and IARU to share costs of hospitality, venue etc 50:50;
- IARU will make available a small amount to contribute to post conference costs – report writing etc.

Agenda item 4.2 Election of IARU Chair and location of meetings in 2008 & 2009

It was agreed that Professor Chubb would continue as Chair until end 2009. The 2008 meeting of presidents will be at Yale in late April (dates to be confirmed asap). Cambridge will host the 2009 meeting as part of their 800th anniversary celebrations.

The 2007 senior officers meeting will be held at Tokyo in late September – the Chair will attend the meeting. We will take the opportunity to get undergraduate deans and their equivalents together at the same time to discuss the Global Summer College and collaborative undergraduate education projects.



Outcomes of Inaugural IARU Presidents' Meeting in Singapore on 13-14 January 2006

Agenda Item (i) Election of Chair 2006 - 2007 Election of Chair-elect 2008 - 2009

Professor Chubb was elected Chair for 2006-07.

Election of the chair-elect for 2008-09 will take place at the 2007 IARU Presidents meeting.

Agenda Item (ii) Key Initiatives in Member Universities

Members were advised that Tokyo would celebrate its 130th anniversary in 2007 and Cambridge its 800th in 2009.

- It was agreed that Tokyo would host activities related to the research theme, which it would be leading (Energy, environment, food and water (including urban/rural issues)) during 2007.
- It was agreed that Cambridge would host the 2009 IARU Presidents meeting (subject to the agreement of IARU Chair for 2008-09).

The meeting agreed that there was danger in focussing too much on research – universities need to prepare undergraduates to be able to do research. It was agreed that this could be taken up as a proposal for action under agenda item (vi).

Discussion of possible models for summer vacation (May-August) programs resulted in the identification of two models:

- a) Students from member universities travel to a host member university and undertake a summer school program with students from the host university – could last for between six and twelve weeks. This could involve anywhere between two and ten member universities; and
- b) A corporation or government agency provides internship opportunities for a cohort of students from all member universities – perhaps two from each for a total of twenty;

It was agreed that each university interested in running summer schools along the lines of a) above would provide a half-one page proposal to the IARU secretariat by end March 2006. These proposals should cover issues such as visas, insurance etc. These would be collated and sent to member universities who would indicate which programs might be of interest, with a view to participation in 2007.

Out of session, Berkeley undertook to approach companies such as Intel and Cisco to gauge interest in possible internship opportunities along the lines of b) above.

Agenda Item (iii) IARU Research Proposals

The IARU group agreed to pursue four separate research themes and identified member universities, which would take each forward.

- Movement of people
Oxford and Berkeley
- Ageing (longevity) and health
Copenhagen and Peking
- Energy, environment, food and water (Including urban/rural issues)
ETH Zurich, Tokyo and NUS
- Security
ANU and Cambridge

It was agreed that each of these themes would involve some combination of substantive research and “studies of studies” if that was more appropriate.

It was agreed that some proposals would be IARU initiatives that involve only IARU member universities and others would be projects that IARU might facilitate, involving both IARU member and other universities.

The following process for taking forward the research proposals was agreed – it was noted that it was crucial that the IARU add value through its activities:

1. Lead universities would work together to define the areas of research
2. Workshops would be convened – scheduled to be around August-September 2006. These would be attended by both senior and junior researchers
3. The purpose of workshops would be to define research (identify maybe three most important areas) and encourage:
 - Strategic advice to the Presidents
 - Identifying opportunities for substantive research (or studies of studies)
 - Identifying opportunities for graduate students
 - How to use the outcomes of the research to influence policy makers
4. Workshops would not be exclusive to IARU members – where experts from non-IARU universities are identified and interested, they can be invited to participate.
5. The separation of the science from the politics would be important.

It was anticipated that outcomes of these workshops would be formally documented for discussion at the 2007 IARU Presidents’ Meeting.

It was agreed that these workshops would be funded from internal resources.

It was agreed that sourcing external funding to support the activities of the IARU would be very important – Professor Shih noted the opportunities that the substantial increase in Singapore’s National Research Foundation’s (NRF) funding represented.

Agenda items (iv) Strategies to Gain Research Funding Support

Agenda item (v) Intellectual Property Issues That Could Arise Through Joint Research Projects

Agenda Item (vi) Societal Benefit for Higher Education and Value of Funding Research Universities

Discussion of these three agenda items was conflated. Three more themes for IARU activity were identified along with member universities, which would take the lead in their development.

- Understanding women in universities Around the globe
Yale and Cambridge
- Transforming power of undergraduate Education
ANU, NUS and Cambridge
- Graduate education
NUS, ANU and Yale (if champion available)

All members expressed support for these three proposals. The meeting noted that there was an opportunity presented by the change in Singapore's Y12 approach to look longitudinally at Singapore Y12 graduates' experiences at member universities. The possibility of taking the PISA measures and adapting them for undergraduate education was also raised.

Each proposal will process along similar lines, first identifying what the IARU should be doing and what it wants to achieve and then sharing approaches and experiences with a view to learning from each other.

Agenda item (vii) Benchmarking

It was agreed that each member university would (based on the agenda paper) identify (in priority order) the five issues concerning which they would be most interested in exchanging information/ benchmarking. Response should be provided to the IARU secretariat by end February, which will collate responses and prepare a short paper proposing a mechanism to get things going.

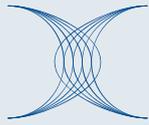
Agenda Item (viii) Any other business

There were no items raised.

Agenda item (ix) Date of next meeting

The next IARU Presidents' meeting will be at the Australian National University in Canberra on Wednesday March 28th and Thursday March 29th, 2007.

A one-day workshop on undergraduate education, at which IARU Presidents could participate, will be scheduled for Tuesday March 27th. Other workshops may also be scheduled around these dates.



Outcomes of the 2007 Meeting of IARU Senior Officers

Senior Officers

2.1 Security

The meeting agreed that work on this project should proceed as per the paper, with a view to preparing a revised, more refined proposal to be prepared immediately following the workshops planned for March/April 2008. A letter would be sent to the IARU Chair advising the outcomes of the workshop and seeking a small amount of funding to maintain momentum. This would be considered by Presidents at Yale in late April and contributions sought from interested members.

The meeting agreed that Tokyo should apply for JSPS funding in the upcoming round and that a second workshop should be scheduled for Tokyo in 2009.

2.2 Ageing, Longevity and Health

The meeting congratulated the authors on a very well prepared proposal and agreed that work should proceed. Copenhagen will now take the lead on preparing tailored bids for funding which will be sent to the IARU chair, who will circulate to colleagues for advice and then authorise where appropriate. These tailored bids should be provided with a covering note detailing recommendations on how funding agencies should be approached and by whom.

2.3 Energy, Resources and Environment

The meeting agreed that this project should proceed. Once more work had been done on refining the financial details, the same process as for the Ageing, Longevity and Health project should be followed.

2.4 Approaches to funding agencies

It was agreed that while there may arise conflicts between IARU bids for funding and bids prepared by individual members in other contexts, these could be managed in the same way similar conflicts are managed on a regular basis.

It was agreed that Presidents would need advice from their senior research deputies on quality of research proposals before they would be prepared to put their names to bids for external funding. Lawrence Cram undertook to prepare a template and circulate to DVC (Research) colleagues for comment. This might include:

- The extent to which the IARU adds value to the research proposed
- The quality of the research program
- The education agenda (if any)
- Management and leadership of the program
- Finances

3 ISSS

The meeting noted the progress report from ETH Zurich and the planned first event in Singapore in 2009.

4 2009 United Nations Climate Summit, Copenhagen

The meeting noted the update provided on the day by University of Copenhagen and planned date of 10-12 March 2009. Copenhagen's note sought names of candidates for the Scientific Congress Committee by 1 October with a view to convening a meeting on 12 November. Steering Committee nominations were also sought by 1 October.

5 Movement of People

It was agreed that the sub-project on Human Security fitted well with Cluster five of the Security proposal and could be taken forward in that context.

Professor Sato and Dr Lie will discuss how a narrower and more focussed proposal might be prepared.

6 Women in Universities Project

The meeting noted Yale's report on progress on this project.

Part 1 – Engendering Self Knowledge

Members are asked to identify a coordinator from their Office of Institutional Research, or equivalent, to participate in two meetings: one (perhaps a “virtual” meeting) to exchange information and determine actions and a timetable, followed by a second to exchange experiences, address problems and identify solutions

Part 2 – Interventions to improve the advancement of women faculty

Part 3 – Equality and the Gender of the Globalizing University

Don Filer will check what has happened to the “Gender Gap” issue and advise Oxford.

Judy Resnak and colleagues will be in contact with all IARU members to invite participation.

Tokyo informed participants that the Tokyo Office for Gender Equality would hold a symposium in February 2008 and invited participation from IARU members.

7 Possible Capacity Building Role for IARU

The meeting noted the paper and supported the idea in principle. It was agreed that this sort of capacity building might best be done by individual universities and it was not clear what value might be added by IARU involvement. The difficulty of doing this at a level other than at a single university in a particular discipline was noted. It was agreed that interested members would prepare case studies for the 2008 **Senior Officers Meeting as a way of sharing information and learning from each other.**

8 IARU and Careers

The meeting agreed that this activity should be encouraged and supported, including the symposium planned for July/August 2008 at NUS. ANU, NUS, Oxford and Copenhagen were positive about the opportunities this might bring, especially in terms of assisting students returning from IARU members to their own countries where other IARU members might be able to provide assistance.

9 IARU Membership

The general consensus was that in this early stage of the development of the IARU it would be best to keep it small and manageable. The benefits of working with “like” institutions are considerable. Yale and Berkeley were more inclined to the view that adding members to give a more “global” dimension to the IARU was desirable.

It was noted that Presidents had agreed that no new members should be added before 2009. Given that the only meeting of Presidents before then would be at Yale in 2008, this matter should be discussed at that meeting.

It was agreed that Don Filer would convene a small group to prepare a paper on the issues around increasing IARU membership for consideration by Presidents at Yale in April 2008. Other members of this group will be Kiichi Fujiwara, Barry Halliwell, Heather Bell and Iain Watt. Issues to be addressed will include:

- The threshold issue of whether IARU should have more members;
- How would such members be selected and invited?
- What factors should be considered (starting with the five outlined in the agenda paper)?
- What regions should be considered?
- Would some sort of mentoring approach or incorporating universities from developing countries into IARU projects be a more suitable solution?

There will be political sensitivities that must be taken into account.

10 Agenda for meeting of Presidents at Yale in April 2008

The following items were flagged for discussion at the meeting in April 2008:

- Sustainable Campuses
- IARU Research Projects
- Women in Universities Project
- Global Summer Program
- Research-led Teaching
- IARU Membership
- IARU Going Forward – an analysis of the success or otherwise of IARU's first 28 months.
- IARU Program on Industrial Innovation
- Engaging Younger Staff in IARU Research Collaboration.

The secretariat will circulate a draft agenda for comment by end-2007. Members are invited to suggest items for inclusion.

11 Senior Officers meeting in 2008

It was agreed that University of California, Berkeley would host the meeting of IARU senior officers in 2008. The secretariat will liaise with Dr Lie to settle on some possible dates in late September or early October and circulate to participants to determine the most suitable date by end-October.

12.1 Making the Most of Ideas! Outline proposal for an IARU Program on Industrial Innovation.

The meeting approved the development of a more detailed proposal for consideration by Presidents at Yale in April 2008. ANU, NUS and Copenhagen expressed strong interest in working with Cambridge on this proposal. Mike Gregory will develop a more “fleshed-out” proposal in consultation with colleagues at ANU, NUS and Copenhagen, which will be circulated to members by end-December inviting comments and nomination of participants.

12.2 Meeting of Presidents at Cambridge in April 2009

Cambridge has advised that there are two possible windows – April 22-24 or April 28-30. Participants agreed to check the diaries of their presidents and get back to the secretariat. Secretariat will follow up with a view to settling on dates by end-October.

12.3 Possible funding for young researchers to get together to build “bottom-up” research proposals

Cambridge proposed a mechanism to engage younger staff in the IARU through low cost (maybe between \$5000 and \$20000 per project) bids to support conferences and/or workshops to develop collaborative research proposals across IARU members. It was agreed that this should be developed and brought to the meeting of Presidents at Yale in April 2008. Mike Gregory will prepare a brief proposal which the secretariat will circulate for comment and revision as a paper for the April meeting.

12.4 Financial Report and Secretariat Funding

The meeting noted the financial report and agreed to increase the annual allocation of funding support to the secretariat to USD80,000 pa. ANU will continue to provide the balance of funding support required by the secretariat.

12.5 Redesign of Yale MBA

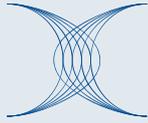
Participants noted the information provided on Yale’s new MBA structure and the planned seminar on the new curriculum in early 2008. Don Filer will provide information to the secretariat, who will then circulate invitations to members to each send two representatives.

12.6 Research Admissions

It was agreed that members would establish an informal network to assist each other in evaluating the academic qualifications of students from countries where this can be difficult. In the longer term some sort of “practical resource” of information might be developed.

12.7 What is a PhD?

ANU, NUS and Oxford agreed to work together on an informal basis to share information on the content, structure and aims of PhD programs. Lawrence Cram will circulate a note to initiate the conversation.



Outcomes of the 2007 Meeting of IARU Senior Officers

Education Collaboration

2 Global Summer Program

The meeting noted the paper and that it was substantially based on the US, undergraduate for-credit model. It was agreed that more flexibility should be built in to allow members liberate themselves from existing constraints, expand opportunities for students, allow staff to work together and simplify management processes. The GSP could be seen as an umbrella structure under which a varied range of courses could be made available to students.

The GSP would be badged/branded as distinctively IARU and therefore needs to be unique and of top quality.

Some issues that need to be addressed:

- Some members are not permitted to charge tuition fees, others are required to – perhaps need to look to some form of bartering or in-kind transfers
- For-credit – agreed that this requirement be relaxed, with the understanding that GSP courses be at least as academically rigorous as regular courses
- English language test requirements – it was agreed that members would rely on IARU partners to select students with appropriate English language skills.
- A central website will be needed – the IARU secretariat will be responsible for this.

The meeting agreed that Bill Whobrey should convene a meeting at Mattingley Hall, Cambridge in early 2008, primarily to discuss the longer term future of the GSP, but also progress with the 2008 offering. The preferred date is in the period February 11-13 or January 23-25 with further options of 7-11 January or 17-20 March. Members will advise Bill of their nominee and preferred date by end-October.

3.1 IARU educational initiatives around sustainability

The meeting agreed that the best way to demonstrate the possibilities in this area would be to undertake a pilot project (ANU, NUS and maybe Tokyo). Each member will also identify people who might be interested and put them in contact with Richard Baker.

3.2 Educational opportunities arising from IARU projects

The meeting agreed that the link between teaching and research and the benefits and consequences of “research led teaching” should be a focus of activity for IARU.

Richard Baker and Elizabeth Fallaize will develop a paper for consideration by Presidents in April that is based on the existing paper and includes proposals for action. Actions might include a workshop at Berkeley around the time of the 2008 senior officers meeting. NUS and Copenhagen also expressed interest in being involved.

3.3 Open Yale

The meeting noted Don Filer's presentation and his invitation to IARU members to make use of the material.

4 Regional perspectives on leadership roles

The meeting agreed that, at this stage, IARU should not be developing a course on leadership. It was agreed that leadership, particularly the negotiation of cultural differences, should be included as an implicit objective in GSP courses.

A watching brief will be maintained and the issue revisited if necessary.

5 Student Exchange

The meeting agreed that the document should be reworked as a set of guiding principles for student exchanges (by the secretariat).



Outcomes of the 2007 Meeting of IARU Senior Officers

Campus Sustainability

2 Identifying appropriate sustainability measures (metrics)

The meeting agreed that IARU should develop a sustainability index based around models developed by Yale and Cambridge. This will recognise that member universities are at different stages in the development of campus sustainability measures and that it is not to be seen as a commitment to doing everything right now. We will be looking for an approach that incorporates flexibility and allows universities to do things differently. ANU and Yale will circulate a survey for completion by 31 January 2008.

3 Comparing Ecologically Sustainable Design (ESD) building standards in IARU member countries to identify common elements

The meeting agreed that IARU members should use national best practice ESD standards, where they exist, in the construction of all University buildings or major refurbishments. Where standards do not exist, for example in the construction of laboratory buildings, IARU should establish a process for exchanging information that would lead to best practice design.

4 Developing a (global) standard – integrating metrics, building guidelines, and sustainability principles, for IARU

It was agreed that IARU should develop environmental targets particularly in the areas of greenhouse emissions reduction, water conservation and waste management. These targets, while having a genuine impact on reducing our environmental footprint, would also take into account the various stages of development of each University, what environmental initiatives have already been undertaken and any projected growth.

The issue of baselines was discussed, particularly in the context of several universities not having historical data to construct 1990 or even 2005 baselines. It was agreed that IARU targets might best be based on a 2008 baseline, while member universities could, at the same time, have their own targets based on earlier baselines.

The mix of priorities at each university will be different – eg water conservation is not an issue at some universities. It was agreed that each member would establish a hierarchy of environmental impacts and focus on those most important to it.

It was agreed that while considerable research had been completed on the current environmental management arrangements in place at our respective universities, it was clear that further work would be needed to finalise a set of meaningful targets for consideration. A draft paper will be prepared by ANU and Yale and circulated by 31 January 2008.

5 Integrating education and campus management in the context of campus sustainability

The meeting noted the paper prepared by ANU and agreed that linking campus sustainability initiatives to members' education curricula would add an extra dimension to the campus sustainability agenda.

6 Interns for sustainable campuses – proposed exchange program

The meeting agreed that an exchange program between sustainability offices at IARU institutions should be established. This would be for both staff and students. A paper detailing the proposal which would include information on the financial implications will be distributed before the April 2008 meeting.

7 General discussion on the process leading up to the meeting of IARU Presidents at Yale in April 2008

The meeting placed great emphasis on the importance of each member having a clearly identified person, with the weight and authority to make things happen, to act as the liaison point for the development of these proposals. The issue of the need to shift some resources to make these initiatives work was noted as being very important. IARU Presidents will consider the papers at their meeting in April. A statement on the IARU's initiatives around campus sustainability should be prepared as an outcome of the April meeting.



Meeting of Senior Research Deputies ETH Zurich, 18- 19 September 2006

All presentations are available on the IARU website. Common themes emerging from the individual presentations are summarised below.

Chair's introduction (Professor Lawrence Cram)

- The infrastructure of a university affects its ability to create cooperative relationships – both within the university and with other IARU members.
- There are challenges and tensions when developing governance arrangements – increased “top down” power for Presidents/VC's versus increased “bottom up” power for schools, centres etc
- IARU members support excellence in teaching and research differently at different institutions. Bottom-up approaches seem to be the default. Do successful “top down” approaches exist?
- IARU institutions each get their funding from very different sources.
- It is important that IARU access international funds – how might IARU tap into funding that individual institutions cannot access.
- Benchmarking IARU institutions responses to change could facilitate better arguments for implementing change at individual institutions.
- IARU needs to find mechanisms to engage faculty and students.

Fostering cross-disciplinary research (Discussion led by Mr Charles Tambiah)

Discussion from presentation:

- The IARU could use existing relationships for collaborative research and provide the infrastructure for cross-disciplinary research.
- The challenge is building trust with key researchers in the initial phase when the research project has not been defined. Leading researchers do not necessarily need to be involved from inception - junior researchers could develop IARU research platforms.
- The IARU could establish a facilitator role to assist researchers involved in the IARU research projects (funded by the participating universities paying a proportion of the salary). We need to create opportunities, not try to force them.

- A collaborative process has the potential of creating a Centre of Excellence which could assist when trying to secure funding.
- A key factor is the choice of problem – if we look at problem based issues such as malaria it will be easier than broad topics such as cell biology.
- It may be better to build infrastructure and networks in smaller increments, proving the value of the IARU before getting into big projects.
- Top down approaches are difficult to manage – need to identify opportunities for individual researchers without necessarily having set outcomes in mind.

Frameworks for collaboration - common problems and solutions, mechanisms to facilitate collaborative research, general understanding of constraints in each country/region – such as contract jurisdictions, intellectual property laws etc (Discussion led by Ms Rachel Vance)

Discussion from presentation:

- The IARU could initiate the development of an international arbitration process for research misconduct
- There would be benefits from sharing institutional experiences of academic misconduct and benchmarking existing legal processes.
- IARU could consider developing a broadly based Research Ethics framework (not developed around the medical sciences).
- IARU might develop a proforma for the transfer/exchange of material for non-commercial use

Proposed:

- i. Benchmark legal processes at IARU institutions for academic misconduct.
- ii. Circulate/share research integrity documents between IARU institutions – perhaps followed by a workshop.
- iii. Establish a network of legal offices across the IARU.
- iv. Develop a common agreement and/or proforma for the transfer of material for non-commercial use.
- v. Circulate some questions on intellectual property environments among members.

Mechanisms to manage and direct research to achieve university strategic objectives (Discussion led by Professor Barry Halliwell)

Discussion from presentation:

- Excellence is often ahead of its time and thus not appreciated or recognised/rewarded.
- IARU institutions have some obligation to protect the past.
- It would be interesting to explore the question “Where do new research agenda’s come from?”

- Could there be benefit in sharing existing “establishing excellence” information (salary systems, hidden benefits and appealing workplace conditions). This might include how to attract/keep best staff, incentives for excellence etc. These best practices could be circulated among the IARU members or areas could be encouraged to travel to individual institutions.
- IARU needs to develop mechanisms to support early career researchers.

Crisis management - the role of universities in assisting government to respond to crises - eg avian influenza, earthquakes/tsunamis, wars/civil unrest in neighbouring countries (Discussion led by Professor Lawrence Cram)

Item not discussed.

Summary and a way forward towards the IARU Presidents meeting in March 2007 and the mechanism for preparing it (IARU secretariat or a sub-committee of research deputies?)

The IARU matters discussed in this meeting can be usefully considered from at least seven distinct perspectives:

1. Presidents’ view:

- Members have common cause, and share some visions and goals
- Companionship in difficult positions
- Creation of new opportunities
- New ways of thinking
- Offering new relationships and approaches
- Address grand challenges/problems in a new context
- Internationalisation – opening up/new views

2. Infrastructure view:

- Physical
 - o Accommodation for IARU visitors
 - o Offices for IARU visitors
 - o Access and development of labs and equipment
 - o Creating and sharing libraries, databases and collections
- Logistical
 - o Travel (including immigration)
 - o Communication
 - o Transfer of material (through equipment and agreements)
 - o Common access to websites and Internet
- Institutional policy and legislative matters

- o Legal/commercial
- o Ethical/research integrity
- o Risk management
- Academic contexts
 - o Transfer of credit
 - o Recognition of learning
 - o Behaviour of visitors and students

3. Faculty (Education and Research Services) view:

- Retention and revitalization of staff
- Employment conditions
- Sharing staff development opportunities
 - o Junior faculty
 - o Seed funding for early career researchers
 - o Special training opportunities
- Engagement across IARU
- Researchers
 - o Supporting endangered research (unusual pieces of research)
 - o Reviews
- Educators
 - o Sharing courses, pedagogy
- Service/Administration – benchmarking resource allocation and function

4. Undergraduate, Postgraduate and Research Students' views:

- Fulfil dreams
- Create opportunities
- “People of the world”
- Diversity of experiences and perspectives
- Risk taking
- Networking for skill development, later colleagues
- Seminars on an international scale

5. Senior Officers' views:

- Integration and coordination
- Build capability and share experiences
- Selectivity of engagement
- Facilitation

- Planning
- Creative distribution of resources
- Renewal and revitalization
- Benchmarking

6. International view:

- Benchmarking and data
- Codes of practice, policies, procedures
- Universities transcend nations
- Public attitudes and support in our countries; trends
- Balancing in each National Innovation System across
 - o Basic – Applied
 - o Industry – Blue Sky
- Innovate the concept of a university – what is the future for universities?

7. Problem-solving (market-based) view:

- Mode 1 – Mode 2 research methodologies (Gibbons)
- “Students” or “Clients”
- Funding bodies
 - o Differentiation of agendas
- Operating in the public sphere: beyond the “ivory tower”
- The importance of non-economic values/agendas
- Endangered disciplines
- Encouraging the “really new”
 - o Maintaining and updating the “liberal arts” education
 - o Graduates of the future

Action required:

- i. Members asked to send their research integrity documents to the secretariat by end of October for circulation.
- ii. Members asked to participate where possible in the benchmarking of legal processes for academic misconduct. The ANU legal area will circulate an initial list to other IARU legal areas seeking feedback for the development of a survey.



Meeting of Senior Officials ETH Zurich, 20 September 2006

Research projects/Other projects

Challenges currently:

- Difficult to engage academics who already have research agendas
- Academics are reluctant to commit to broad research projects, participation may occur once the research themes are defined.
- Academics within some communities are not aware of the IARU
- At this stage few institutions have allocated funding for the initial collaboration stage

Participants suggested that direction be provided to organisers about expectations of outcomes from the workshops. These should include:

- Preparation of an intellectual case
- A session dedicated within the remaining workshop to the preparation of a costings model and the identity of suitable funding bodies.
- Opportunities to involve research students, and early career researchers should be explored.
- Shortly after the workshops lead universities should prepare written reports to the secretariat (there may be some additional liaison between the secretariat and the lead universities ensuring comparable reports).
- Secretariat will circulate to the IARU members with significant lead time to the Presidents meeting.

It was proposed that the secretariat with the assistance of representatives of IARU members (from US, UK, Japan/China) seek external seed funding from US funding bodies such as Ford and Rockefeller Foundations to support the IARU's international collaboration agenda (expressly for international collaboration in terms of travel and workshop/conference funding – say \$50,000 per workshop). The approach would seek to use the US\$100,000 of secretariat funding to leverage additional funding. This would be arranged to take advantage of the presence of appropriate IARU representatives in the US. John Lie to assist in this.

It was agreed that workshops (including the one on the role of women and the education meetings) would be able to bid for up to US\$10,000 to take their workshop outcomes to a document ready for consideration by Presidents in March. The secretariat will prepare some simple guidelines. Bids

would be assessed by the secretariat with two senior officers co-opted to assist. Material for the Presidents meeting should include some scoping of costs and possible sources of funding (including local sources).

Finance and sponsorship

It was agreed that members would provide their research protocols (with particular reference to acceptable sources of funding) to the secretariat (or, where preferred, simply identify sensitive areas via a set of dot points). The secretariat would then compile a IARU protocol that takes account of each member's sensitivities.

Website

Participants were positive about the website and opportunities to both utilise it as an information sharing mechanism within the IARU and as a place where non-members can learn about the IARU.

Membership

The extension of IARU membership will be revisited at the meeting of the senior officers in 2007.

Chair for 2008 and 2009

Senior officers to send any expressions of interest to the secretariat by the end of October. It was agreed that one outcome that would be well supported would be for the current Chair to extend his term by another one or two years. Participants agreed that the Chair be approached about this, should there be no expressions of interest from other Presidents. There was some agreement that a two-year term might be too short to have an effective impact.

Secretariat in 2008 and 2009

Two options were explored, one in which the secretariat moves with the presidency, and the other in which the secretariat stays with ANU for a longer period. There are benefits and problems with either option and the matter was unresolved. After discussions with the Chair the secretariat will circulate options about the location of the secretariat for 2008-2009 and the long-term alternatives of the location of the secretariat.

Presidents' meeting at ANU in March 2007

It was agreed that the program should include at least one quarter of a day for informal discussions. The secretariat will send an email with a draft program (including the proposed agenda and possible related events) to the Presidents seeking feedback.

Presidents' meetings in 2008 and 2009

Agreed Cambridge will host 2008 meeting. Anticipated if the Chair changes the meeting in 2009 will be held on the campus of the Chair elected. If no change to chair then at a location to be advised.

Senior Officers meeting in 2007

Agreed Tokyo will host 2007 meeting. Tokyo will provide the secretariat with possible dates in mid to late September, which will be circulated to determine the most suitable date(s).

Financial Report /Annual contributions

Annual contributions from members will remain at US\$20,000 for 2007.

USD100,000 will be used for leveraging in the seed funding proposal. It is proposed that the remaining amount is used for assisting the lead universities developing their research proposals for the Presidents meeting.

Agreed expectations:

- The research projects would bid for USD10,000 where it was required.
- A small group (three people including the secretariat) would vet the expenditure
- The secretariat will draft guidelines about the appropriate use of the USD10,000 funding

Registration of name /logo

Agreed the secretariat will register the trademark in the eight countries where IARU member universities are located.

Publications

No action required

Staff Exchanges

It was agreed that this represented a good opportunity to learn from each other's experiences. Yale has already developed a useful list for assisting visiting staff to Yale which could be circulated to members interested. This type of activity will take place under the umbrella of IARU staff mobility. Members will support/encourage staff to become involved.

Student Exchanges

NUS tabled the NGS-IARU Scholarship proposal seeking feedback from the IARU. Members will respond directly to Professor Halliwell.

It was proposed the IARU umbrella existing exchange activity (particularly at PhD level) which would allow recognition of existing mobility and deepen the alliance (may be useful when seeking external funding for international collaboration). Opinion was divided on the merits of this approach.

It was agreed that each member would produce a map of their activity interaction with other IARU members. When these are combined each will learn about things of which they were unaware. At the end of the process, we should have a good snapshot of where we are now. Members to get a first effort to the secretariat by end-December.

Joint/dual degrees

Opportunities for Post Doc or graduate students could be tied into the proposed IARU research activities.

Benchmarking

Agreed the current benchmarking activities should be linked to the agreed legal data collection agreed at the senior research deputies meeting. No need to initiate more at this stage.

Responding to crises

Yale is willing to share their extensive crisis management materials with IARU members. Any additional activity in this area could be developed bilaterally between interested partners. It was suggested that this might be best taken up among those with responsibility for these issues – perhaps registrars or their equivalents.

Public policy statements

Presidents to discuss in March, 2007.

Summer Schools and Internship Programs

John Lie will follow up and approach Intel and Cisco in the first instance.

Presentation by Professor Kuebler on proposal for annual sustainability prizes

Professor Kuebler presented his proposal for the IARU to establish prizes for sustainability similar to Nobel Prizes. There was doubt expressed about the advisability of the IARU adopting such a politically sensitive agenda at this time. The point was also made that this was a bit premature given that IARU had not yet developed a research agenda around sustainability. Participants agreed to wait on reactions from expert academic representatives at the meeting on energy, resources and environment scheduled to take place over the next two days.

Action required:

- i. Leads of the remaining workshops to be advised to ensure that a costings model and the identity of suitable funding bodies and other agreed requirements are included in material prepared for Presidents in March.
- ii. Secretariat will circulate all research proposals to the IARU members with significant lead time to the Presidents meeting.
- iii. Secretariat with the assistance of a select group seek external seed funding using the USD100,000 (from annual contributions) as leverage.
- iv. Members asked to send their research protocols to the secretariat (or identify sensitive areas).
- v. Chair IARU - members to send expressions of interest to the secretariat by the end of October.
- vi. Secretariat to approach current Chair on his views about extending his term.
- vii. Secretariat will circulate options about the location of the secretariat for 2008-2009 and the long-term alternatives of the location of the secretariat.
- viii. Secretariat will send an email to the Presidents seeking feedback for the 2007 Presidents meeting agenda and associated activities.
- ix. Tokyo to provide to the secretariat for circulation possible dates for the 2007 Senior Officers meeting to be hosted in mid - late September.
- x. Annual contributions to remain at \$20,000.
- xi. Secretariat manage the process of vetting requests for seed money to assist in the research proposals being developed for the Presidents meeting in March and co-opt assistance as required.
- xii. Secretariat to draft guidelines about the appropriate use of the USD10,000 funding
- xiii. The secretariat will register the IARU trademark in the eight countries.
- xiv. All IARU members will map their existing relationships, with the aim of increasing awareness of existing activities among partners and send these to the secretariat by the end of the year.
- xv. Members to provide comment to NUS about the proposed NGS – IARU Scholarship
- xvi. Agreed the current benchmarking activities should be linked to the agreed legal data collection
- xvii. John Lie (Berkeley) to follow through with the Internship Programs proposal.