



**“Collaboration Among Universities, Business Firms, and City Governments to Develop Climate Change Adaptation Strategies for Pacific Rim Cities”**

in

**“An APEC Climate Change and Sustainable Environment” (Plenary Session 5)**

in

**“ECONOMIC CRISIS AND RECOVERY”  
PECC Conference, October 8-10, 2009, Singapore**

Presented by

**Richard Drobnick**

**Managing Director, APRU World Institute and  
Director, Center for International Business Education and Research  
Marshall School of Business, University of Southern California**

# Member Institutions

## 42 APRU Members and 2 Invited Members

### Australia

Australian National University  
University of Melbourne  
University of Sydney

### Canada

University of British Columbia

### Chile

University of Chile

### China

Fudan University  
Hong Kong University of Science & Technology  
Nanjing University  
Peking University  
Tsinghua University  
University of Hong Kong  
University of Science and Technology of China  
Zhejiang University

### Chinese Taipei

National Taiwan University

### Indonesia

University of Indonesia

### Japan

Keio University  
Kyoto University  
Osaka University  
Tohoku University  
University of Tokyo  
Waseda University

### Korea

Korea University  
Seoul National University

### Malaysia

University of Malaya

### Mexico

National Autonomous University of Mexico  
Tecnológico de Monterrey

### New Zealand

University of Auckland

### Philippines

University of the Philippines

### Russia

Far Eastern National University

### Singapore

National University of Singapore

### Thailand

Chulalongkorn University

### United States of America

California Institute of Technology  
Stanford University  
University of California, Berkeley  
University of California, Davis  
University of California, Irvine  
University of California, Los Angeles  
University of California, San Diego  
University of California, Santa Barbara  
University of Oregon  
University of Southern California  
University of Washington

### Invited Members

Board of the Swiss Federal Institutes of Technology (ETH)

Johns Hopkins University

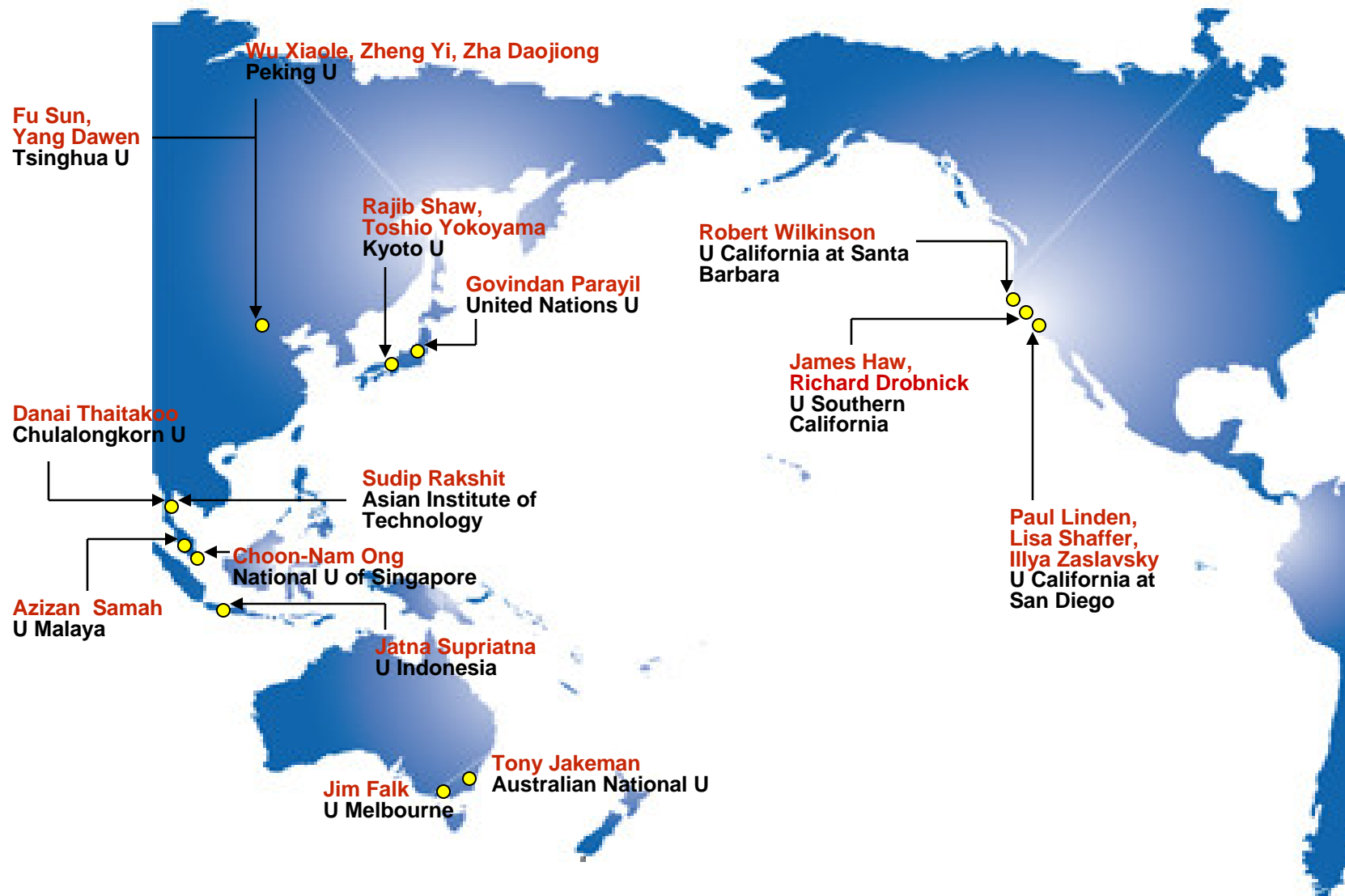
# AWI Governing Board



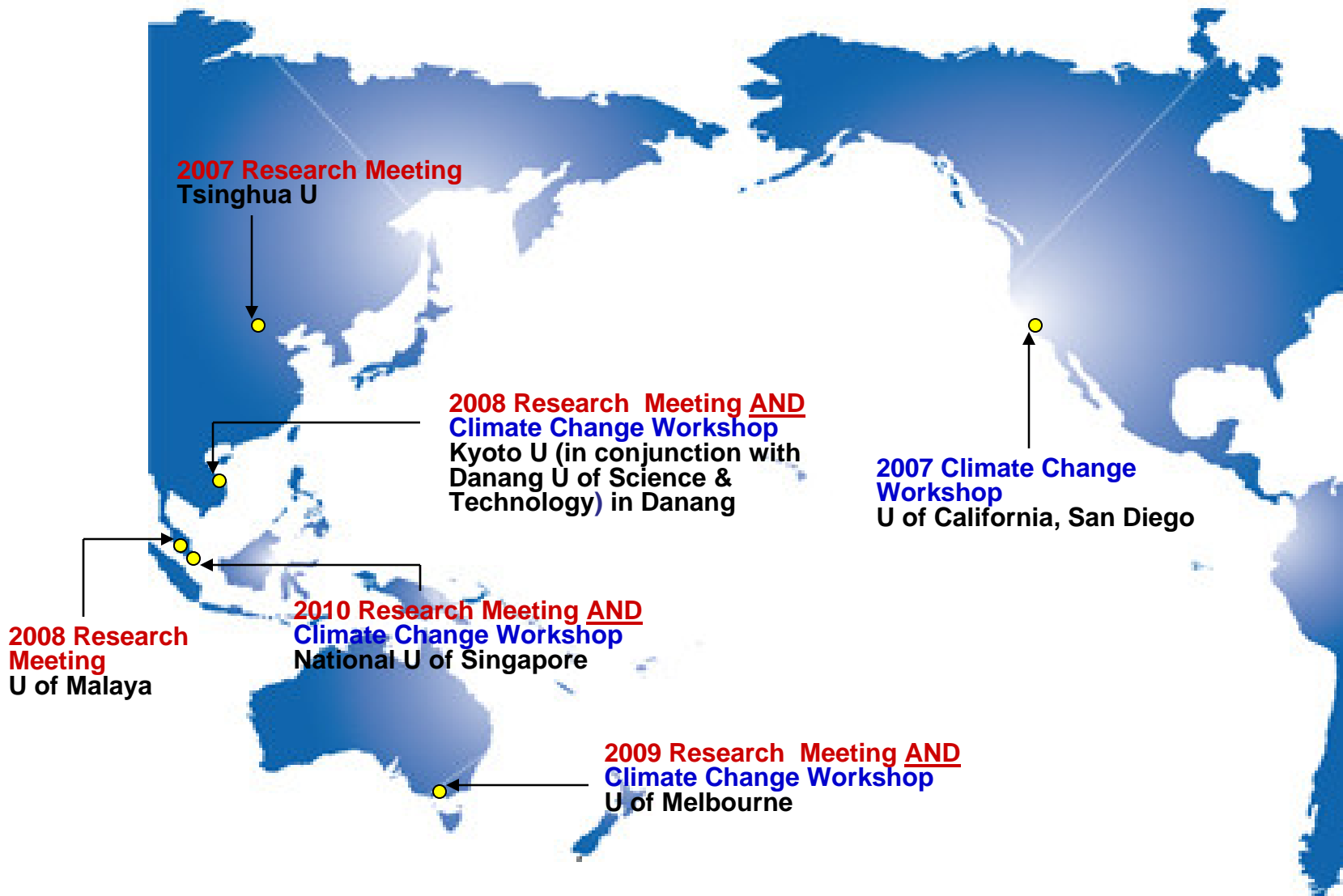
# Climate Change Mitigation & Adaptation Strategy (CMAS) Case Study Cities (11)



# CMAS Research Team Leaders (14 research teams)



# CMAS Workshops (4) and Research Meetings (5)



# CMAS Research Program

## Description

Help secure a sustainable water future for coastal cities and regions facing climate change, economic growth and population increases. CMAS works to incorporate climate change research and climate impact assessments into integrated water management decisions, working with academic experts, industry, and government practitioners in 11 Pacific Rim cities-- 6 in developing economies; 5 in developed economies.

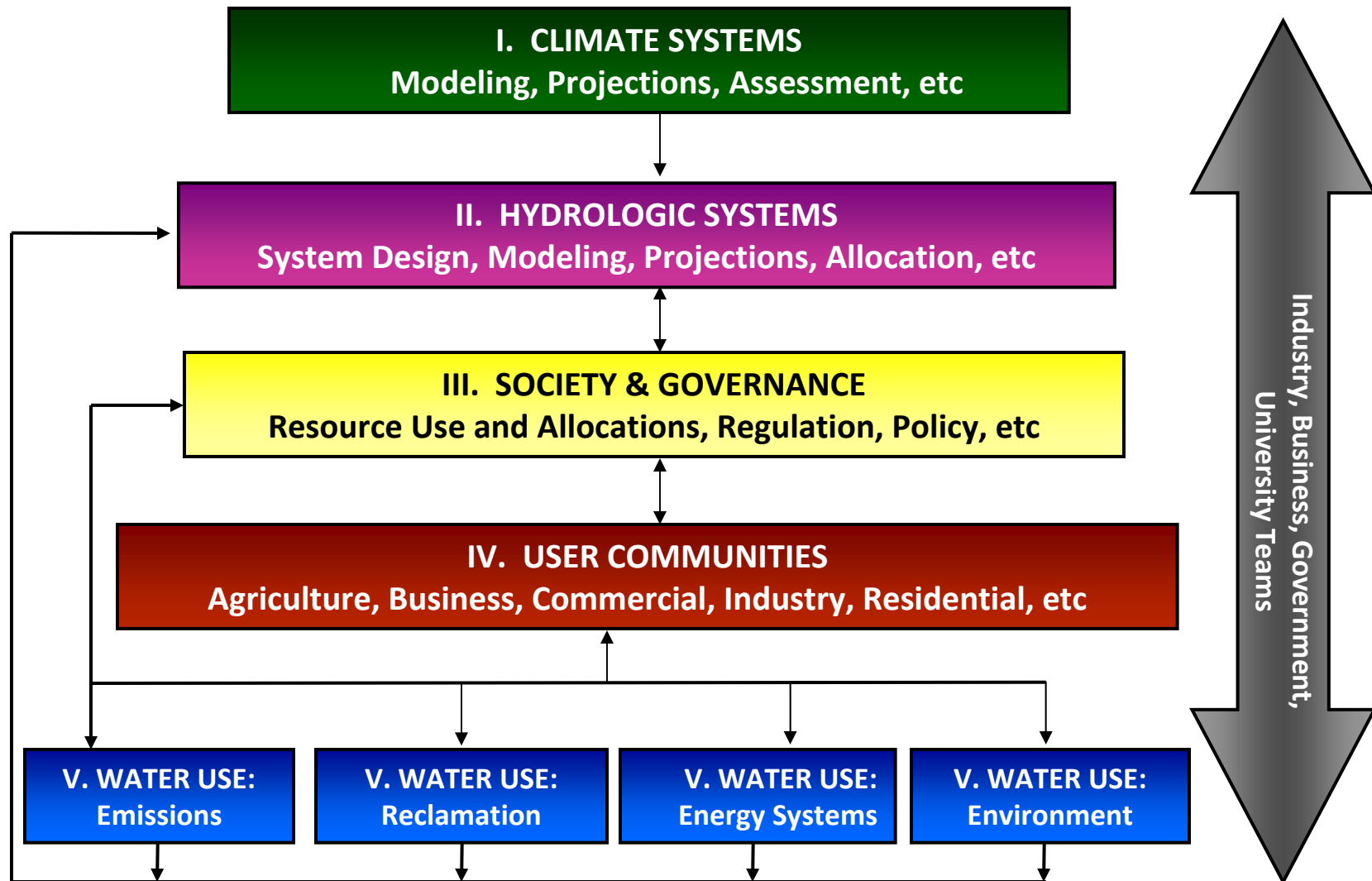
## CMAS Research Theme Director

Professor Jim Falk

Director, Australian Centre for Science, Innovation and Society  
University of Melbourne

# CMAS MODEL

## INTEGRATED WATER RESOURCE MANAGEMENT & IMPACTS of CLIMATE CHANGE Asia-Pacific Rim Urban Communities





# CMAS Five Thrust Areas

- I. **Climate Systems** - focuses on enhancing linkages between regional climate models (RCMs) and global climate models (GCMs) for the Pacific Rim case study cities.
- II. **Hydrologic Systems** - focuses on linking precipitation inputs and extreme weather events to impacts on the land masses of urban communities.
- III. **Society and Governance** - focuses on tools and approaches to overcoming barriers to effective integrated water governance and to develop a clearer picture of how local knowledge may affect effective adaptation responses, and the role that education can play in shaping resilient urban communities in the face of water stress.
- IV. **User Communities** – focuses on User Communities, ensuring they are both examined and participate in the shaping of the research questions and responses.
- V. **Water Use: Emissions, Reclamation, Energy & Environment** – focuses on developing an array of technologies and approaches for water reclamation for integrated use with the overall project. The thrust will be an integration of four sub-areas: Emissions, Reclamation, Energy, and Environment.

# **AWI Strives to Attract Business Participation**

## **AWI Requests to ABAC (February, 2009)**

- 1. ABAC might help AWI recruit business participants -- persons developing products and services to better manage challenges related to climate change and public health threats. Such business recruits might participate in AWI workshops, might be interviewed by AWI researchers, or might review and comment on AWI reports.**
- 2. ABAC might disseminate some of AWI's research results in ABAC publications.**
- 3. ABAC might incorporate some of AWI's research results in its policy recommendations to APEC leaders.**

## ABAC Response to AWI Requests\*

# 24. *“Mr Richard Drobnick, Managing Director from the APRU World Institute (AWI), presented to the group on the Institute’s upcoming research projects on Climate Change and Public Health. Mr Drobnick outlined that ABAC can assist the Institute on its projects in three ways: 1) recruit business participants to participate in surveys 2) ABAC as a vehicle to assist in publicising and disseminating AWI’s work 3) ABAC as a vehicle to assist AWI in policy recommendations to senior officials and leaders resulting from its studies and research.”*

# 25. *“The Chairman agreed that ABAC establish a relationship with AWI and the Institute work with the Secretariat to contact members regarding their participation and interest in their upcoming projects.”*

\* Recommendations of ABAC’s “Sustainability Development Working Group” (2/12/09)

# AWI Strives to Recruit Government Participation



AWI Managing Director, Richard Drobnick, Kyoto University President Kazuo Oike and Keio University President Yuichiro Anzai sharing information about AWI's research programs with Japanese Prime Minister Yasuo Fukuda (June, 2008)

# **AWI Requests to PECC**

- 1. PECC Member Committees might help AWI recruit business and government participants for its research programs --persons developing products and services to better manage challenges related to climate change and government policy makers/policy advisors who are involved with relevant climate change issues.**

**Such recruits might participate in AWI workshops, might be interviewed by AWI researchers, or might be asked to comment on draft versions of AWI reports.**

- 2. PECC might disseminate some of AWI's research results in PECC publications.**
- 3. PECC might incorporate some of AWI's research results in its policy recommendations to APEC senior officials.**

## **Annex 1: CMAS Outcomes**

- 1. Keynote lecture by CMAS Research Theme Director, University of Melbourne's Jim Falk, at "Tokyo World Conference for Sustainable Future," sponsored by the Nihon Kezai Shimbun (November, 2008)**
- 2. Obtained agreement from ABAC to collaborate with AWI research programs, at ABAC Meeting in Wellington (February, 2009)**
- 3. Article published about CMAS by CMAS co-director UC San Diego's Lisa Shaffer, "Coastal Cities: Climate Change Impacts and Response Strategies," in Saul Hymans (ed), The Economic Outlook for 2009: Fifty-sixth Annual Conference on the Economic Outlook, Ann Arbor, Michigan, Research Seminar in Quantitative Economics (March, 2009)**
- 4. Seminar presented by CMAS Research Theme Director, University of Melbourne's Jim Falk on "Climate Change, Water and the CMAS Program," at United Nations Institute of Advanced Studies, Yokohama (May 2009)**

## **Annex 1: CMAS Outcomes**

**5. Invited to become a partner for Regional Cooperation and Knowledge Hub Services for the National Hydraulic Research Institute of Malaysia (NAHRIM) *NAHRIM Knowledge Hub* and participated in NAHRIM's "Workshop on Developing Water and Climate Change Adaptation Guidelines," Kuala Lumpur (May, 2009)**

**6. Conducted a workshop titled, "Hydrologic Data Management and Modeling in Southeast Asia," Kuala Lumpur (July, 2009)**

- **Co-organized with: UNESCAP, Aguajaring & Water Knowledge Hub for Climate Change Adaptation & NAHRIM**
- **Attracted 30 government agency participants from all across Southeast Asia**
- **Jointly conducted by AWI CMAS members: University of Malaya and University of California at San Diego**



## **Annex 1: CMAS Outcomes**

**7. Stimulated the development of a “Sustainability Partnership” with the Asia Society Centers of Northern and Southern California and the University of California at Los Angeles (UCLA) and the University of Southern California (USC), to produce two workshops and public conferences per year, from 2009-2014, on sustainability issues, with “Year One” schedule shown below: (September, 2009)**

**“Water & Energy Nexus,” San Francisco, December, 2009**

**“Water & Energy Nexus,” Los Angeles, April, 2010**

**8. Invited by the President of the King Abdullah University of Science and Technology [www.kaust.edu.sa](http://www.kaust.edu.sa) to help organize sessions for the inaugural “Red Sea Science & Innovation Forum,” which will be held in Jeddah in January, 2011. A tentative title for the 2011 forum is “Sustainable Cities in the Solar Belt” (September, 2009)**



## **Annex 1: CMAS Outcomes**

- 9. CMAS Research Theme Director, University of Melbourne's Jim Falk participated as a rapporteur and panelist in the "Regional Climate Change Conference," sponsored by Japan's Science and Technology in Society Forum, Kyoto (October, 2009)**
- 10. Group on Earth Observations (GEO) approved a concept proposal from AWI CMAS members—UC San Diego, U. Melbourne, & U. Malaya to "Develop Hydrological Data Infrastructure and Capacity Building for Assessing and Predicting Climate Change Effects on Water Resources in South East Asia" (October, 2009)**

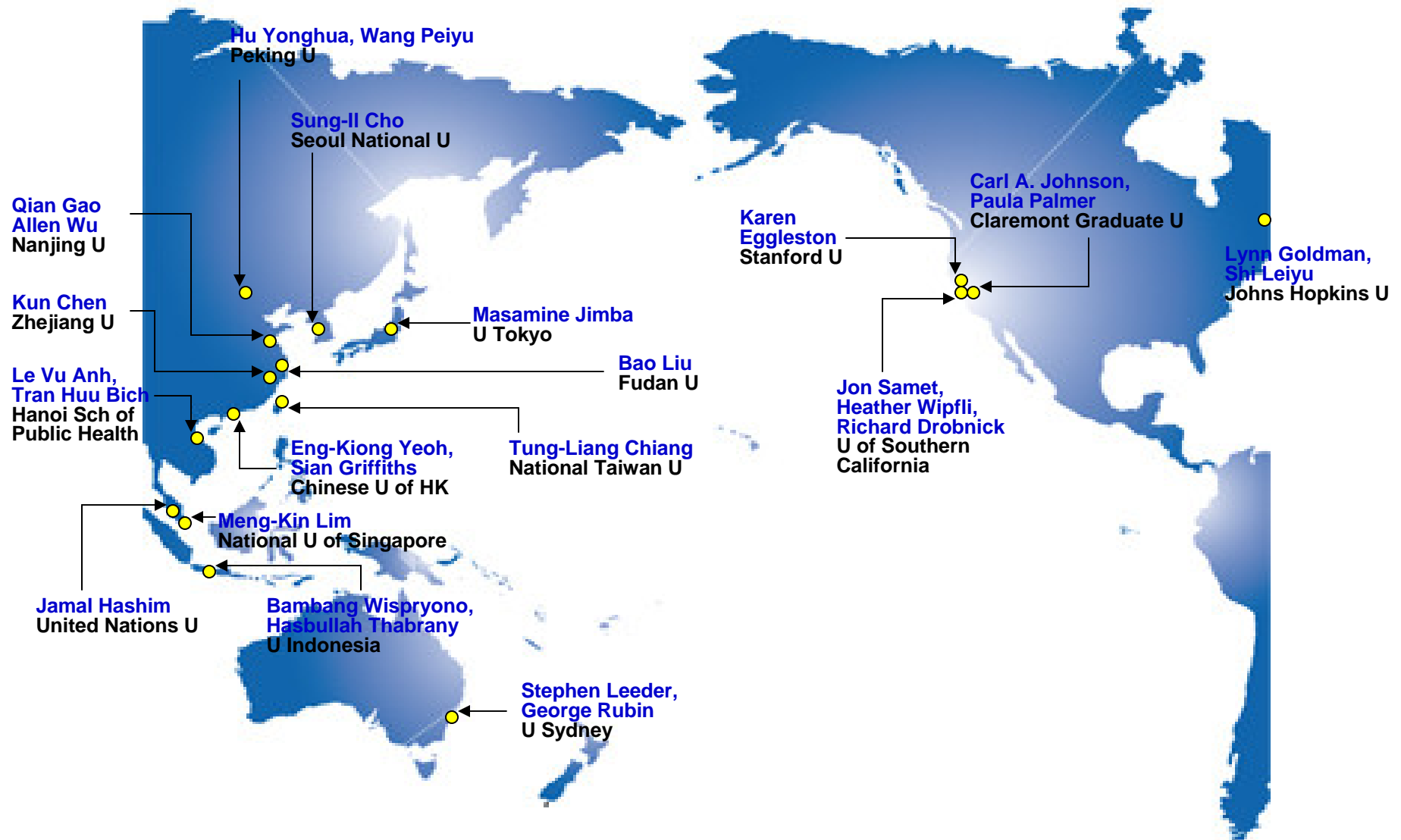
## Annex 1: CMAS “Pipeline”

- Submitted a draft proposal to the Asian Development Bank for funding support for CMAS (August, 2009)
- Invited by the United Nations University to submit a proposal to develop a “UNU-Climate Transition Innovation Center in Melbourne. A University of Melbourne proposal has been submitted to the Government of Victoria to provide matching funding (September, 2009)
- Submitted proposal to include AWI CMAS sessions in the program for the “2010 Singapore International Water Week” (September, 2009)
- Proposed to publish an AWI Climate Change Book: *And Not a Drop to Drink: Water, Pacific Rim Cities, and Climate Change*, World Scientific (Singapore), (December, 2010)

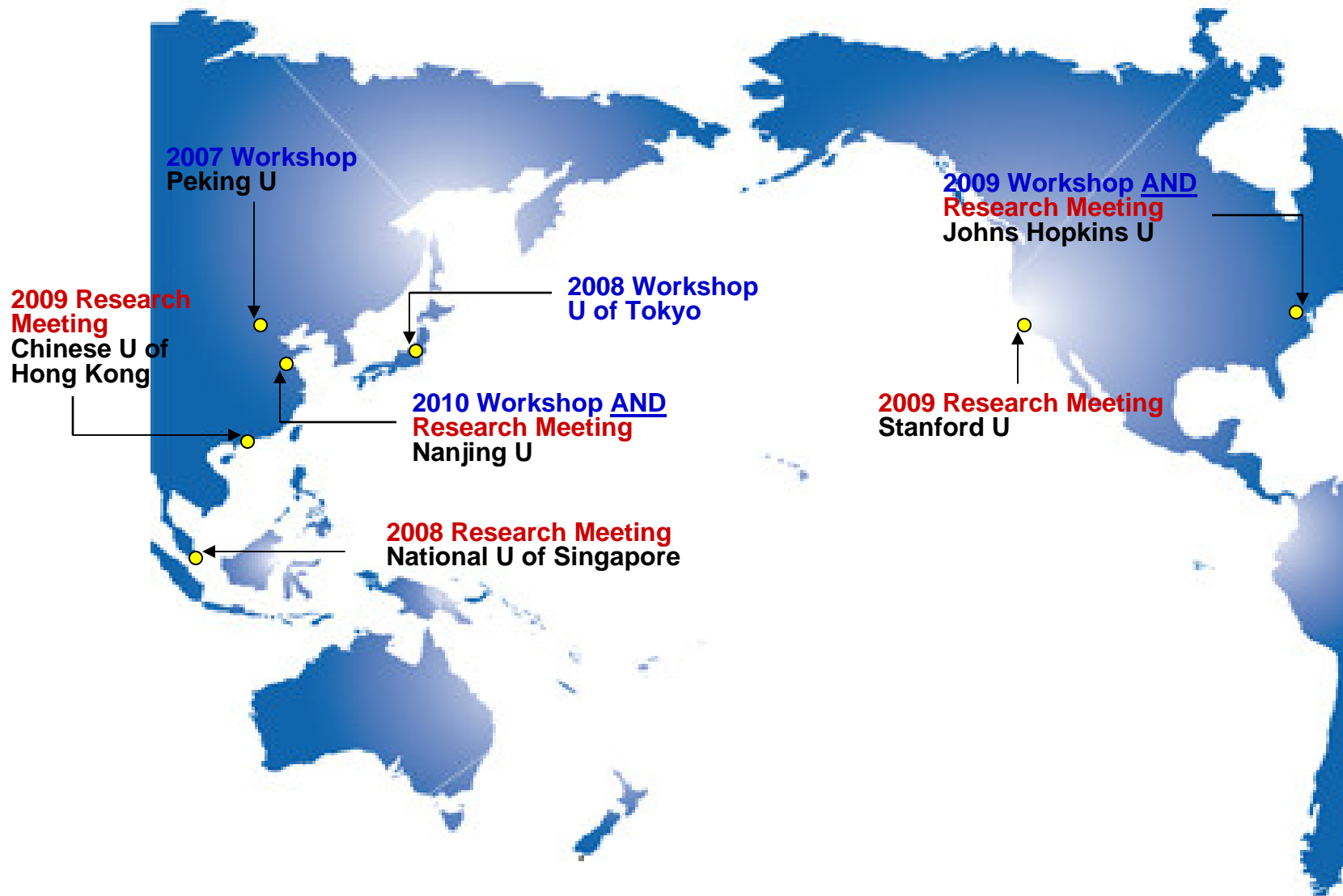
## Annex 2: AWI Public Health Research Program: Case Study Cities (15)



## Annex 2: AWI Public Health Research Team Leaders (17 research teams)



## Annex 2: AWI Public Health Workshops (4) and Research Meetings (5)



## Annex 2: Public Health Non-Communicable Disease (NCD) Project Outcomes

### Outcomes

1. The University of Sydney awarded AUD14,000 to Prof Stephen Leeder to develop the AWI Public Health NCD Phase 2 project titled, “Breakthrough Collaborative Research Project to Reduce Mortality from Cardiovascular Disease” (September, 2009)
2. Invited to provide a panel session on AWI NCD Phase 2 Projects at the “Asia Conference on Emerging Issues in Public Health”, hosted by the School of Public Health & Primary Care, Chinese University of Hong Kong on Nov 29–Dec 1, 2009 (September, 2009)
3. Final draft of AWI Public Health NCD Baseline Assessment article (Data from Phase 1: “Macro Studies”) by Meng Kin Lim (NUS) and Karen Eggleston (Stanford U) to be presented at AWI research workshop at CUHK, Nov 30-Dec 1, 2009 (October, 2009)

### Pipeline

1. Proposed to publish an AWI Public Health Book: *Bridging the Gap Between Academic Public Health & the Public Health Workforce: New Approaches for Advancing Public Health*, Co-editors, Meng Kin Lim (NUS) and Lynn Goldman (Johns Hopkins U), World Scientific (Singapore), (December, 2010)



**THANK YOU**