



SUMMARY REPORT
APRU World Institute Workshop
Climate Change: Challenges and Strategies for Sustainable Cities

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University of California, San Diego

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The inaugural workshop of the Association of Pacific Rim Universities World Institute brought together 40 senior researchers and policy advisors from the public and private sectors to foster understanding and discussion about climate change in the context of sustainable cities. The scientific consensus is clear that human activity is altering the world's climate. There are many manifestations of climate change already seen around the world, such as sea level rise, melting of glaciers, reduction of mountain snowpack, earlier onset of spring growing seasons, increased acidification of ocean waters, and changes in severe weather events. While much is known about climate change at global scales, the capability to model and predict regional and local scale impacts is an area of active research with preliminary results that have significant potential to inform societal responses. Whether focusing on policy responses to reduce greenhouse gas emissions, or designing adaptation and mitigation strategies, scholars and practitioners need to have the best possible understanding of climate change and its impacts.

Most of the world's population lives in urban areas, primarily in coastal regions, and this urban, coastal population is increasingly concentrated around the Pacific Rim. The design and operation of cities has an impact on global and regional climate processes. Greenhouse gas emissions from energy used in the built infrastructure, transportation, and industrial activities are significant contributors to climate change and represent important opportunities for innovation and efficiency. In addition, impacts from changes now underway from climate conditions, are already affecting city life and operations.

The APRU World Institute (AWI) workshop was extremely successful. Through a combination of plenary sessions, small breakout groups, and informal interaction, there was significant exchange of expertise and perspectives across sectors, disciplines, and geographic regions. Dr. Choon Fong Shih, President of National

University of Singapore, and Chair of the APRU World Institute Governing Board, opened the workshop. Professor Richard Somerville, one of the Coordinating Lead Authors from Working Group 1 of the Intergovernmental Panel on Climate Change, gave the opening presentation. UC San Diego Chancellor Marye Anne Fox welcomed the participants at a reception, hosted by UC Regent Peter Preuss, and she participated in the closing session of the meeting. ETH President Alexander Zehnder offered to host the 2008 AWI Workshop on Climate Change and Sustainability in Zurich. The full list of participants and the agenda are attached to this report and are also available on the website, as are most of the presentations: <http://iaep.ucsd.edu/awi>.

The key conclusions and proposed actions recommended by the workshop participants are highlighted below.

Value of APRU and AWI

Participants agreed that APRU represents a potentially powerful force for the future, bringing together 37 major research universities from around the Pacific Rim at a time when dialog and collaboration across the Rim is of central importance to solving key global challenges. By creating the APRU World Institute, APRU has provided a mechanism to build an even stronger force for advancing knowledge and helping to address societal challenges. This inaugural AWI workshop demonstrated the value of this institute.

Participants felt that APRU/AWI can become a trusted resource for regional and global solutions. Furthermore, if no more than 10 APRU/AWI institutions made serious commitments—as individual institutions and in collaborations—to develop “*environmental sustainability leadership capabilities*” in key subsets of their hundred thousand elite graduates per year, APRU/AWI would make a substantial contribution to solving sustainability problems around the Pacific Rim, as well as for the world.

Possible APRU/AWI Roles in the Development of Sustainable Cities

Among the workshop recommendations for APRU/AWI leaders to consider were:

- Make climate change and sustainability an ongoing theme for AWI, so that the momentum and relationships created at the inaugural workshop can be nurtured and maintained and lead to practical results.
- Include climate change and sustainability as a theme in APRU’s annual doctoral student conference.
- Provide a forum for continued regular interaction between academic, business, and government experts around the theme of sustainable cities, so that trust can be established and relationships nurtured for the long-term.
- Create opportunities to “broaden the circle” to engage with people and organizations that resist efforts to address climate change, i.e., – provide a forum to build consensus about sustainability efforts.

- Serve as a portal and “honest broker” of information on climate change, sustainability, and related issues to facilitate collaboration and reduce redundancy.
- Create an AWI process to highlight and share best practices, such as:
 1. How to create interdisciplinary and transdisciplinary programs on sustainability within APRU/AWI campuses
 2. How to develop sustainable practices in member campuses
 3. How to build relevant partnerships between university and public/private sector organizations
 4. How to develop specific programs and practices in sustainable city development. Such an AWI process would make it easier to contribute to progress on sustainability by reducing the need to “reinvent the wheel” at each APRU/AWI institution.
- Create a regular system of awards for best developments, and a challenge fund to support the best projects, especially interdisciplinary approaches in the APRU/AWI key theme areas, those involving multiple APRU/AWI members.
- Design and carry out a comparative city project with teams led by APRU/AWI universities and incorporating representatives from city government, industry and the non-profit sector.
 1. Recommend metrics and indicators of sustainability at the city-region level, based on existing and new approaches.
 2. Develop a common set of methods to analyze current conditions as well as scenarios that look 10-20 years into the future. Build models around alternative climate change scenarios. Use these scenarios as a basis for identifying opportunities to intervene and reduce the adverse impacts of global change.
 3. Create or encourage development of awards and incentives to recognize research and applications that contribute to sustainable cities.
 4. Take on a highly visible project, such as the design of a new facility in one or more of the APRU cities, in which many APRU/AWI members could participate.
- Facilitate internships for students to gain experience in government, private sector and non-profit organizations.
- Develop and offer new shared educational programs including:
 1. Professional and executive education programs about climate change and sustainable cities for business leaders, architects, engineers, and others.
 2. On-line courses for conventional degree programs.
 3. Interdisciplinary summer programs and workshops for APRU/AWI students
- Use the size and clout of APRU membership to implement environmentally preferred purchasing programs and renewable energy technology programs that will impact the broader global marketplace.

General Comments and Observations

- Universities are powerhouses of expertise, knowledge and technology. They have capacities and capabilities for forward thinking and innovation that may be deployed to understand and generate plausible solutions to the challenges of climate change. The community of students who would become the leaders of tomorrow should be educated and nurtured to play a positive role to meet these challenges.
- Universities need to find ways to encourage and reward faculty efforts that cross disciplinary boundaries and provide practical applications and solutions to major societal problems. APRU universities can serve as testbeds to create and evaluate transdisciplinary approaches. Where such initiatives have been implemented, APRU can compile and share best practices.
- Universities can play an important role in providing expert and credible scientific information and other research results to decision-makers. Among the things universities can do in this area are:
 1. Work with professional communicators to make the messages understandable and appealing.
 2. Recognize cultural differences and adapt the messages as appropriate for different APRU/AWI societies.
 3. Down-scale analyses to local/city scales so that people can more easily understand the impact and implications for themselves and their cities.
 4. Use scenario analysis and modern visualization tools to present information through compelling storytelling that involves audiences emotionally and includes visual impact.
 5. Share win-win solutions, such as private sector successes in reducing environmental footprints while improving the economic bottom line.
 6. Conduct analyses that include present day conditions and projections to 10 and 20 years in the future, timeframes relevant to current decision-makers and their children.
- APRU should encourage member universities to incorporate sustainability into curricula throughout the university, including the arts, humanities, sciences, and engineering. Environmental education and awareness will be most effective if it begins with elementary school children and continues through their university experience.
- APRU should encourage universities to incorporate sustainable practices into their campus operations to create a learning laboratory and to demonstrate the values they aspire to teach to their students. Universities can become “terrariums of opportunity.”
- Leadership is needed from all sectors, including a clear international policy framework for reducing greenhouse gas emissions so that there are clear market signals to discourage carbon emissions and encourage alternative technologies.

Conclusions

There was wide agreement this had been a very successful workshop. It demonstrated the value of interdisciplinary, inter-sectoral, international collaboration across the Pacific Rim in addressing the major societal challenges posed by climate change. Participants made important connections with experts with whom they had not previously had contact. Everyone recognized the value of sharing best practices within academia as well as between universities and other societal sectors. There will be a recommendation to the AWI Governing Board that this process continue and become an integral part of AWI's ongoing programs. The offer by ETH President and AWI Governing Board member Alexander Zehnder to host AWI's 2008 Workshop on Climate Change and Sustainability in Zurich was enthusiastically endorsed by AWI Governing Board members Choon Fong Shih and Marye Ann Fox, as well as by all of the 2007 workshop participants.