PACON International will be emailing the member newsletter until the members-only portion of the website is ready. Please keep us posted of a working email address and any address/phone/fax updates so our database is kept current.

Farewell Remarks

by
Dr. Narendra Saxena
Founding President, PACON International

In 1982 I was blessed to have been able to initiate PACON International and with the help and advice of many colleagues made it into a successful Pacific-wide professional society. I am thankful for the friendship and advice of colleagues such as Dr. Yan Hongmo of China, Prof. Ray Golding of Australia, Mr. Norman Estabrook of California, the late Dr. Wataru Kato of Japan, and the late Capt. E. Chipman Higgins of Hawaii.

While PACON was being built, I was able to visit all of the Chapters and some Chapters-in-Formation such as Malaysia and India, and met marine experts and policymakers from those countries. I learned a lot from those travels. Some years back, a PACON member suggested making PACON a member-oriented organization by having the membership elect its Directors. The current Board of Directors was elected by the members-at-large in 2006.

Although PACON has been supported by U.S. Federal and State agencies, especially NOAA/NOS and the USGS, it now needs its members - especially the elected Board of Directors - to provide financial support or provide contacts for securing funding from organizations of their governments or charitable foundations. Active support in the Technical Program is also needed. Your help in suggesting important special topics useful for your area/country, chairing sessions, and giving presentations would ensure smoothly-run conferences. PACON’s success is due to its permanent headquarters in Hawaii, its staff, and its participating members whose ideas for solutions and discussion create the backbone of this society.

While I have remained active for the past 25 years, I have decided to retire to pursue my other projects and leave the organization in the capable hands of the current President Dr. Young C. Kim of California State University - Los Angeles, and the newly elected active Board of Directors. As Founding President, I will remain in the advisory role and as Director for Life will keep tabs on the activities of PACON. I will see many of you at future PACON conferences.

If you have any suggestions or comments on improving PACON, please drop me a note at nsaxena@hawaii.edu or at pacon@hawaii.edu.

I bid all of you farewell and thank you for your support over the past 25 years.

Naren Saxena
FRIENDS OF PACON, a fundraising idea initiated by Dr. Lorenz Magaard, is an opportunity to make donations towards PACON International’s expenses. Unlike the PACON Endowment Fund which is for scholarships, or the PACON Student Travel Fund which goes to assist students only, the money in the FRIENDS OF PACON Fund is used directly for the operating costs of PACON. Your donation is greatly appreciated.

Dr. [ ]  Professor [ ]  Mr. [ ]  Mrs. [ ]  Ms. [ ]

Print Name (as it should appear in our records)

Home Address

City
State/Province

Zip Code
Country

Phone
Fax

E-mail

Please make checks payable to PACON International.

Credit Card payment:

VISA [ ]  MasterCard [ ]  Diner’s [ ]  Carte Blanche [ ]  JCB [ ]

Card Number
Expiration Date (mm/yyyy)

Name on Card
Amount of Donation

PACON International is a tax-exempt charitable organization under Section 501(c)(3) of the Internal Revenue Code. Contributions are deductible to the extent provided by law. Please check with your tax advisor for details.
The Twenty-First Annual Conference, PACON 2008, will be held at the Ala Moana Hotel in Honolulu, Hawaii, on 1-4 June. The newly renovated hotel is located just outside the Waikiki resort area and adjacent to Ala Moana Center, Hawaii’s largest shopping center with over 260 stores, restaurants, and food court. The deadline for abstracts is **29 February 2008**. The PACON 2008 Call for Papers can be found on our website [www.hawaii.edu/pacon/](http://www.hawaii.edu/pacon/). The Master of Ceremonies will be **Dr. Jerome Comcowich** (USA).

**Monday, 2 June 2007**  
Opening Ceremony

Keynote Address #1  
**Mr. T. Michael May**, Hawaiian Electric Company, Inc., USA (Title TBA)

**Theme Session on Energy**  
(Renewable Energy, Traditional Energy Sources and their Impact)

**Tuesday, 3 June 2007**  
Keynote Address #2 (TBA)

**Theme Session on Climate Change**  
(Climate Prediction, Socio-economic Value of Climate Prediction, Adaptation to Climate Change, ENSO, Environmental Finance, Mitigation of Climate Change)

PACON Awards Banquet Speaker (TBA)

**Wednesday, 4 June 2007**  
Keynote Address #3 (TBA)

**Thursday, 5 June 2007**  
Keynote Address #4 (TBA)
Technical Sessions

OST-1: Ocean Observing Systems

OST-2: Marine Biotechnology
   (Natural Products, Manufactured Products)

OST-3: Fisheries Technology

OST-4: Remote Sensing and Oceanographic Satellites
   (Satellite, Ocean Systems)

OST-5: Operational Experiences in Environmental Monitoring
   (Techniques of Buoys & Ships of Opportunity, New Developments, Sensors for Long-Term Applications, Biofouling, Scientific & Monitoring Applications)

OST-6: Aquaculture and Mariculture Technology

OST-7: Spectroscopic Oceanographic Sensors and Instrumentation
   (LIBS and Raman Spectroscopy, Spectroscopic Imaging)

OST-8: Aquatic Invasive Species

OST-9: Coral Reef Science

CST-1: Hydrodynamics of Coastal Waters
   (Wave Characteristics, Wave Theories and Measurements, Wave Transformation)

CST-2: Coastal Water Level Fluctuations
   (Tides, Storm Surges, Tsunamis, Sea Level Rise)

CST-3: Coastal Structures
   (Wave Forces, Wave-Structure Interaction, Planning, Design, Construction, Performance and Maintenance)

CST-4: Ports and Harbors
   (Dredging, Mooring, Harbor Resonance, Planning, Design, Construction, Maintenance)

CST-5: Coastal Sediment Processes
   (Sediment Transport Processes, Coastal Erosion, Shoreline Changes, and Stabilization)

CST-6: Coastal Environment
   (Coastal Pollution, Recreation, Water Quality, Environmental Impact)

CST-7: Sustainable Coastal Development
   (Energy Development, Coastal Zone Management, Coastal Resource Management)

CST-8: Coastal Hazards
   (Coastal Storms, Seismic and Tsunami Events, Impact of Climate Change, Beach and Bluff Erosion, Coastal Flooding, Man-Made Disasters)

WKSP-1: Education in Marine Science and Technology

Student Poster Session-Cecilia Hsi Saxena Award
THEME SESSIONS

PACON 2008's theme, "Energy and Climate Change, Innovative Approaches to Solving Today's Problems", and its two theme sessions, "Energy" and "Climate Change", will emphasize the key role of the ocean in these matters. Problems such as global warming and possible counter-measures cannot be tackled without consideration of the central role of the ocean and the fact that reduction of negative consequences of climate change is inextricably linked to energy consumption and supply. The Climate Change session will be chaired by Dr. Lorenz Magaard. The Energy session chair will be announced at a later date.

STUDENT POSTER SESSION

The Student Poster Session - Cecilia Hsi Saxena Award will be chaired by Dr. Zuojun Yu and co-chaired by Dr. Jerome Comcowich. PACON 2008 again invites senior standing undergraduate students to join current or 2008-graduating post-baccalaureate students from accredited universities to submit a poster for the Student Poster Session. Up to six of the best student poster winners could receive the Cecilia Hsi Saxena Award, along with an awards certificate, PACON membership, refund of their PACON 2008 registration fees, and a monetary award. All primary student authors will receive a certificate of participation. Information may be obtained from our website www.hawaii.edu/pacon/.

DONATIONS & MEMBERSHIPS

PACON International thanks Dr. Lorenz Magaard and Dr. Wolf D. Grossman for their generous donations to the FRIENDS OF PACON Fund.

We would also like to thank Mr. Richard Martino and Dr. Patrick Sullivan for renewing their individual memberships.

PACON International Board of Directors (Elected Term 2007-2011)

Dr. John Benzie, Moana Technologies, USA
Dr. Ju-Chin Chen, National Taiwan University, Taiwan
Ms. Elizabeth Corbin, State of Hawaii DBEDT, Science Technology Branch, USA, SECRETARY
Dr. Michael P. Crosby, National Science Board, USA
Mr. Norman Estabrook, USA (Term: 2007-2009)
Dr. Kenji Hotta, Nihon University, Dept. of Oceanic Architecture & Engr., Japan
Dr. Ho-Shong Hou, Ministry of Economic Affairs, Taiwan
Dr. Susumu Ishii, Nihon University, Japan
Dr. Young C. Kim, California State University, Los Angeles, USA, PRESIDENT
Dr. H. D. Knauth, GKSS-Research Centre, Germany
Ms. Ann Kobayashi, City & County of Honolulu, USA
Dr. Lorenz Magaard, Int’l Pacific Research Ctr., SOEST, Univ. of Hawaii, USA, PRESIDENT-ELECT
Dr. Koichi Masuda, Nihon University, Japan
Dr. Narendra Saxena, Pacific Mapping Program, University of Hawaii, USA
Dr. DanLing Tang, South China Sea Institute of Oceanology, China
Dr. John Wiltshire, Hawaii Undersea Research Lab, University of Hawaii, USA, TREASURER
Dr. Ki-Dai Yum, Korea Ocean Research & Development Institute, KOREA
REMOTE SENSING OF SUSPENDED SEDIMENTS CONCENTRATION IN THE NORTH-EAST INDIAN OCEAN AFTER TSUNAMI 2004

Zhongzheng Yan and Danling Tang*

Remote Sensing and Marine Ecology Group
Laboratory for Tropical Marine Environmental Dynamics
South China Sea Institute of Oceanology
Chinese Academy of Sciences
Guangzhou, China

and

Graduate University of Chinese Academy of Sciences
Beijing, China
*lingzistdl@126.com, lingzis@scsio.ac.cn

ABSTRACT

The present study investigated spatial and temporal changes of suspended sediment concentration (SSC) in the North-East Indian Ocean (NEIO) after the 2004 Sumatra tsunami using MODIS satellite remote sensing data. Results show that a short time (four weeks) after the tsunami, SSC markedly increased (55.6%-200%) in large river estuaries along the coast of the Bay of Bengal. Monthly analyses indicated increases (4.26%) of SSC for the entire North-East Indian Ocean area in 2005, especially in November 2005 when an increase of SSC reached about 6.19% compared with other years. The reasons were also analyzed.

INTRODUCTION

The largest earthquake of the past 40 years generated a tremendous Indian Ocean tsunami on 26 December 2004 (Lay et al., 2005). Giant waves wrecked the coastal area in its initial surge and destroyed most of the coastal ecosystems. Field survey found that the coastal ecosystems, comprised of coastal vegetation (including mangroves), seagrass and coral reefs were badly damaged (UNEP, 2005). The ensued tsunami backwash also introduced land debris and sediments to the marine ecosystem (Robertta, 2005) which may have increased the suspended sediments concentration (SSC). Increase of SSC can also affect light scattering which in turn reduces primary production (Tang et al., 2006). The latent effect of introduced suspended sediment on a marine ecosystem seems to be a very interesting question that has attracted numerous scientific concerns. With the coastal vegetation badly damaged, modification of drainage patterns in estuaries and wetlands may have caused some spontaneous concerns: Has SSC increased after tsunami? How, where, and when did SSC change? What was the relationship between the changes of SSC and tsunami? In present study, we made an attempt to address some of these concerns.

MATERIAL AND METHODS

Our studied area extended between 5°N and 25°N and 75°E to 105°E (Rect. b in Fig. 1A). The bathymetry in this area decreased gradually from more than 4000 m south of Sri Lanka to 2000 m and less at 18°N, where the Bay of Bengal (BOB) is the arm of the Indian Ocean.
We applied MODIS (Moderate Resolution Imaging Spectroradiometer) nLw551 nm products to study changes of relative suspended sediments concentration. Data was obtained from the Ocean Color Web (http://oceancolor.gsfc.nasa.gov) for a 4-year period (2002 - 2006).

The SSC anomaly was processed for two 4-week periods (i.e., 25 November to 25 December 2004 and 26 December 2004 to 24 January 2005) - before and after the 26 December tsunami.

The SSC anomaly image after the tsunami was made by using the average of 26 December 2004 – 24 January 2005 minus the average of the same times for the other three years (2002-2003, 2003-2004, and 2005-2006). The SSC anomaly image before the tsunami was made by using average of 25 November-25 December 2004 minus the average of the same times for the other three years (2002, 2003 and 2005).

RESULTS AND DISCUSSION

SSC increased a short time after tsunami

Comparison between anomaly pre- and post- tsunami indicates that the SSC increased in the coastal areas (arrows, Fig. 1B) four weeks after the tsunami, showing badly damaged areas with increase of turbidity, for example, in north Sumatra (Fig. 1B) near the earthquake’s epicenter. Four weeks after the tsunami, the SSC anomaly increased 55.6%-200% compared with the average value of the other three years (2002, 2003 and 2005) in the coastal areas of the northeast coast of Sri Lanka, northwest coast of Indonesia, southeast coast of Myanmar, and the north offshore of the Bengal Bay (arrows, Fig. 1B), which seemed caused by re-suspension from the initial tsunami surge. These were consistent with a survey observation conducted on 3 January 2005, nine days after the tsunami (DOD, 2005) showing that SSC were 9-21 mg/m³ on 25 December 2004 and increased to 4-36 mg/m³ on 27 December 2004.

The area of high SSC also extended from 15 km (50 m depth) to 45 km (1000 m depth) away from the northern part of the Chennai coast. It is known that the tsunami’s initial surge badly damaged the coastal area and the ensuing backwash, which carried sediments and debris from land to the ocean, can contribute to the increase of SSC (Roberta, 2005). Sediment re-suspension can also result from a variety of other causes such as bottom currents, tidal currents, and turbidity flows and explains why we found SSC also lightly increased in other years. The mixing action of a tsunami is much higher than other factors, therefore SSC showed marked increase after the tsunami.
Figure 1. (A) Geographic location of the study area, Rect. denotes the study area, and the red star denotes the epicenter of the earthquake near Sumatra. (B) Anomaly SSC distribution: (1) four weeks before the tsunami (25 Nov-25 Dec 2004) and (2) four weeks after the tsunami (26 Dec 2004-24 Jan 2005).

**Time series analysis**

Detailed analysis of weekly normalized SSC data for four years (4 July 2002 to 10 June 2006) showed that four weeks after the tsunami the SSC climbed step by step in 2004-2005 (Fig. 2A), keeping a relatively high level in 1 January - 19 December 2005 compared with the same period of the other years (Bold arrow, Fig. 2A).
Figure 2. Time series analysis for four years (2002-2006). (A) Time series of weekly SSC (4 Jul 2002 to 10 Jun 2006). (B) Comparison of monthly SSC values between 4-years average (2002-2004 and 2006) and 2005, and the percentage of net increase of SSC in 2005.

The increase of SSC can be also easily found in the anomaly image of SSC four weeks after the tsunami (Fig. 1B). The resuspension and sediments from land caused coastal water turbidity. The SSC increased year round in 2005 (Figs. 2A and B), especially in the months of September to December. The largest increase of SSC were observed in November 2005 (Fig. 2B) with increases of 6.18 percent. This may correlate with the high runoff and discharge pattern change of the rivers around BOB, possibly affected by tsunami waves.

For the entire BOB area the SSC increased by about 4.26% in 2005 compared with the other years (2002 to 2004) (Fig. 2B). It reached 6.19% in November 2005. The high SSC areas were usually located in the coastal regions (Fig. 1B) and most were near large river estuaries. Besides counteracting tsunami waves and protecting the hamlet near them (Fernando et al., 2005; Liu et al., 2005), coastal ecosystems can also split and decrease surged waves, then decrease the wave velocity and increase sedimentation. Where the coastal ecosystems were badly damaged during the tsunami (UNEP, 2005) may have contributed to the marked increase of SSC in 2005.

**SUMMARY**

1. Four weeks after the tsunami, SSC markedly increased in coastal area located at the estuaries of some large rivers. The increasing quantity was as much as about 55.6%-200% of the average value. This increase was caused mainly by the resuspension function of the initial surge of the tsunami.
2. Among four years (2002-2006), high SSC were observed in 2005, especially in November. Those increases may have been mainly caused by the bad runoff of the coastal area and may also be a result of the badly damaged coastal vegetation from the tsunami.
ACKNOWLEDGEMENT

This work was jointly supported by National Natural Science Foundation of China (40576053), Research Program of Chinese Academy of Sciences (KZCX3-SW-227-3), and “One Hundred Talents Program of Chinese Academy of Sciences” awarded to Professor DanLing Tang.

REFERENCES

DOD. Department of Ocean Development (Eds.) (2005), Preliminary Assessment of Impact of Tsunami in Selected Coastal Areas of India, 42 pp., Chennai, India.


ABOUT THE AUTHORS

Yan Zhongzheng, Ph.D. student of South China Sea Institute of Oceanography (SCSIO), Chinese Academy of Science, current research project is about the remote sensing of marine biology and environments.

DanLing Tang, Ph.D, Professor. Received her Ph.D (marine biology and satellite remote sensing) in 1998 in Hong University of Science and Technology, she devotes herself to research and teach on ocean and environmental sciences, and also received International Poet of Merit and Honored Member of International Society of Poets. http://lingzis.51.net.
AUSTRALIA:
Black, John A. (L)
Brander, Robert W. (L)
Dixon, Patricia I. (L)
England, Matthew M. (L)
Erikkson, Cecilia
Golding, Ray (L)
Hopley, David (L)

CALIFORNIA:
Boudreau, Russell
Carter, Chance
Chen, Fred
Earle, Sylvia A. (L)
Estabrook, Norman B. (L)
Hine, Roger
Kim, Young C. (L)
McGillivary, Philip
Richardson, Tim
Sullivan, James J. (L)
Sutter, William W. (L)
Wolff, Paul M. (L)

CHINA:
Ng, Chiu Keung (L)
Ji, Xiaomei (S)
Tang, Dan Ling
Wang, Ying (L)
Yan, Hongmo (L)
Yang, Dayuan

EAST COAST (US):
Angel, S. Michael
Bamford, Holly
Canan, Penelope
Carey, John J. (L)
Chave, Alan
Crosby, Michael P. (L)
Glenn, Scott
Hill, Gary W. (L)
Jourdan, David W.
Leach, Mary L. (L)
Marcus, Henry
Martino, Richard
Podgorny, Richard (L)
Slater, Kysha
Strickland, Elizabeth
Teng, Chung-Chu
Weiner, Ronald M.

EUROPE:
Bernaerts, Arnd (L)
Grossmann, Wolf D.
Hansen, Svein Erling
Knauth, Hans-Diethard (L)
Mrotzek, Maximilian
Schroeder, Friedhelm

HAWAII:
Bates, David
Bellinger, Reb (L)
Benzie, John A.H. (L)
Chavanne, Marion B. (S)
Chio, Chi Hong (S)
Coffman, Makena (S)
Coleman, Craig (S)
Comcowich, Jerome
Corbin, Elizabeth
Friedl, Bill (L)
Ge, Liang (S)
Harmon, Jack (L)
Jones, Colin M. (L)
Kittinger, Jack (S)
Kobayashi, Ann
Liu, Clark
McElwee, Kristine
Mader, Charles
Magaard, Lorenz (L)
Malahoff, Alexander (L)
Marsh, James B.
Matsunaga, Matthew M. (L)
Maynard, Sherwood
Melnichinko, Oleg
Morishige, Carey
Okajuma, Yuka (S)
Porter, John
Rognstad, Mark R. (L)
Saxena, Narendra (L)
Schmitt, Randall K. (L)
Sharma, Shiv K. (L)
Shoji, Noriko
Simonds, Kitty M. (L)
Sprague, Tina
Sullivan, Patrick K.
Swanson, Melinda (S)
Velhote, Denise (S)
Wig, Howard
Wiltshire, John (L)
Wu, Yongyan (S)

JAPAN:
Agata, Shinnosuke (S)
Akai, Kazuaki (L)
Gotoh, Hiroshi
Hamada, Seiichi
Hanada, Osamu (L)
Hatakeyama, Hakaru (L)
Hotta, Kenji (L)
Ichimura, Hiroko (L)
Ichimura, Hiroshi (L)
Ikegami, Yasuyuki (L)
Ikoma, Tomoki
Inoue, Masaharu (S)
Ishii, Susumu (L)
Iwamoto, Akira (L)
Iwamoto, Fusae (L)
Kan, Hironobu (L)
Kishino, Masao (L)
Kishino, Naoki (S)
Kobayashi, Akio
Kobayashi, Jyumpei (S)
Kobayashi, Masato (S)
Kohno, Hideki
Kumagai, Heisuke (S)
Liu, Antony A.K.
Maeda, Hisaaki (L)
Masuda, Koichi
Masuda, Mitsuhiko (S)
Miyata, Kaori (S)
Miyoshi, Machi (S)
Murakami, Hitoshi
Nakamura, Shigehisa (L)
Nakazawa, Kiminori
Nasu, Noriyuki (L)
Noshi, Yasuhiro (S)
Noto, Keiichi (L)
Ogino, Masashi (S)
Okabe, Takumi
Okamoto, Kyoichi
Okamoto, Takeki (L)
Osaki, Yuji (L)
Sakai, Takuji
Sakuta, Masaaki (L)
Sao, Kazuko
Sawano, Nobuhiro
Yu, Zuojun
Zhou, Hongqiang (S)
Shibata, Tatsuzo (L)
Tomisawa, Yuya (S)
Terai, Kiyohide (L)
Watabe, Tomiji (L)
Yamada, Yoshifusa (L)
Yamamoto, Jun
Yasuoka, Kaori (S)
Yoneura, Daisuke (S)
Yoshida, Koichiro (L)
Yoshida, Yasushi (L)

KOREA:
Ahn, Kyungmo
Cho, Hong Yeon (L)
Huh, Hyung Tack (L)
Jin, Jae Youll (L)
Kim, Cha-kyum (L)
Kwak, Hi-Sang (L)
Lee, Jong Chan
Lee, Kwang Soo

NON-CHAPTER FOREIGN
(Canada)
HancyK, Jeremy
Pereira, Gerard
Robson, Matt
Thomas, Jim O.
Zielinski, Adam

(Malaysia)
Tang, Kelvin K.W. (S)

(Taiwan):
Chen, Ju-chin
Hou, Ho-Shong (L)
Hwang, Ching-Her

(S) = student members
(L) = life members

~ PACON INTERNATIONAL LIFE MEMBERS ~

Kazuaki Akai
Agustin Ayala-Castanares*
Reb Bellinger
John A.H. Benzie
Arnd Bernaerts
John Black
Robert W. Brander
John J. Carey
Hong Yeon Cho
Loke-Ming Chou
Michael P. Crosby
Patricia I. Dixon
Sylvia A. Earle
Matthew H. England
Norman Estabrook
Bill Friedl
Ray Golding
Osamu Hanada
Jack Harmon
Hakaru Hatakeyama
E. Chipman Higgins*
Gary W. Hill
Hans E.W. Hoffmann
David Hopley
Kenji Hotta
Guoben Hou*

Ho-Shong Hou
Hyung Tack Huh
Hiroki Ichimura
Hiroshi Ichimura
Susumu Ikeyama
Akira Iwamoto
Jae Youll Jin
Colin M. Jones
Hironobu Kan
Cha-Kyum Kim
Young C. Kim
Masao Kishino
Hans-Diethard Knauth
Hi-Sang Kwak
Mary L. Leach
Rongxing Li
Hisaaki Maeda
Lorenz Magaard
Alexander Malahoff∗
Matthew M. Matsunaga
Shigeji Saka Naka
Noriyuki Nasu
Chiu Keung Ng
Keiichi Noto

Takeki Okamoto
Yuji Osaki
Richard Podgorny
Mark R. Roenstad
Masaaki Sakuta
Narendra Saxena
Randall K. Schmitt
Shiv K. Sharma
Tatsuzo Shibata
Hyun Jin Shim
Kitty Simonds
James J. Sullivan
William W. Sutter
Kiyohide Terai
Ying Wang
Tomiji Watabe
John Wiltshire
Paul M. Wolff
Yoshifusa Yamada
Hongmo Yan
Koichiro Yoshida
Yasushi Yoshida
Ki-Dai Yum

* deceased

PACON International (Pacific Congress on Marine Science and Technology)
PACON International (Pacific Congress on Marine Science and Technology, International) was created following two successful marine science and technology Congresses held in Honolulu: PACON 84 and PACON 86. Since then, PACON has held twelve Congresses (Hawaii, Australia, Japan, Korea, and Myanmar) and eight Regional Symposia (Hawaii, China, Hong Kong, Russia, California, and Taiwan). Combining 12 congresses and 8 regional symposia, the PACON International Board has agreed to rename the annual events as PACON Annual Conferences. The next annual conference, PACON 2008, will be held in Honolulu, Hawaii (USA).

**PACON International Mission Statement:**

PACON International is dedicated to the sharing of scientific and technical information on the world’s oceans to advance marine science and technology and its utilization in ocean policy formation, and the sustainable development of the world’s oceans and coastal regions with a Pacific focus, through education and public programs.

The PACON International Newsletter *Voice of the Pacific* [Copyright 2007] is published by: PACON International, 2525 Correa Road, HIG 407A, Honolulu, HI 96822 USA; Phone: 808-956-6163; Fax: 808-956-2580; Email: pacon@hawaii.edu, Website: [www.hawaii.edu/pacon](http://www.hawaii.edu/pacon). Founding-President: Narendra Saxena, President: Young C. Kim, President-Elect: Lorenz Magaard, Past-President: Ho-Shong Hou, Acting Executive Director: Paula Kuriyama, Editor: Elizabeth Glover. The views expressed herein do not necessarily reflect those of the University of Hawaii or PACON International. Commercial products named are not endorsements.