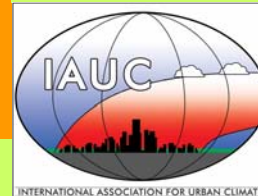


IAUC NEWSLETTER

INTERNATIONAL ASSOCIATION FOR URBAN CLIMATE

Issue No. 26
December, 2007.



www.urban-climate.org

President's Column

It is my great pleasure to announce that the IAUC Awards Committee has selected Dr Masatoshi Yoshino, Professor Emeritus of the University of Tsukuba and Senior Programme Advisor, Environmental and Sustainable Development Programme, United Nations University as the 2007 IAUC Luke



Howard Award winner. The award honors an individual who has made outstanding contributions to the field of urban climatology in a combination of research, teaching, and/or service to the international community of urban climatologists. Professor Yoshino has made profound contributions and his influence over the field is significant, covering various aspects of urban and applied climatology, especially in Asia. This award is a fitting tribute to a scientist who has inspired generations of Japanese urban climatologists. Please read the full citation later in the newsletter.

I am also very pleased to report that Bob Bornstein is the winner of the 2008 Helmut E Landsberg Award of the American Meteorological Society. The Helmut E Landsberg Award recognizes an individual or team for exemplary contributions to the fields of urban meteorology, climatology, or hydrology. Quoting from the citation Bob has received the award "for over three decades of international leadership in the field of urban meteorology, including fundamental contributions in the areas of air pollution meteorology, urban heat island dynamics, and mesoscale modeling of urban areas". Bob is of course known to many of our members, he was also an inaugural board member (2000-06) and past treasurer of IAUC (2005-06).



The special ICUC6 (Göteborg) issue of the International Journal of Climatology (Vol 27, Issue 14) has been published in November. It contains 14 papers including most of the plenary presentations and a few additional selected contributions.

Preparations for ICUC7 in Yokohama (Japan) in 29 June – 3 July 2009 are in full swing. Please have a look at the official website, download and distribute

the 1st circular (<http://www.ide.titech.ac.jp/~icuc7/ICUC7-1st circular.pdf>).

This is the last newsletter edited by Gerald Mills. Starting with the first edition published in October 2003, Gerald has set high standards and developed the newsletter into an interesting and indispensable communication tool for all IAUC-related activities. I am sure that everyone will join me in expressing my sincere thanks to Gerald for doing such a wonderful job. Please find a review of the newsletter written by Gerald later in this edition. The next newsletter will be published in March 2008 when we will switch to a quarterly schedule with David Pearlmutter as the new editor. I would like to encourage you to think about submitting an article to David (www.bgu.ac.il/CDAUP/david.html).

As the year draws to a close I would like to briefly reflect on challenges ahead. Growth of membership remains a priority. A large and diverse membership base is important for IAUC to retain its relevance and justification to represent the urban climate community. We also have to explore opportunities to bring in the urban perspective into the global climate change debate. Cities are major emitters of GHG gases but also centers of education, power and finance and therefore have enormous potential to contribute to adaptation and mitigation strategies. Any ideas on how to move ahead are most welcome.

With best wishes for 2008!
Matthias Roth
geomr@nus.edu.sg



Contents

- p1. President's Column.
- p2. Urban News
- p3. Luke Howard Award
- p4. ICUC 7 Yokohama, Japan
- p5. AMS Urban Environment Symposium
- p7. Editor's Report on Newsletter
- p9. Urban bibliography
- p10. Board information and submission information.

Urban Climate News

RANKING OF THE WORLD'S CITIES MOST EXPOSED TO COASTAL FLOODING TODAY AND IN THE FUTURE

PRESS RELEASE - OECD – Paris, 4 Dec 07

The impact of climate change and urban development could more than triple the number of people around the world exposed to coastal flooding by 2070, according to a new report by the OECD, co-authored by experts from academia and the private sector¹

Ranking port cities with high exposure and vulnerability to climate extremes finds that around 150 million people could be exposed to a 1 in 100 year coastal flood event by 2070, up from 40 million today. The estimated financial impact of such an event would also rise to USD 35 trillion by 2070, up from USD 3 trillion today.

The study analyses the exposure of people and property and infrastructure to a 1-in-100 year flood event in over 130 key port cities worldwide. A 1-in-100 year flood event is a commonly accepted risk assessment standard. The study aims to help policy makers determine where to focus adaptation strategies to climate extremes and to understand the potential benefits of mitigation policy. It is the first in a series of OECD reports looking at the economic impact of climate change on cities.

In its estimate of the impact of climate change, the study assumes mean sea level rise of 0.5 meters by 2070. This estimate includes the contributions from melting ice sheets that have proved important over recent decades and is consistent with a medium to high risk scenario.

Mitigation strategies will slow and limit the exacerbating effects of climate change on coastal flood risk, the report notes. This will bring precious time for cities to implement adaptation measures. Studies show that putting effective coastal defences in place can take 30 years or more. Adaptation will have to move to the top of the policy agenda today if it is to make a difference tomorrow.

Around half of the total population exposure to coastal flooding caused by storm surge and damage from high winds is contained in just ten cities today. Mumbai has the highest number of people exposed to coastal flooding. But by 2070, Kolkata (Calcutta) will be the most vulnerable, with the exposed population expected to increase over seven times to more than 14 million people.

Over the coming decades, the unprecedented growth and development of the Asian mega-cities will be a key factor in driving the increase in coastal flood risk globally. In terms of population exposure, Kolkata is closely followed by Mumbai, Dhaka, Guangzhou, Ho Chi Minh City, Shanghai, Bangkok, Rangoon and Hai Phong. Mi-

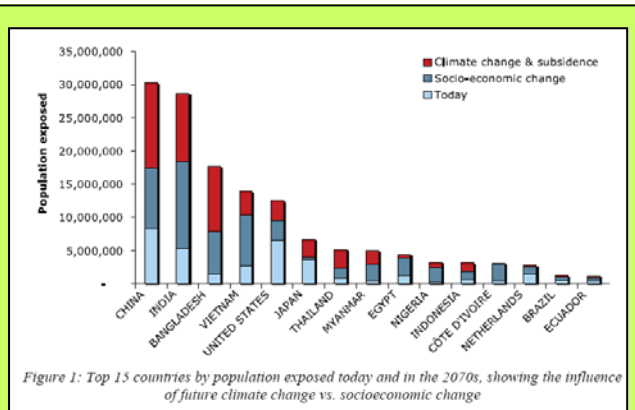


Figure 1: Top 15 countries by population exposed today and in the 2070s, showing the influence of future climate change vs. socioeconomic change

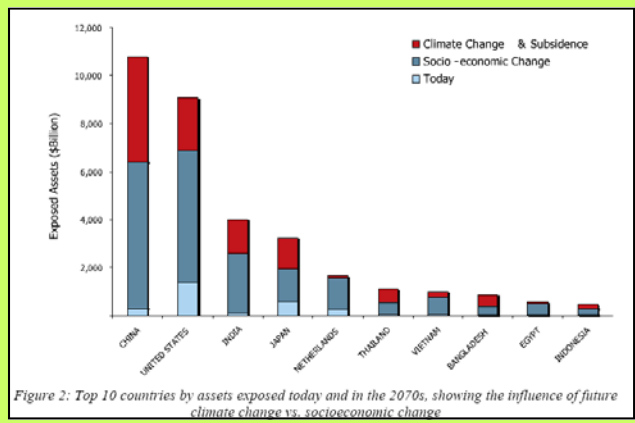


Figure 2: Top 10 countries by assets exposed today and in the 2070s, showing the influence of future climate change vs. socioeconomic change

ami stands out as the only top ten city situated in a developed country.

The cities with the highest value of property and infrastructure assets exposed to coastal flooding today are primarily in developed countries. Miami is the most exposed city today and will remain so in 2070, with exposed assets rising from approximately US\$400 billion today to over US\$3.5 trillion. By 2070, eight of the most exposed cities will be in Asia. Guangzhou is the second most exposed city in terms of assets, followed by New York, Kolkata, Shanghai, Mumbai, Tianjin, Tokyo, Hong Kong, and Bangkok, respectively.

This report - ranking of the world's cities most exposed to coastal flooding today and in the future - is part of a series planned by the OECD on the theme of Cities and Climate Change. Further work will look at the effectiveness of flood defense measures and the vulnerability of key cities globally.

For more information on the OECD's work on climate change, please see: www.oecd.org/env/cc

¹ OECD Environment Working Paper "Screening Study: Ranking Port Cities with High Exposure and Vulnerability to Climate Extremes. Interim Analysis: Exposure Estimates", ENV/WKP(2007)1, OECD 2007. The full report can be accessed from: www.oecd.org/env/workingpapers.

The Luke Howard Award



Dr.Sci. Masatoshi Yoshino

The IAUC is happy to announce that Dr.Sci. Masatoshi Yoshino, Professor Emeritus of the University of Tsukuba and Senior Programme Advisor, Environmental and Sustainable Development Programme at the United Nations University, has been selected by its Awards Committee for the 4th (2007) Luke Howard Award. His influence on the study of urban climates has been, and continues to be, significant.

Prof. Yoshino's great achievement lies in the field of small scale climates including that of urban climate. He is the author of more than 300 articles on climatology with more than 100 papers in reviewed journals. Among his contributions is his seminal textbook entitled **Climate in a Small Area**. It describes systematically climates throughout the world using detailed data and explores the relationship between geographical features and the climate system. Used as a standard book for over thirty years, it has had a great impact on the development of climatology.

Among his contributions to the study of urban climates was his summary of the history of urban climate research published in 1990/91. In addition to his examination of the lineage of current climate work, he suggested fruitful areas for future research. Among these is the effect of urban areas on precipitation, a topic that is receiving considerable attention now.

His research interests in such diverse topics as the impacts of global warming, land use change, urban flooding and wind distributions, are used by both researchers and policy-makers. His impact has been particularly marked in Thailand, Indonesia and Sri Lanka, among other Asian countries.

Throughout his career he has been an internationally recognised academic leader. He has acted at various times as Vice-president of International Geographical Union (IGU), the chairman of Climatology Commission of IGU, and the chairman of the National Committee of International Geosphere-

Biosphere Programme (IGBP). In addition he has contributed to international societies on sustainable development as an executive senior advisor of the United Nations University.

Based on his outstanding contributions to the field of urban climatology in a combination of research, teaching and service to the international community of urban climatologists, Prof.Yoshino was selected as the winner of the IAUC Luke Howard Award 2007.

Manabu Kanda
IAUC Awards Committee Chair

A partial Curriculum Vitae

Academic Activity

- Former Vice-President of International Geographical Union,
- Foreign Member of the Rumanian Academy of Sciences,
- Former Member of Science Council of Japan,
- Former President of Association of Japanese Geographers,
- Former President of Japanese Association for Arid Land Studies,
- Former Chairman of IGBP National Committee of Japan,
- Former Chairman of IGU-Commission on Climatology,
- Former President of Japanese Study Group for Climate Impact and Application
- Chairman of Bioclimate Studies in Japan

Published Books

- 1961, Sho-kikou (Local climate), Chijin-shokan, Tokyo, Japan (in Japanese),
- 1968, Kikougaku (Climatology), Chijin-shokan, Tokyo, Japan (in Japanese),
- 1975, Climate in a small area, University of Tokyo Press, Tokyo, Japan,
- 1978, Kikougaku (Climatology), Taimeido, Tokyo, Japan (in Japanese),
- 1979, Sekai-no-kikou, Nippon-no-kikou (World climate and Japanese climate), Asakura-shoten, Tokyo, Japan,
- 1987, Shinpan-sho-kikou (Revised edition of local climate), Chijin-shokan, Tokyo, Japan (in Japanese),
- 1997, Chugoku-no-sabakuka (Desertification in China), Taimeido, Tokyo, Japan (in Japanese),
- 2001, Kikouchimei-shuusei (Studies on climatic place names), Kokon-shoin, Tokyo, Japan (in Japanese),
- 2004, Kikou-fuudo-ni-manabu (Studying climates). Ed. : Bioclimate Study Group, Gakuseisha, Tokyo ,
- 2006, Rekishi-kikou-wo-yomu (Climate in the history). Gakuseisha, Tokyo.

Some published articles

- 1990/91, Development of urban climatology and problems today. Energy and Buildings, 15/16, 1-10)
- 2004, Development of phenological recognition and phenology in ancient China. Japanese Jour. of Biometeorology, 41 (4), 141-154,
- 2004, Agroclimatological problems in the Taklimakan Desert and its surrounding area in NW China. Jour. Agric. Meteorology, 61(1), 1-14.
- 2005, Life of farmers in at the oases in the Taklimakan Desert and in Dzungfang, China. Global Environment, 10(1), 81-96 (in Japanese).
- 2006, Global warming and mountain environment. Global Environmental Research, 10(1), 3-12.

ICUC-7 Yokohama Japan June 29 to July 3, 2009.



The International Association for Urban Climate (IAUC) warmly invite you to the Seventh International Conference on Urban Climate (ICUC-7) to be held in Yokohama, Japan from June 29 to July 3, 2009. ICUC-7 is the continuation of a series of similar conferences starting in Kyoto, Japan in 1989, followed by those in Dakha, Bangladesh in 1993, Essen, Germany in 1996, Sydney, Australia in 1999, Lodz, Poland in 2003, and Göteborg, Sweden in 2006. The success of this series helped to create a cohesive international community of urban climatologists.

The aims of the conference remain as before, to provide an international forum where the world's urban climatologists can meet to showcase and discuss modern developments in research, and the application of climatic knowledge to the design of better cities. ICUC-7 wishes to cater to the interests of a diverse community of meteorologists, climatologists, hydrologists, ecologists, engineers, architects and planners and others interested in these topics. On behalf of the organisers we are honoured to invite you to attend the Seventh International Conference on Urban Climate in Yokohama, Japan in 2009.

Dr. Manabu Kanda, ICUC-7 Local Organizer
Dr. Matthias Roth, President of IAUC

Scientific Programme

The focus can be original research into the physical, biological and chemical atmospheric processes operating in built areas, the weather, climates and surface hydrology experienced in built areas, the design and testing of scale, statistical and numerical models of urban climates or reports on the application of climatic understanding in architectural design or urban planning. Papers may relate to new concepts, methods, instruments, observations, applications, forecasting operations, scenario testing, projections of future climates, etc. Sessions that focus on major field or other projects may be proposed. Hence appropriate topics include, but are not restricted to:

- Building climates (interior and exterior) and the climatic performance of built features
- Urban bioclimates relevant to the functioning of plants, wildlife and humans
- Climates of paved surfaces such as roads, streets, highways, runways and parking lots
- Climatic performance of urban trees, lawns, gardens, parks, irrigation, rivers, lakes and reservoirs
- Topoclimatology of cities including the effects of coasts, valleys and other landforms
- Airflow over cities including turbulence, urban roughness and

- drag, changes of wind speed and direction, urban circulation systems, wind engineering
- Urban impacts on surface moisture, dew, evaporation, humidity, fog, cloud and precipitation
- Exchanges of heat, mass and momentum between the urban surface and its boundary layer
- Short- and long-wave radiation in polluted air, urban visibility
- Urban heat islands, their nature, genesis and mitigation
- Remote sensing of cities and urban climate
- Interactions between urban climate and the emission, dispersion, transport, transformation and removal of air pollutants
- Models of the urban atmosphere at all scales
- Climate sensitive urban design and planning
- Forecasting urban weather, comfort, hazards, air quality
- Cities and global change

Schedule

*2nd circular: March, 2008
*Pre-registration: October, 2008
The pre-registration form is attached to the 2nd circular. Participants can also submit their applications online.

*Abstract submission: October, 2008
Short abstract (maximum 200 words) can be sent by e-mail to the conference secretariat.

*Notification of Acceptance: December, 2008

*Submission of extended abstract: March, 2009
Details of the format for extended abstracts will be provided in the Second Announcement

Meeting venue

The conference will be held at PACIFICO YOKOHAMA-PACIFIC CONVENTION PLAZA YOKOHAMA-. This wonderful location has been enjoying a renaissance in recent years. Refer to <http://www.pacifico.co.jp/english/index.html> for the detail of the symposium site.

International Scientific Committee

The committee will be composed of all the board members of the International Association for Urban Climate (IAUC <http://www.urban-climate.org/>).

Local Arrangements Committee

Manabu Kanda (Tokyo Institute of Technology), Chairman

Conference Website

<http://www.ide.titech.ac.jp/~icuc7/>
Please browse above site frequently because it will be updated regularly.

Contact Information

Secretariat of ICUC-7
Department of International & Development Engineering
Tokyo Institute of Technology
2-12-1, Ookayama, Meguro-ku, Tokyo 152-8552, Japan
Phone /Fax :+81- 3- 5734- 2768
e-mail: icuc7secretariat.mk@ide.titech.ac.jp

The first circular is available at
[www.ide.titech.ac.jp/~icuc7/ICUC7-1st circular.pdf](http://www.ide.titech.ac.jp/~icuc7/ICUC7-1st%20circular.pdf).

Conference Report

Seventh Symposium on the Urban Environment

From: *National urban database and access portal tools (NUDAPT), a project overview.* By **Jason Ching**

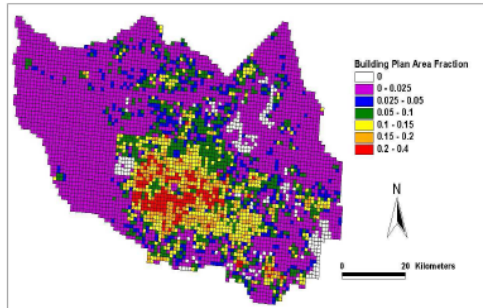
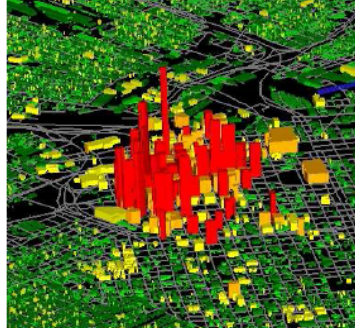


Fig. 1(a) Left: Three dimensional building data derived from airborne lidar platform for 1x1 km section of downtown Houston. (b) Right: Building plan area density, an example of a UCP for Harris County (Houston Metropolitan area) (cf Table 1)

San Diego, California. Mid-September. Sunny skies and perfect weather. Does it get any better? Well, yes, when you throw in three days of fascinating, enlightening presentations on the urban environment at a great location, you get a fabulous mix of intellectual stimulation and relaxation. That just about sums up the American Society of Meteorology's Seventh Symposium on the Urban Environment which was held jointly with the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes, September 10 – 13, 2007 at the Catamaran Resort Hotel, located right on the shores of Mission Bay in San Diego, California, USA.

Much of the world's urbanized population lives in coastal areas. The conference provided the forum to examine the interface between these two topics - focusing on the processes, issues, and research related to understanding this special urban climate – with its own set of issues and problems. Many sessions were specifically urban climate focused, and others combined both coastal and urban, examining the climate issues specific to coastal urban areas (see schedule on p6).

The opening joint plenary session included Jason Ching, of NOAA, Cynthia Rosensweig of NASA, Shuyi Chen from the University of Miami, Jorge Gonzalez from Santa Clara University, Thomas Malone from the University of Maryland, and Mariano Estoque from the Manila Observatory in the Philippines. These speakers set the tone for the conference speaking about issues facing coastal cities – of urbanization impacting the environment, and the environment impacting the coastal populations – particularly in the face of climate change.

Joint plenary sessions began each day. Monday afternoon had concurrent sessions – one

joint track on urban and coastal topics and one track primarily on urban issues - biometeorology and human impacts of the urban climate. Tuesday's focus was on multi-scaled urban modeling. Wednesday featured two sessions on observation and monitoring of the Urban Coastal environments, and an urban session on focusing on turbulence and boundary layer. Wrapping up the conference on Thursday were a series of combined sessions on air quality and dispersion modeling, and also few sessions on physical and fine-scale modeling.

All in all, about 20 plenary, joint, and urban or coastal sessions took place, as well as two evenings of poster sessions. These represented a wide range of topics and studies from many locales – tropical to temperate – empirical UHI studies, use of remote sensing, examinations landcover/landuse, impacts of vegetation and open space, energy budgets, coastal and urban air quality, and dispersion modeling and more.

One of the program's organizer's commented that they were keeping the blinds closed on the conference room windows so the view of the water, sun, sand and sailboats would not tempt the attendees. Not to worry, the lure of the presentations at this very good conference was enough to keep us interested and inside.

DonnaA. Hartz,
Arizona State University,
School of Geographical Sciences

Conference Report

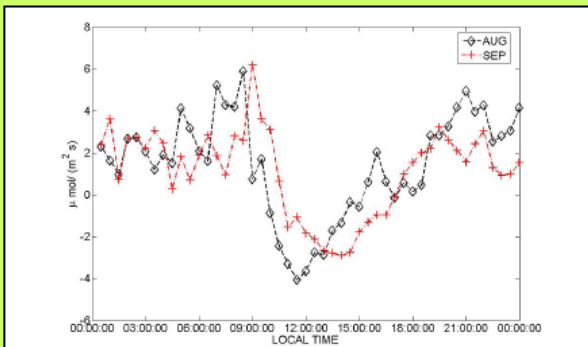


Figure 2: 30 minute averaged CO_2 fluxes for August and September 2005 for Murray, residential site.

From: *A comparison of CO₂ fluxes at two sites within the urbanized Salt Lake Valley*, Prathap Ramamurthy, University of Utah, Salt Lake City, UT; and E. R. Pardyjak.

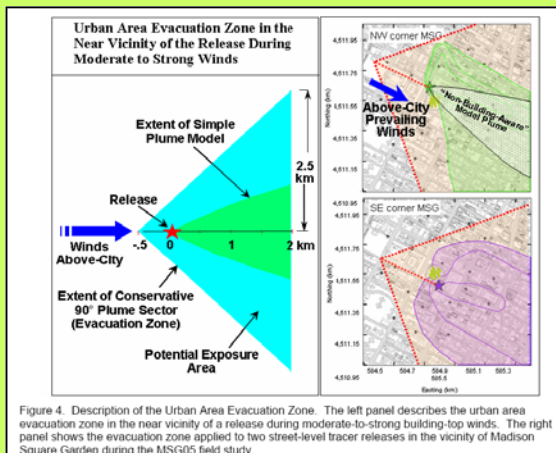


Figure 4. Description of the Urban Area Evacuation Zone. The left panel describes the urban area evacuation zone in the near vicinity of a release during moderate-to-strong building-top winds. The right panel shows the evacuation zone applied to two street-level tracer releases in the vicinity of Madison Square Garden during the MSG05 field study.

From: *Urban Dispersion Program: Urban measurements applied to emergency response* by K. Jerry Allwine, Pacific Northwest National Laboratory, Richland, WA; and K. L. Clawson, J. E. Flaherty, J. H. Heiser, R. P. Hosker, M. J. Leach, and L. W. Stockham.

From: *Urban design and thermal comfort: assessment of open spaces in Barra Funda, a brownfield site in São Paulo, by means of site measurements and predictive simulations* by Denise Duarte, USP - University of Sao Paulo, Sao Paulo, SP, Brazil; and J. Gonçalves and L. Monteiro.

ML	P1	P2	P3	P4	P5	P6	P7	MS
07:00	N	N	N	N	N	N	N	N
07:15	N	N	N	N	N	N	N	N
07:30	N	N	N	N	N	N	N	N
07:45	N	N	N	N	N	N	N	N
08:00	N	N	N	N	N	N	N	N
10:00	W	W	H	W	W	W	N	H
10:15	H	H	H	H	W	H	N	H
10:30	H	H	H	H	W	H	N	H
10:45	H	H	H	H	W	H	N	H
11:00	H	H	H	H	H	H	N	H
13:00	VH	VH	VH	VH	VH	VH	H	VH
13:15	VH	VH	VH	VH	VH	VH	H	VH
13:30	VH	VH	VH	VH	VH	VH	H	H
13:45	VH	VH	VH	VH	VH	VH	H	H
14:00	VH	VH	VH	VH	VH	VH	H	H
16:00	VH	VH	VH	VH	VH	VH	H	W
16:15	VH	VH	VH	VH	VH	VH	H	N
16:30	VH	H	VH	VH	VH	VH	H	N
16:45	H	H	VH	VH	VH	VH	H	N
17:00	H	H	VH	VH	VH	VH	H	N

Figure 6: Final results of thermal sensation for the seven points of study and for the meteorological station.

A full listing of papers available at: http://ams.confex.com/ams/7Coastal7Urban/techprogram/programexpanded_429.htm

Seventh Symposium on the Urban Environment

Monday, 10 September

Joint Session J1 Plenary: Coastal-Urban Interactions and Vulnerabilities in the Areas of Weather, Climate, and Air Quality (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

Joint Session J2 Characterizing the Urban and Coastal Climate: Thermal and Boundary Layer Structure and Atmospheric Responses (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

- Session 1 Human Dimensions, Urban Climate, Planning, and Biometeorology I
- Session 2 Human Dimensions, Urban Climate, Planning, and Biometeorology II
- Session 3 Energy Exchange, Water Balances and Anthropogenic Fluxes

Tuesday, 11 September 2007

Joint Session J3 Plenary: Advancing our Modeling Capabilities (Tools) (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

- Session 4 Advanced Multiscale Urban Modeling

Keynote Session KS1 Award, Recognition and Guest Luncheon Speaker (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

- Session 5 Advanced Multiscale Urban Modeling II
- Session 6 National Urban Database and Access Portal Tools (NUDAPT)

Wednesday, 12 September 2007

Joint Session J4 Plenary: Observations and Forecasting in Urban Coastal Zones (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

- Session 7 Observing and Monitoring the Urban-Coastal Environment
- Session 8 Observing and Monitoring the Urban-Coastal Environment II
- Session 9 Urban Turbulence and Boundary Layers

Thursday, 13 September 2007

Joint Session J5 Plenary: Modeling for Emergency Response and Air Quality in Urban-Coastal Areas (Joint between the Seventh Symposium on the Urban Environment and the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes)

Joint Session J6 Coastal and Urban Dispersion and Air Quality (Joint between the Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes and the Seventh Symposium on the Urban Environment)

- Session 10 Urban Air Quality and Dispersion Studies
- Session 11 Urban Air Quality and Dispersion Studies II
- Session 12 Physical and Fine-Scale Modeling
- Session 13 Physical and Fine-Scale Modeling II
- Session 14 Urban Air Quality and Dispersion Studies III

Editor's Report

Colleagues, this is my final Newsletter as editor. David Pearlmutter will take over this position in the new year.

The idea of a Newsletter to accompany the creation of the International Association for Urban Climate (IAUC) was first mooted at ICUC-5 in Łódź, Poland. That was a particularly important conference for the field of urban climatology, I think, as it demonstrated that there was a dispersed community of scholars that had sufficient common interest to sustain a high-calibre international conference.

Tim Oke has referred to the recent history of urban climatology as an 'ending of the solitudes'. This phrase captures the evolution of the field nicely. For much of its history, advancement in urban climatology has relied on the endeavours of few scholars, often working in isolation and along parallel lines of inquiry. Its more recent history however has been characterised by major advancements in our scientific understanding. This has occurred as the 'population' of urban climatologists has mushroomed and strong centres of research have emerged in North America, Europe and Asia.

As the world's population will soon be predominantly 'urban' it is essential that the field provides a scientific understanding of the environment where most people will live. The 'ending of the soli-

tudes' refers to the development of an international research community that agrees on the outstanding issues and shares insights and resources to explore these issues. The primary purpose of the Newsletter has been to aid in this development.

In the tables below, have listed the work that has been published in the Newsletter over the past three years. I am very grateful for the support of colleagues who sent me in materials to generate substantive Newsletters on a regular basis. I have listed the Country Reports (Table 1) and the Urban Project Reports (Table 2) that indicates the strength of the field both in terms of breadth and sophistication. There were many other contributions that I have not listed, most notably those on Urban News and on Conferences. I owe a special thanks to Jenny Salmond who has produced the Urban Bibliographic Report for the last three years.

I hope that the Newsletter remains an important part of the development of the IAUC in the future and I wish David well in his stewardship.

Gerald Mills
Gerald.mills@ucd.ie

Table 1: Since its inception, the Newsletter has endeavoured to obtain reports from places.

Most of these contributions represent Country Reports and provide an insight into the different research emphases that characterise urban climate research internationally.

In the adjacent columns are the 'places', the authors and the issue number followed by the date.

Mexico	Ernesto Jauregui & Adalberto Tejeda	4 Apr 2004
New Zealand	Rachel Sproken-Smith	6 Aug 2004
Czech Republic	Josef Brechler	8 Dec 2004
Italy	Tiziano Tirabassi	9 Feb 2005
Korea	Jong-Jin Baik	
Poland	Krzysztof Fortuniak	10 Apr 2005
Germany	Andreas Matzarakis	11 Jun 2005
Argentina	Laura E. Venegas	
Malaysia	Shaharuddin Ahmad	12 Aug 2005
Sri Lanka	Rohinton Emmanuel & Erik Johansson	
Iran	G. Azizi	13 Oct 2005
Nigeria	Ibidun O. Adelekan	
India	Ramesh P. Singh <i>et al</i>	14 Dec 2005
Addis Ababa, Ethiopia	Bisrat Kifle	17 Jun 2006
Canada	Jocelyn Mailhot <i>et al</i>	
Australia	Andrew Coutts	19 Oct 2006
Phoenix, Arizona	Anthony J. Brazel	23 Jun 2007
Singapore	Matthias Roth & Winston Chow	24 Aug 2007

Editor's Report

Project	Author	Issue	Date
The Basel UrBan Boundary Layer Experiment (BUBBLE).	Mathias Rotach	2	Dec 03
WMO Guide on Urban Observations	Tim Oke	3	Feb 04
Joint Urban 2003	Jerry Allwine		
Stadtklima/Urban Climate	Andreas Matzarakis		
Urban Perspectives	Barbara Zahnen	4	Apr 04
Townscape III	Sleiman Azar		
FUMAPEX	Alexander Baklanov		
ENVI-met A microscale urban climate model	Michael Bruse	5	Jun04
The climate of urban street canyons, Goteborg, Sweden.	Oaf Offerle		
Open-air modelling of urban surfaces in a desert climate.	David Pearlmutter	6	Aug 04
Tribute: Prof. Robert MacDonald	Steven Hanna		
Outdoor Experiments on 1/5-Scale Urban Models.	Manabu Kanda		
Modelling scalar fluxes in urban areas	Janet Barlow	7	Oct 04
DAPPLE	Samantha Arnold		
Urban CO2 fluxes: Rome, Italy	Miglietta et al	8	Dec 04
Challenges in Urban Meteorology	Margaret McCalla & Robert Dumont		
Urban FluxNet database CO2 flux measurements	Danilo Dragoni	9	Feb 05
SURF Rainfall in a tropical city, Indonesia	Dewi G.C. Kirono		
Mitigation of thermal stress, Seoul South Korea	Toshiaki Ichinose		
Monitoring and prediction of urban climate Seoul, Korea.	Yeon-Hee Kim	11	Jun 05
The Helsinki Mesoscale Testbed	Walter F. Dabberdt	13	Oct 05
A new urban flux site in Italy	Alessandro Matese	14	Dec 05
Wind field over Moscow using two Sodars	Margarita A. Kallistratova		
Mapping the London heat island	Richard Watkins		
Urban fluxes of VOCs and CO2 from a Mexican neighbourhood.	Erik Velasco et al	15	Feb 06
CityFlux: A mid-term perspective	Ian Longley	16	Apr 07
The Montréal Urban Snow Experiments (MUSE)	Stéphane Bélair et al		
Urban heat island intensity in Kunming, China	Y. Zhang et al		
Urban heat island intensity in Wuhan, China	Z.H. Chen et al	17	Jun 06
Climate guidelines for planning in Lisbon, Portugal	Maria-Joa Alcoforado et al		
Luke Howard & The Climate of London (1)	Gerald Mills	18	Aug 06
Urban heat island intensity: Beijing Climatic Station 1961-2000	Guoyu Ren, et al.	19	Oct 06
Urban heat island effect in Tianjin City, China	S. Han, et al.		
Air ventilation assessment system for high-density planning and design	Edward Ng and Vicky Cheng		
Representations of 'urban' and 'rural' space in UHI literature	Iain Stewart		
The urban heat island phenomenon: The case of Chicago	Pravin Bhiwapurkar	20	Dec 06
Urban climate and air pollution in Ouagadougou, Burkina Faso	Jenny Lindén		
Luke Howard's intellectual milieu.	Richard Hamblyn	21	Feb 07
Luke Howard & The Climate of London (2)	Gerald Mills		
Urban design and outdoor thermal comfort in warm climates.	Erik Johansson	24	Aug 07
Towards a tree-view factor	Lee Chapman	27	Oct 07
The Urban Heat Harvester	Robert Samuels		

Table 2: A listing of the urban climate research projects published in the Newsletter.

IAUC Committee Reports

Bibliography

This is my last bibliographic report for the newsletter. Thanks to everyone for their contributions this month and over the last few years. We've seen a wealth of papers published and there can be little doubt about the strength of the discipline. I'd like to take this opportunity to thank my colleagues on the committee and to welcome new members: Gregoire Pigeon, Rohinton Emmanuel, Corinne Frey, Lilly-Rose Aravamudhan, Abel Tablada, Janos Unger and Julia Hidalgo. We are always looking for more volunteers to help prepare the bibliography so if you would like to participate please contact us.

Julia will be taking over as Chair as of the committee so please send further references to papers published since January 1 2007 for inclusion in the next newsletter to her : julia.hidalgo@uvigo.es. As before, please mark the header of your email with 'IAUC Publications 2007'. In order to facilitate entering the information into the data base please use the following format:

Author:
Title:
Journal:
Volume:
Pages:
Dates:
Keywords:
Language:



Thanks once again for all your support.

Jennifer Salmond
j.salmond@auckland.ac.nz

Recent publications in Urban Climatology
(Languages are specified where the publication is known to be in a language other than in English.)

Assimakopoulos, D. N., C. Georgakis, et al. (2006). "Experimental validation of a computational fluid dynamics code to predict the wind speed in street canyons for passive cooling purposes." *Solar Energy* 80: 423-434.
Assimakopoulos, M., G. Mihalakakou, et al. (2007). "Simulating the thermal behaviour of a building during summer period in the urban environment." *Renewable Energy* 32: 1805-1816.
Camalier, L., Cox, W., Dolwick, P. (2007). "The effects of meteorology on ozone in urban areas and their use in assessing ozone trends." *Atmospheric Environment* 41(33): 7127-7137.
De la Flor, F. S., J. M. S. Lissen, et al. (2006). "A new methodology towards determining building

performance under modified outdoor conditions." *Building & Environment* 41: 1231-1238.
Eliasson, I., I. Knez, et al. (2007). "Climate and behaviour in a Nordic city." *Landscape and Urban Planning* 82: 72-84.
Emmel, M., M. Abadie, et al. (2007). "New external convective heat transfer correlations for isolated low-rise buildings." *Energy and Buildings* (39): 335-342.
Furusjo, E., J. Sternbeck, et al. (2007). "PM10 source characterization at urban and highway roadside locations." *Science of the Total Environment* 387(1-3): 206-219.
Gaitani, N., G. Mihalakakou, et al. (2007). "On the use of bioclimatic architecture principles in order to improve thermal comfort conditions in outdoor spaces." *Building & Environment* (42): 317-324.
George, K., Ziska, L.H., Bunce, J.A., Quebedeaux, B., (2007). "Elevated atmospheric CO2 concentration and temperature across an urban-rural transect." *Atmospheric Environment* 41(35): 7654-7665
Giridharan, R., S. Lau, et al. (2007). "Urban design factors influencing heat island intensity in high-rise high-density environments of Hong Kong." *Building & Environment* 42: 3669-3684.
Gokhale, S., Khare, M., (2007). "A theoretical framework for the episodic-urban air quality management plan (e-UAQMP)." *Atmospheric Environment* 41(36): 7887-7894
Grawe, D., Cai, X.-M., Harrison, R.M., (2007). "Large eddy simulation of shading effects on NO2 and O3 concentrations within an idealised street canyon." *Atmospheric Environment* 41(43): 7304-7314.
He, J. F., J. Y. Liu, et al. (2007). "Assessing the effect of land use/land cover change on the change of urban heat island intensity." *Theoretical and Applied Climatology* 90(3-4): 217-226
Heiden, U., K. Segl, et al. (2007). "Determination of robust spectral features for identification of urban surface materials in hyperspectral remote sensing data." *Remote Sensing of Environment* 111(4): 537-552
Kan, H., London, S.J., Chen, H., Song, G., Chen, G., Jiang, L., Zhao, N., Zhang, Y., Chen, B., (2007). "Diurnal temperature range and daily mortality in Shanghai, China." *Environmental Research* 103(3): 424-431
Kolokotroni, M., I. Giannitsaris, et al. (2006). "The effect of the London urban heat island on building summer cooling demand and night ventilation strategies." *Solar Energy* 80: 383-392.
Lee, J.-T., Son, J.-Y., Cho, Y.-S., (2007). "A comparison of mortality related to urban air particles between periods with Asian dust days and without

Bibliography

- Asian dust days in Seoul, Korea, 2000-2004." *Environmental Research* 105(3): 409-413.
- Nikolopoulou, M. and S. Lykoudis (2007). "Use of outdoor spaces and microclimate in a Mediterranean urban area." *Building & Environment* 42: 3691-3707.
- Pearlmutter, D., P. Berliner, et al. (2007). "Integrated modeling of pedestrian energy exchange and thermal comfort in urban street canyons." *Building & Environment* 42: 2396-2409.
- Pereira, A., S. Green, et al. (2007). "Relationships between single tree canopy and grass net radiations." *Agricultural and Forest Meteorology* 142: 45-49.
- Robitu, M., M. Musy, et al. (2006). "Modeling the influence of vegetation and water pond on urban microclimate." *Solar Energy* 80: 435-447.
- Shiva Nagendra, S. M., K. Venugopal, et al. (2007). "Assessment of air quality near traffic intersections in Bangalore city using air quality indices." *Transportation Research – D* 12(3): 167-176
- Simpson, M., S. Raman, et al. (2007). "A study of the variation of urban mixed layer heights." *Atmospheric Environment* 41(33): 6923-6930.
- Stewart, I. D. (2007). "Landscape Representation and the Urban-Rural Dichotomy in Empirical Urban Heat Island Literature, 1950-2006." *Acta Climatologica et Chorologica* 40-41: 111-121.
- Stone, B. (2007). "Urban and rural temperature trends in proximity to large US cities." *International Journal of Climatology* 27: 1801-1807.
- Synnefa, A., M. Santamouris, et al. (2006). "A study of the thermal performance of reflective coatings for the urban environment." *Solar Energy* 80: 968-981.
- Takebayashi, H. and M. Moriyama (2007). "Surface heat budget on green roof and high reflection roof for mitigation of urban heat island." *Building & Environment* 42: 2971-2979.
- Zmarsly, E., Kuttler, W. and H. Pethe (2007). "Meteorologisch-klimatologisches Grundwissen (Basics in Meteorology and Climatology)" Auflage (3rd edition) 182 pp.(in German)

IAUC Board

Board Members & Terms

- Toshiaki Ichinose (National Institute for Environmental Studies, Japan): 2007-2011.
- Benedicte Dousset (Hawai'i Institute of Geophysics and Planetology, USA): 2006-2010
- Rohinton Emmanuel (University of Moratuwa, Sri Lanka): 2006-2010
- Kevin Gallo (National Oceanic and Atmospheric Administration (NOAA), USA): 2006-2010
- Dr. Petra Klein (University of Oklahoma, USA): 2007-2011
- Sue Grimmond (King's College London, UK): 2000-2003, President, 2003-2007
- Manabu Kanda (Tokyo Institute of Technology, Japan): 2005-2009, ICUC-7 Local Organizer, 2007-2009.
- Wilhem Kuttler (University of Essen, Germany): 2004-2008
- Sven Lindqvist (Göteborg University, Sweden): ICUC-6 Local Organizer, 2004-2006*
- Gerald Mills (UCD, Dublin, Ireland): 2007-2011.
- Tim Oke (University of British Columbia, Canada): President, 2000-2003, Past President, 2003-2006, Emeritus President 2007-2009*
- Matthias Roth (National University of Singapore, Singapore): 2000-2003, Secretary, 2003-2007, Acting-Treasurer 2006, President 2007-2009
- Jennifer Salmond (University of Birmingham, UK): 2005-2009, Secretary, 2007-2009
- James Voogt (University of Western Ontario, Canada), 2000-2006, Webmaster 2007-*.
*appointed members

IAUC Committee Chairs

Editor IAUC Newsletter: David Pearlmutter
Bibliography Committee: Julia Hidalgo
Membership Committee: TBA
Nominating Committee: Tim Oke
Int. Representative Committee: TBA
Chair Teaching Resources: Gerald Mills
Chair Awards Committee: Manabu Kanda
WebMasters: James Voogt

Newsletter Contributions

The next edition will appear in early April. Items to be considered for the next edition should be received by **February 29, 2008**. The following individuals compile submissions in various categories. Contributions should be sent to the relevant editor:

News: Dr. J. Marshall Shepherd
marshall.shepherd@nasa.gov

Conferences: Jamie Voogt
javoogt@uwo.ca

Bibliography: Jennifer Salmond
j.salmond@auckland.ac.nz

Urban Projects: Sue Grimmond
sue.Grimmond@kcl.ac.uk

General submissions should be relatively short (1-2 A4 pages of text), written in a manner that is accessible to a wide audience and incorporate figures and photographs where appropriate. In addition we like to receive any images that you think may be of interest to the IAUC community.