



Contents

Volume 9, Number 2 April 2007

<i>Special features</i>		<i>Departments</i>	
Disaster Myths...Looting	1	Hazard mitigation news	6
The myth and the reality	1	Publications	8
The myth of a disaster myth	4	Websites	8
What the tsunami taught us about needs assessment	5	Conferences/seminars/symposium	10
News briefs	11	Material added to NTHMP Library	11
Researchers apply ag shelterbelt design	15	IAQ	12
Stop the presses	15	Video reservations	13
Russia's Far East to get new tsunami warning system by 2008	10	State Emergency Management offices	11
Ireland to participate in EU tsunami warning system	15	NTHMP Steering Group directory	14
April is Earthquake and Tsunami Awareness month	11		

Disaster Myths...Fourth in a Series

Looting after a Disaster: A Myth or Reality?

This special article in the Disaster Myth series presents a point-counterpoint on the significance and prevalence of looting after disasters. Both authors were asked to answer, independently, a series of questions, including whether looting after disasters is a myth, what evidence supports that opinion, what previous research has established about looting, and how the myths (and realities) about looting influence disaster planning and response. While the previous articles in this series were meant to help dispel disaster myths, this article demonstrates the debate surrounding the controversial issue of looting and explores it in greater depth. Together these positions reveal the arguments and evidence for both sides of the debate. The editors [Natural Hazards Observer] hope that this point-counterpoint will provoke thought among those concerned with public safety and response in disasters.

The first author, E. L. Quarantelli, provides a historical overview of looting in disaster research to help elucidate the myth. The findings of previous disaster research are used to support the argument that looting, in fact, is not prevalent after disasters. In the end, there is a lack of evidence showing that this behavior is commonplace.

As a counterpoint, Kelly Frailing focuses on the events following Hurricane Katrina as evidence that looting is not a myth, but a reality of disasters. This position is also supported by experience during previous events, such as Hurricane Betsy, and by crime statistics.

The Myth and the Realities: Keeping the "Looting" Myth in Perspective
 by E. L. Quarantelli
 Disaster Research Center, University of Delaware

Not all findings about looting reported by disaster researchers have been correctly understood. Important distinctions and qualifications about the phenomena have sometimes been ignored. Thus some demythologization of the looting myth is necessary.

The word "looting," which comes from Sanskrit (lut, to rob) entered into European languages centuries ago to refer to the plundering undertaken by invading armies. But until recently, contemporary and historical accounts of disaster have not used the term. The first systematic professional use of the word appears to have been in a well-known National Opinion Center (NORC) study of the 1952 Arkansas tornado.

(continued on page 3)

TsuInfo Alert

is prepared by the Washington State Department of Natural Resources
on behalf of the National Tsunami Hazard Mitigation Program,
a State/Federal Partnership funded through the National Oceanic and Atmospheric Administration (NOAA).

It is assembled by
Lee Walkling, Librarian,
and is published bi-monthly by the
Washington Department of Natural Resources, Division of Geology and Earth Resources.

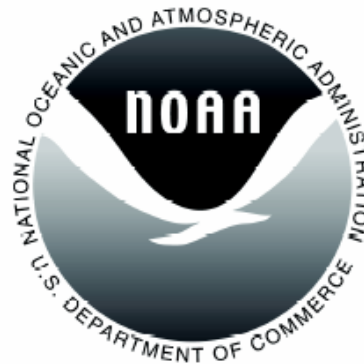
This publication is free upon request and is available in print (by surface mail),
and at <http://www.dnr.wa.gov/geology/tsuinfo/index.html>.
Participants in the TsuInfo program can request copies of reports listed in this issue from:

Washington Geology Library
Washington Department of Natural Resources
Division of Geology and Earth Resources
1111 Washington Street SE, MS 47007
Olympia, WA 98504-7007
360/902-1473
fax: 360/902-1785
e-mail: lee.walkling@dnr.wa.gov

The views expressed herein are those of the authors and not necessarily those of
NOAA, the Washington Department of Natural Resources, or other sponsors of
TsuInfo Alert.



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands



(continued from page 1)

This modern usage probably developed because the U.S. military, which initially sponsored social science studies of disasters in the early 1950s, was concerned that, in the face of atomic bombing, America would socially disintegrate and people would engage in antisocial behavior. This ignored the finding of the strategic bombing surveys of wartime Germany and Japan, as well as of British studies of their civilian populations, which showed that looting was not a serious problem after massive air bombings.

Although no formal definition of looting was ever advanced by the earliest researchers, the NORC studies, field work by Harry Moore, and research supported by the National Academy of Sciences did look at looting phenomena, general viewed informally as the illegal taking of property. The conceptual problem of studying looting has been compounded by the fact that "looting" is not a criminal category in American penal codes, except in a handful of states that have legally formalized the term relatively recently.

A consistent observation of the early studies was that instances of looting in the disasters examined (few of which occurred in metropolitan areas) were nonexistent or numerically very rare. This contrasted with a parallel observation that stories about looting were widespread in mass media accounts and among affected populations (58% reported hearing such stories and 6% thought they had been looted in the Arkansas disaster--a finding repeated over and over again in other studies).

In the 1960s, the many civil disturbances in large American cities were studied by disaster researchers. While to this day there is no agreement that riots should be conceptualized as conflict or willful disasters, the researchers found that looting was very pervasive in the riots studied and that the pattern of the looting behavior significantly differed. In natural disasters looting was very rare, covertly undertaken in opportunistic settings, done by isolated individuals or very small groups, and socially condemned. In contrast, looting in the riots was frequent, overtly undertaken, aimed at specific targets, participated in by very large numbers of individuals often in social networks, and was socially supported.

Semi-systematic studies of looting that continued into the 1970s in the United States did not challenge the overall picture that researchers had earlier developed. Mostly anecdotal reports in other developed countries were consistent with the American experience. This view was later generalized to the proposition that looting was not a problem in modern, developed countries and that in the rare instances when it occurred it had the distinct social characteristics found by the pioneer disaster researchers. However, absent systematic studies in developing countries to this day, and using mostly anecdotal accounts and mass media reports, the best that can be said is that major

looting in developing countries sometimes appears on a massive scale, such as after the recent earthquake in Pakistan, but that at other times, such as after the 1985 Mexico City earthquake, looting is an infrequent problem.

Furthermore, from the 1970s to the present day there have been occasional large-scale community crises after which researchers studied mass looting. One was the 1977 New York City blackout during which selective neighborhoods experience massive looting illustrating the distinctive conflict situation pattern found in the 1960s. However, before "obvious" implications are drawn, one should note that similar blackouts in 1968 and 2003 did not generate mass looting.

Crucial to any discussion of looting is what happened in St. Croix in the U.S. Virgin Islands when that city was hit by Hurricane Hugo in 1985. After that event, the University of Delaware's Disaster Research Center undertook three different field studies, including a systematic quantitative survey of all businesses in the major shopping centers. The looting in St. Croix was massive. Not only were all consumer goods in sight taken, but there was even stripping of electrical and wall fixtures and of carpets. The largest mall (with about 150 shops) and two others were heavily hit, with less than 10% of the businesses reporting they were not totally looted.

The looting was initiated by pre-impact organized gangs of delinquent youths who first targeted stores with large quantities of consumer goods. A second stage occurred when other participants with noncriminal lifestyles began looting other kinds of stores (e.g., hardware stores). Finally, an even larger number of people joined, targeting stores with basic necessities (e.g., food supermarkets) and generally not looting items taken by the first two categories. Overall, the looting pattern was what earlier researchers had found in civil disturbances. However, contrary to widespread rumors, there was not a single authenticated case of the looting of private residences, schools, hotel, the one industrial complex with valuable equipment, or even resort restaurants. The looters used no physical force and, at worst, made only unfulfilled verbal threats.

A possible explanation for this atypical occasion of mass looting was that it involved a major catastrophe rather than a lesser disaster--with a concentration of disadvantaged persons exposed to everyday perceptions of major differences in lifestyles; a subculture tolerant of everyday minor stealing along with everyday organized youth gangs engaged in serious crime, such as drug dealing; and a local police force widely seen as corrupt and inefficient (early in the event, officers themselves had openly engaged in looting--not the usual pattern in civil disturbances).

A case can be made that what happened in New Orleans after Hurricane Katrina repeated, on a smaller scale, what had happened in St. Croix. The New Orleans event

was smaller because in St. Croix a majority of the population probably participated in the looting, the looting did not last as long in New Orleans, and percentage-wise, far more stores were looted in St. Croix. But the over-all pattern of mass looting, as well as the social conditions generating it, were the same in both cases.

To conclude, looting of any kind is rare in certain kinds of disasters in certain kinds of societies. The pattern of looting in natural disasters is different from what occurs in civil disturbances. There are occasional atypical instances of mass looting that only emerge if a complex set of prior social conditions exist.

The Myth of a Disaster Myth: Potential Looting
Should be Part of Disaster Plans
By Kelly Frailing
Loyola University, New Orleans

Hurricane Katrina was an unprecedented disaster that will have long-lasting effects on the people and the city of New Orleans. There are valuable lessons to be learned by emergency personnel, officials, and researchers that can aid planning for future disasters, whether natural or human-induced. Because of Katrina's unique place in American disaster history, it is the main focus of the following discussion of the looting controversy.

Why Looting is No Myth

An argument in the disaster literature contends that looting does not occur after natural disasters, such as hurricanes or earthquakes, but that it does happen during civil disturbances. Looting during civil disturbances is construed as a message of protest against the conditions that facilitated the civil disturbance in the first place.^{1,2} An implication of this assertion is that when people take property after a natural disaster, they do so because they need those items to survive the aftermath. Police use the term "commandeer" to justify taking vehicles and other property, arguing that those items are essential to carry out their duties. The property, however, must be returned in good order. Taking property that has only a tenuous link to survival after a natural disaster--plasma televisions in a city without electricity, firearms, alcohol, and narcotics from businesses; and other items including silverware and jewelry from private residences--can legitimately be construed as looting. To make a distinction between natural disasters and civil disturbances on the basis of whether or not looting occurs is fatuous. Some examples in the literature describe looting after natural disasters: the earthquake that struck San Francisco in 1906,³ the earthquake that struck Tangshan, China, in 1976,⁴ the flood caused by Hurricane Agnes in Wilkes Barre, Pennsylvania, in 1972,⁵ and the flood that devastated Buffalo Creek, West Virginia, in 1972.⁶ Finally, there is substantial evidence of looting in New Orleans in the wake of Hurricane Katrina.

Current Research on Looting

The reports of looting in New Orleans after Hurricane Katrina were ubiquitous, almost to the point of being inescapable. Newspapers, the Internet, and especially 24-hour cable news networks reported widespread looting beginning shortly after Katrina's landfall.

In a study of the emergent behavior that followed the storm, researchers acknowledge that antisocial behavior occurred in New Orleans. However, they take care to characterize Katrina and its aftermath not as a "natural disaster," but as a "catastrophe"--an overwhelmingly devastating event, why they contend allows for the emergence of both prosocial and antisocial behavior. Prosocial behavior, which those researchers maintain was far more prevalent than antisocial behavior, included activities such as rescuing those stranded by the storm and acquiring food and clean water.⁷ The contention that prosocial behavior was far more prevalent than antisocial behavior after Katrina is not disputed here. To give just one example of prosocial behavior, the Eighth District New Orleans Police Department Homeless Outreach van, with its wheelchair lift, was used to rescue over 3,000 people in the five days after the storm.

Recasting Katrina as a catastrophe does not change the fact that looting occurred in New Orleans. Using burglary as a legitimate proxy variable for looting, researchers examined the socioeconomic conditions of the city and burglary rates surrounding three different storms. The economic conditions of the city fairly accurately predicted burglary rates before and after each storm. Hurricane Betsy, a powerful and devastating storm, struck New Orleans in 1965 when the city was close to its peak population and economically booming. The burglary rate was 9.0 per 100,000 in a month after Hurricane Betsy. In contrast, the burglary rate, as measured by police reports, in the month after Hurricane Katrina was 245.9 per 100,000. Moreover, the burglary rate after Katrina was calculated using only those losses that were definitely determined to be due to burglaries. A majority of the post-storm losses were coded by the police as "21K," which indicated the losses could have been due either to the hurricane or to looting. It is conceivable, then, that the post-Katrina burglary rate may actually have been even higher than 245.9 per 100,000.⁸

It is not just the lack of social control that facilitated post-Katrina looting. It was the confluence of that factor and the historically evolving socioeconomic conditions that have produced a largely minimum-wage economy and a population of which nearly one-third was living in poverty. These conditions increased the probability of significant looting. Hurricane Katrina simply intensified and worsened the conditions of deprivation and crime that have plagued New Orleans for many years.

Influence of the Looting Myth in Disaster Planning and Response

To write off even the possibility of looting as a myth in the context of natural disasters is irresponsible at best. It is crucial that disaster response planners anticipate looting in the wake of natural disasters and design their responses accordingly. Many retailers in New Orleans, perhaps acting in their own best interests, freely gave food, water, and other needed supplies. In order to avoid property damage, a number of merchants left their doors unlocked to accommodate people's needs. Some people were less than grateful and repaid the merchants' generosity by sacking the establishments. An examination of loss claims by stores in post-Katrina New Orleans would provide a clearer picture not only of what was taken, but also of what volume of survival supplies are necessary for a disaster of that magnitude and of what types of businesses may be able to provide them most readily.

Anticipating looting is also a proper policy for law enforcement. When search and rescue operations are taken over by other first responders, there is less need for police involvement in these activities. Therefore the police could concentrate their efforts on maintaining law and order and protecting property. There is nothing to be gained by private citizens' taking the law into their own hands and endangering their lives in the process. Looting after disasters is not a myth. It is a well-documented phenomenon and to minimize it by recasting a disaster as a "catastrophe" is not useful. Disaster response planners need to anticipate and design effective responses to anti-social behavior, help meet people's basic needs, and move as quickly as possible into the recovery phase of the disaster.

References:

1. Dynes, R.; Quarantelli, E. L., 1968, "What looting in civil disturbances really means," IN *Trans-action*, v. 5, no. 6, p. 9-14.
2. Quarantelli, E. L.; Dynes, R., 1970, "Property norms and looting: Their patterns in community crises." IN *Phylon: The Atlanta University Review of Race and Culture*, v. 31, no. 2, p. 168-182.
3. Morris, C., 2002, *The San Francisco calamity*: University of Illinois Press. (Available online: <http://www.fdungan.com/frisco.htm>).
4. Zhou, D., 1997, *Disaster, disorganization, and crime*: State University of New York Doctor of Philosophy dissertation.
5. Siman, B. A., 1977, *Crime during disaster*: University of Pennsylvania Doctor of Philosophy dissertation. (<http://repository.upenn.edu/dissertations/AA17806644/>).
6. Erikson, K. T., 1972, *Everything in its path*: Destruction of community in the Buffalo Creek flood: Simon and Schuster.
7. Rodriguez, H., Trainor, J., Quarantelli, E. L., 2006, *Rising to the challenges of catastrophe: The emergent and prosocial behavior following Hurricane Katrina*: The

Annals of the American Academy of Political and Social Science, v. 604, p. 82-101.

8. Frailing, K., Harper, D. W., 2007, *Crime and hurricanes in New Orleans*. IN Brunson, D. L., Overfelt, D., Picou, J. S., editors, *The sociology of Katrina--Perspectives on a modern catastrophe*: Rowman & Littlefield Publishers. ♦

What the tsunami taught us about needs assessment

Many remember the vivid images of the devastation resulting from the 2004 South Asia tsunami. The tsunami was a natural disaster of immense proportions--affecting 14 countries, internally displacing 1.7 million people, and killing an estimated 225,000 people. Shortly after the tsunami, a group of humanitarian agencies gathered to assess the lessons learned from the international response and produced a series of thematic evaluations to consolidate sector learning.

In July 2006, the Tsunami Evaluation Coalition (TEC) published *Joint evaluation of the international response to the Indian Ocean tsunami--Synthesis report* along with five thematic evaluations, one of which is the report entitled *The Role of Needs Assessment in the Tsunami Response*. The report focuses on how effectively the international community conducted needs assessment during the first three months.

The report offers 17 recommendations to improve needs assessments after the next big natural disaster. The first recommendation suggests that the UN and the Red Cross should invest in a permanent rapid assessment capacity. Another proposes that a percentage of future relief funding should always be put aside for regional disaster preparedness. Additionally, they recommend a large number of nationals should be trained in each country to ensure a significant pool is available for initial rapid assessment immediately after a disaster.

Populations touched by the tsunami remarked that being assessed is different than being consulted. Whenever possible, they should be empowered to prioritize their own needs and use cash subsidies. This practice would considerably reduce the need for thematic assessments and empower affected people to decide whether they need better shelter, food, or other items that are often provided at a higher cost by international actors.

For more information or to read the full Tsunami Evaluation Coalition report, visit <http://www.tsunami-evaluation.org/>.

Abridged from: *Disasters--Preparedness and Mitigation in the Americas*, issue 106, Feb. 2007, p. 3. ♦



NEWS

New UN Emergency Relief Coordinator appointed

UN Secretary-General Ban Ki-moon has appointed Sir John Holmes as the new United Nations Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator. Mr. Holmes replaces Norway's Jan Egeland, who stepped down last month [January 2007] after more than three years as the most senior humanitarian official at the Organization.

From: *Disasters--Preparedness and Mitigation in the Americas*, issue 106, February 2007, p. 4.

6 of 75 cities get top rating in DHS Interoperable Communications Assessment

Only six of 75 U.S. cities received top grades in an assessment of the ability of their law enforcement, fire, and emergency medical services to effectively communicate within one hour of an incident.

The Department of Homeland Security's Interoperability Communications Assessment did, however, find that all 75 urban and metropolitan areas surveyed have policies in place for smooth and rapid communication after a disaster. Using scorecards, the report illustrates the current capability for each area and provides recommendations for improvement.

The six cities and surrounding areas netting the highest scores are Washington, DC; San Diego, Calif.; Minneapolis-St. Paul, MN; Columbus, OH; Sioux Falls, SD; and Laramie County, WY. Chicago, IL; Cleveland, OH; Baton Rouge, LA; Mandan, ND; and American Samoa received the lowest ratings.

To view the interoperable communications report and its findings, see

http://www.dhs.gov/xnews/releases/pr_1167843848098.shtml

From: *Natural Hazards Observer*, v. 31, no. 4, p. 9

NOAA improves tsunami warning system for most threatened parts of the United States

In December [2006], the National Oceanic and Atmospheric Administration (NOAA) announced the deployment of six new Deep-ocean Assessment and Reporting of Tsunami (DART) stations in the southwest Pacific. The new stations provide real-time tsunami detection as waves travel across open waters and thus, afford increased lead time for tsunami warning to the U.S. coastal areas most at risk from tsunamis traveling long distances. Those areas include the coastlines of Hawaii, Alaska, Washington, Oregon and California.

The buoys are part of an effort underway since the devastating Indian Ocean tsunami in December 2004 to improve tsunami detection and warning programs at home and abroad. Over the last two years, NOAA has expanded the U.S. warning system to include the Atlantic coast, Gulf of Mexico, Puerto Rico, and the U.S. Virgin Islands. The agency has deployed a total of 25 DART stations in

U.S. waters, installed 15 new and upgraded 33 existing tide stations, completed inundation models for 17 communities and recognized 26 new "TsunamiReady" communities. NOAA has also hired new employees to fully staff its two tsunami warning centers in Honolulu, Hawaii, and Palmer, Alaska.

Further, in December [2006] NOAA joined the government of Thailand in launching the first DART station in the Indian Ocean. That DART station is the first of 22 envisioned for an Indian Ocean regional tsunami warning system being established under the auspices of the UNESCO Intergovernmental Ocean Commission. The stations are part of a larger, end-to-end warning system that includes tide gauges, communications upgrades, inundation models, and dissemination systems.

For details about NOAA's tsunami detection and warning efforts, see

<http://www.noaanews.noaa.gov/stories2006/s2765.htm>

From: *Natural Hazards Observer*, v. 31, no. 4, p. 8.

Caribbean visitors to ITIC 17-25, September 2006

Dr. Lorna Inniss, Coastal Zone Management Unit, Barbados and Vice-Chair of IOC/ARIB, and Julie Leonard, USAID/Office of Foreign Disaster Assistance, Regional Advisor for the Caribbean, visited Hawaii to learn about best practices in tsunami mitigation, and in particular to gather information and advice for the development of a Caribbean Tsunami Information Centre (CTIC).

At ITIC, Dr. Laura Kong, ITIC Director, helped Inniss and Leonard to better understand the relationship between the IOC/ICG and its Secretariat, and gave suggestions for coordinating, setting direction, and providing capacity building for the Caribbean Early Warning System. Terms of Reference for a CTIC were finalized by the team, including how the ITIC would support the CTIC.

Dr. Inniss and Ms. Leonard also visited the Pacific Tsunami Warning Center (PTWC) for a tour and discussion with Dr. Charles McCreery, PTWC Director, and Dr. Kong. Discussion topics included seismic and sea-level data acquisition, warning products and protocols, dissemination mechanisms, regional and interim global warning roles of the Center, relative importance of having a regional (Caribbean) warning center as opposed to a distant center, such as the PTWC or the West Coast/Alaska Tsunami Warning Center (WC/ATWC), function of the PTWS Communications Plan and national contact and tsunami warning focal points.

To gain a more thorough understanding of how a tsunami warning system works and the role of its component parts, the team also visited Hawaii State and Oahu County Civil Defense agencies to see their Emergency Operating Centres and discuss with staff tsunami warning dissemination protocols, warning mechanisms, and the

important role of the Hawai'i Tsunami Technical Review Committee—a multi-sectoral coordinating committee for setting directions in improving mitigation.

From: Tsunami Newsletter, v. 38, no. 3, p. 16.

Developing Pacific Islands regional strategies to reduce tsunami risks: North Pacific Tsunami Awareness Workshop, Guam, 22-24, August 2006

Pacific Island Countries (PIC) are located within some of the most geologically active parts of the world. On the whole, PIC are amongst the most vulnerable countries in the world to multiple natural hazards, including local, regional, and teletsunamis.

An inaugural western North Pacific Tsunami Awareness Workshop (NPTAW) was convened in Guam in August 2006, through a collaborative effort between U.S. NOAA, South Pacific Applied Geoscience Commission (SOPAC), and ITIC. Over 50 participants represented PIC and territories of Guam, American Samoa, Commonwealth of Northern Mariana Islands, Federated States of Micronesia, Republic of Palau, and the Republic of Marshall Islands. Participants from Australia, Fiji, Japan, and USA also attended.

The aims of the workshop were to present an overview of current efforts for improving the management of tsunami risks specifically targeting new initiatives on early warning systems for the North Pacific. The workshop goal was to enhance the effectiveness of the Pacific Tsunami Warning System for the Northern Pacific through education, outreach, and problem solving.

Excerpted from full report: Tsunami Newsletter, v. 38, no. 3, p. 11-12.

New version of the Spatial Hazard Events and Losses Database (SHELDUS) released

The Hazards and Vulnerability Research Institute has released a new version (5.1) of the Spatial Hazard Events and Losses Database for the United States (SHELDUS): <http://www.sheldus.org>.

SHELDUS is a county-level hazard data set for the United States for 18 different natural hazard events types, such as thunderstorms, hurricanes, floods, wildfires, and tornados. For each event the database includes the beginning date, location (county and state), property losses, crop losses, injuries, and fatalities that affected each county. The new version of SHELDUS contains more than 400,000 records and spans the years from 1960 through 2005. New to this version is the compilation of event-specific loss data for major disasters (e.g., Hurricane Katrina), loss information on selected presidential disaster declarations, and information on the global disaster identifier initiative (GLIDE).

From:

<http://www.colorado.edu/hazards/dr/archives/dr471.html#1>
Disaster Research 471, Feb. 8, 2007.

Request for survey responses

Gerald Smith, a graduate student conducting research on geographic-information requirements for people affected by disaster, is looking for people who have experienced a disaster or were associated with community evacuation and other disaster-response efforts to complete a short survey.

The survey is available here:

<http://www.surveymshare.com/survey/take/?sid=48936>.

From:

<http://www.colorado.edu/hazards/dr/archives/dr471.html#1>
Disaster Research 471, Feb. 8, 2007.

Call for papers: Canadian Risk and Hazards Network

The Annual Symposium of the Canadian Risk and Hazards Network (CRHNet) is a premier meeting ground for practitioners and researchers involved in hazards, disasters, and risk management. The symposium draws practitioners in fields ranging from emergency management, emergency social services, disaster management planning, engineering, public health, and government, and researchers from the natural sciences, engineering, health, social sciences, policy, and interdisciplinary studies. Participants come from across Canada and internationally.

This year's symposium, which will be held November 6-8, 2007, in Vancouver, focuses on the theme of Forging Partnerships for Disaster Resilient Communities. The symposium organizers especially welcome abstracts from emergency planners and other professionals, as well as academics and researchers. Organizers particularly encourage presentations that demonstrate and/or discuss research-practice partnerships.

Abstracts may be submitted for individual oral presentations, organized sessions, panels, or posters. For further information and abstract submission, please visit the symposium Web site:

<http://www.jibc.ca/crhnnet/papers/papers.htm>.

Abstracts must be submitted online and are due March 31, 2007. Contact Prof. Stephanie Chang, Program Committee Chair (stephanie.chang@ubc.ca), with any questions.

From:

<http://www.colorado.edu/hazards/dr/archives/dr471.html#1>
Disaster Research 471, Feb. 8, 2007.

Tsunami Story Festival, April 1, 2007

The Pacific Tsunami Museum's 5th annual Tsunami Story Festival — "A Taste of Mamo Street" — will be full of the memories of those who lived and worked on Mamo Street before and after the big tsunamis of 1946 and 1960.

For details about this annual event, go to

<http://the.honoluluadvertiser.com/article/2007/Mar/28/br/br7038561429.html>.

WEBSITES

<http://www.nytimes.com/2006/11/14/science/14WAVE.html?ex=1321160400&en=35b395ffd080eb47&ei=5090>

Ancient crash, epid wave, by Sandra Blakeslee, New York Times

At the southern end of Madagascar lie four enormous wedge-shaped sediment deposits, called chevrons, that are composed of material from the ocean floor. Each covers twice the area of Manhattan with sediment as deep as the Chrysler Building is high.

On close inspection, the chevron deposits contain deep ocean microfossils that are fused with a medley of metals typically formed by cosmic impacts. And all of them point in the same direction — toward the middle of the Indian Ocean where a newly discovered crater, 18 miles in diameter, lies 12,500 feet below the surface.

The explanation is obvious to some scientists. A large asteroid or comet, the kind that could kill a quarter of the world's population, smashed into the Indian Ocean 4,800 years ago, producing a tsunami at least 600 feet high, about 13 times as big as the one that inundated Indonesia nearly two years ago. The wave carried the huge deposits of sediment to land.

For the full article and corrections, go to the website given above.

<http://projectdisaster.com/>

ProjectDisaster describes itself as a place for the latest news, information and discussion regarding disasters, terrorism, emerging infectious diseases, disaster response, mitigation, and preparedness. Much of the content comes from mainstream news articles, with added expert commentary. ProjectDisaster aggregates a variety of hazard- and disaster-related items of interest into one place

From:

<http://www.colorado.edu/hazards/dr/archives/dr471.html#1>
Disaster Research 471, Feb. 8, 2007.

<http://www.peripresdecusa.org/mainframe.htm>

PERI presidential declarations

This page of the Public Entity Risk Institute's Web site features a searchable list of presidentially declared disasters and emergencies in the United States, information about the number and type of declarations made by each of the last 10 presidents, data on requests for disaster declarations there were denied, and links to related publications and other information. The site also allows users to compile a customized summary table of disaster declarations, by jurisdiction, hazard, costs, or year.

From: *Natural Hazards Observer*, v. 31, no. 4, p. 15.

<http://www.nemaweb.org!/1720>

National Emergency Management Association
Preparedness Committee position paper: A lack of a

strategic interoperable information exchange plan which fully encompasses and seeks to standardize voice and data communications.

Discussion: Over the last three years the nation has had numerous projects underway to develop various forms of communications capabilities. These communications capabilities are being developed 1) by public and private entities; and 2) for radios, computers, and telephones. The majority have different protocols and standards.

The lack of coordinated, common interoperability standards in these efforts is a serious obstacle to achieving true interoperability.

Sept. 22, 2006.

http://www.gcn.com/online/vol1_no1/42689-1.html

Statewide radio interoperability could cost \$7B.

“According to a new survey published by the National Emergency Management Association, state emergency managers estimate it will cost \$7 billion to achieve statewide interoperable communications for first responders.”

“The survey is the basis for the 2006 Biennial Report issued by the association highlighting major concerns and trends in the field. It is a professional group representing state emergency managers, who plan and direct state response to disasters and major incidents. The survey collected information from state emergency managers in 46 states.”

For full report and link to survey, visit website given above.

<http://www.unisdr.org/eng/library/lib-about.htm>

International Strategy for Disaster Reduction (U.N.)
Library on Disaster Risk Reduction

Objectives: to develop, maintain and make available its collection of shared knowledge on disaster risk reduction in order to stimulate a culture of disaster prevention.

The collection: The library comprises more than 10,000 items including books, reports, articles, monographs, serials on the various aspects of disaster risk reduction. More than 5,500 are catalogued. Newsletters, CDROMs, videos, and DVDs are also available.

PUBLICATIONS

Grand Challenges for Disaster Reduction

A report by the Subcommittee on Disaster Reduction, National Science and Technology Council, 22pp., 2005, available at

<http://www.sdr.gov/SDRGrandChallengesforDisasterReduction.pdf>. which presents six Grand Challenges for disaster reduction:

Grand Challenge #1 – Provide hazard and disaster information where and when it is needed;

Grand Challenge #2 – Understand the natural processes that produce hazards;
Grand Challenge #3 – Develop hazard mitigation strategies and technologies;
Grand Challenge #4 – Recognize and reduce vulnerability of interdependent critical infrastructure;
Grand Challenge #5 – Assess disaster resilience using standard methods; and
Grand Challenge #6 – Promote risk-wise behavior.
From: *Earthquake Quarterly*, summer 2006, p. 15-16.

TsunamiTeacher

Guided and compiled by the IOC's ITIC, *Tsunami Teacher* is an information and resource toolkit that brings together a wealth of new and existing information on tsunamis into a single, reliable resource that can be adapted to local conditions through its customizable training modules for different audiences.

TsunamiTeacher is supported both as a dynamic, electronic, on-line resource that will be continually reviewed, updated, and added to by experts, and as an off-line DVD which will run on either PC or Macintosh platforms. The base language is English, with future translations planned into Bahasa Indonesia, Bengali, French, Spanish, and Thai. For more details or to download the program, visit <http://tsunamiwave.info>.

From: *Tsunami Newsletter*, v. 38, no. 3, p. 1.

Vivir con el Riesgo

"Living With Risk: A Global Review of Disaster Reduction Initiatives," a book from the UN/ISDR, is now available in Spanish, giving tips for reducing vulnerability to natural hazards. This 400-page book is seen as a guide to disaster management, and the Spanish translation will allow for a broader audience in a region plagued by natural disaster.

From:

<http://www.colorado.edu/hazards/dr/archives/dr471.html#1>
Disaster Research 471, Feb. 8, 2007.

Disaster resilience--An integrated approach

Douglas Paton and David Johnston. ISBN 0-398-07663-4, 2006, 344 p. \$68.94 hardcover. \$48.95 paperback. Charles C. Thomas, publisher.

This volume discusses how risk can be managed over the long term by identifying those factors that influence a society's capacity to co-exist with periodically hazardous natural processes. Resilience is examined in terms of individual and household preparedness, protection of vital infrastructure, and religious and other support networks. The book also addresses the role of the media, economic and ecological resiliency, and planning for mitigation. Introductory and summary chapters set the separate contributions in context and highlight links between them, to arrive at overall observations about what is needed to create disaster-resilient communities: a conscious effort on the part of people, communities, and social institutions

to develop resources to adapt to changed realities--and to make that adaptation sustainable for the future.

From: *Natural Hazards Observer*, v. 31, no. 4, p. 11.

Measuring vulnerability to natural hazards--Towards disaster resilient societies

Jorn Birkmann, editor. ISBN 92-808-1135-5. 2006, 524 p. \$39.00. United Nations University Press.

An assessment of vulnerability to natural hazards and their impacts--preferably in quantified terms--is essential when estimating the potential consequences of all manner of disasters and should be a cornerstone of effective disaster preparedness worldwide, particularly in this era of changing climate and increasing frequency of extreme natural events. Assessing a population's vulnerability and using that information in policy and decision making would be simplified if such indicators of vulnerability were developed and agreed upon. Toward that end, this book's 24 chapters explore 1) the various definitions, proposed indicators, and conceptual frameworks of vulnerability; 2) the relationship between human vulnerability and environmental change; 3) existing techniques for measuring vulnerability at global, national, and sub-national scales; 4) some qualitative and participatory approaches used at local levels; and 5) ways to assess institutional capacity for reducing vulnerability, using flood disaster risk as an example. A concluding chapter offers overarching observations and describes research that is still needed.

From: *Natural Hazards Observer*, v. 31, no. 4, p. 11.

Tsunami and disaster management: Law and governance

By C. Raj Kumar and D. K. Srivastava. ISBN 962-661-306-8. 2006. 274 p.

The School of Law of the City University of Hong Kong organized the International Conference on Disaster Management: challenges for Governance Reforms in Asia in March 2005, a few months after the tsunami in South-East Asia. Several attendants and presenters at this meeting got together to prepare this publication. It discusses thematic issues relating to disaster management and their implications for governance reform in Asia and beyond. Other issues covered include the assessment of the level of preparedness in the countries affected by the tsunami, the work of public and private institutions in Asia, and issues related to financial aid and relief work directed to the victims. The publication's 15 chapters are divided in three parts that go from disaster laws to the rights of victims and regional perspectives for disaster management, humanitarian relief and rehabilitation. The price of the publication is US\$52, and it is available from Sweet and Maxwell Publishers (<http://www.smlawpub.com.hk/>).

From: *Disasters—Preparedness and Mitigation in the Americas*, issue 106, Feb. 2007, p. 6.

CONFERENCES

May 21-23, 2007

Risk communication challenge: Theory, tools, and practical skills for communicating about risk

Offered by Harvard School of Public Health (617 384-8692). Making wise choices requires understanding risks and benefits, and risk communication is a key tool for creating that understanding. This conference will demonstrate the scientific foundations for effective risk communication by featuring the latest findings on risk perception, highlighting case studies from around the world, and introducing practical tools for communication. <http://www.harvard.edu/ccpe/programs/RCC.shtml>

From: *Natural Hazards Observer*, v. 31, no. 4, p. 17.

May 22-24, 2007

Defuse disaster: CPM 2007 West.

This training event will provide a complete risk management education, along with opportunities to network with professional peers. CPM is dedicated to the convergence of business continuity/COOP, emergency management and security to enable businesses to prepare a comprehensive and effective plan in order to prevail in the face of disaster.

cpmEvents@ContingencyPlanning.com;
<http://www.ContingencyPlanningExpo.com>.

June 5-8, 2007

14th annual conference of the International Emergency Management Society (TIEMS), Trogir, Croatia.

Founded in 1993, TIEMS is a nonprofit society dedicated to developing modern emergency management tools and bringing their benefits to society. This conference, "Disaster Recovery and Relief: Current & Future Approaches," will address numerous issues and developments in emergency management, including GIS, terrorism, the media, health emergencies, business continuity, and more.

The International Emergency Management Society
+47 91 69 30 12 (Belgium); khdrager@online.no;
<http://www.tiems.Org>

From: *Natural Hazards Observer*, v. 31, no. 4, p. 18.

June 10-13, 2007

2007 National Conference on Community Preparedness: Partnerships and collaboration through Citizen Corps, Alexandria, Virginia.

Organizers: The International Association of Emergency Managers (IAEM) and the National Emergency Management Association (NEMA).

<http://www.iaem.com/NCCC2007.htm>.

Citizen Corps was created to help coordinate volunteer activities that will make communities safer, stronger, and better prepared to respond to any emergency situation. It provides opportunities for people to participate

in a range of measure to make their families, their homes, and their communities safer from threats of crime, terrorism, and disasters of all kinds.

The Corps is coordinated nationally by the Department of Homeland Security, which works closely with other federal entities, state and local governments, first responders and emergency managers, the volunteer community, and the White House Office of the USA Freedom Corps. Conference attendees will share best practices regarding community preparedness, examine how to reach out to specific populations, and learn innovative approaches to funding and program implementation.

From: *Natural Hazards Observer*, v. 31, no. 4, p. 18.

July 3-4, 2007

Australasian Natural Hazards Management Conference 2007: From warnings to response and recovery, Brisbane, Australia.

For emergency managers, planners, risk assessors, asset and utility managers, natural hazards researchers, and scientists, this conference offers a forum to discuss the integration of hazard information into effective risk management. The conference emphasizes the application of recent scientific research and other hazard information to create best practices, develop effective warning systems, improve disaster response and recovery, and build resilient communities.

ahm07@hazards-education.org; <http://www.hazards-education.org/ahm07/>.

From: *Natural Hazards Observer*, v. 31, no. 4, p. 18.

July 8-11, 2007

17th World Conference on Disaster Management, Toronto, Canada.

Organizer: The Canadian Centre for Emergency Preparedness (CCEP). The theme for this conference will be "Emergency Management and Business Continuity Working Together." It will feature speakers from many parts of the world and provide opportunities for both training and networking with experts and practitioners in all areas of emergency and risk management.

Alysone Will, (416) 595-1414; coord@wcdm.org;
<http://www.wcdm.org>. ♦

Russia's Far East to get new tsunami warning system by 2008

An April 18 report on TASS-Online announced that "Russia will commission a state-of-the-art tsunami warning system in the Far East by 2008."

From: <http://www.itar-tass.com/eng/level2.html?NewsID=11446742&PageNum=0>

Material added to the NTHMP Library
March – April 2007

Note: These, and all our tsunami materials, are included in the online (searchable) catalog at <http://www.dnr.wa.gov/geology/washbib.htm>. Type 'tsunamis' in the Subject field to get a full listing of all the tsunami reports and maps in the collection.

Reinhardt, Eduard G.; Goodman, Beverly N.; Boyce, Joe I.; Lopez, Gloria; van Hengstum, Peter; Rink, W. Jack; Mart Yossi; Raban, Avner, 2006, The tsunami of 12 December A.D. 115 and the destruction of Herod the Great's harbor at Caesarea Maritima, Israel: *Geology*, v. 34, no. 12, p. 1061-1064.

Tsunami Pilot Study Working Group, 2006, Seaside, Oregon tsunami pilot study--Modernization of FEMA flood hazard maps: U.S. Geological Survey Open-File Report 2006-1234, 1 v.

United Nations Inter-Agency Task Force for Disaster Reduction Working Group, 2006, Global survey of early warning systems--An assessment of capacities, gaps and opportunities toward building a comprehensive global early warning system for all natural hazards: United Nations, 49 p.

Zahibo, Narcisse; Pelinovsky, Efim; Okal, Emile; Yalciner, Ahmet; Kharif, Christian; Talipova, Tatiana; Kozelkov, Andrey, 2005, The earthquake and tsunami of November 21, 2004 at Les Saintes, Guadeloupe, Lesser Antilles: *Science of Tsunami Hazards*, v. 23, no. 1, p. 25-39. ♦

Governor Proclaims April as Earthquake & Tsunami Awareness Month in Oregon

For the full story, go to http://www.salem-news.com/articles/april152007/earthquake_awareness_041507.php

Pacific tsunami alert system needs 'reinforcement'

<http://www.scidev.net/gateways/index.cfm?fuseaction=readitem&rgwid=3&item=News&itemid=3534&language=1>

A good overview of the April 2nd Solomon Islands earthquake and tsunami, with an assessment of the warning system. (Another explanation and critique of the warning system can be found at <http://www.dailynews.lk/2007/04/05/wld03.asp>)

A new issue of the ITIC "Tsunami Newsletter"

(Jul-Sep 2006, Vol. XXXVIII No. 3) is now available online at <http://ioc3.unesco.org/itic/contents.php?id=353>

STATE EMERGENCY MANAGEMENT OFFICES
updated 3-31-2006

Alaska Dept of Military & Veteran Affairs
Division of Homeland Security & Emergency Mgmt.
PO Box 5750
Fort Richardson, AK 99505-5750
(907) 428-7000; toll-free 800-478-2337
Fax (907) 428-7009
<http://www.ak-prepared.com/>

California Office of Emergency Services
3650 Schriever Ave.
Mather, CA 95655
(916) 845-8510; Fax (916) 845-8910
<http://www.oes.ca.gov/>

Hawaii State Civil Defense, Dept. of Defense
3949 Diamond Head Road
Honolulu, HI 96816-4495
(808) 733-4300; Fax (808) 733-4287
<http://www.scd.state.hi.us>

Oregon Division of Emergency Management
PO Box 14370
Salem, OR 97309-50620
(503) 378-2911; Fax (503) 373-7833
<http://www.oregon.gov/OOHS/OEM/>

Washington State Military Dept.
Emergency Management Division
Camp Murray, WA 98430-5122
(253) 512-7067; Fax (253) 512-7207
<http://emd.wa.gov>

Provincial Emergency Program
455 Boleskin Road
Victoria, BC V8Z 1E7 Canada
(250) 952-4913; Fax (250) 952-4888
<http://www.pep.bc.ca/>

Cuba interested in warning system

A March 23rd online news item stated that Cuba would like to join the Caribbean tsunami warning system network.

Speaking at the 2nd congress of Science of the earth (Geociencias 2007), Enrique Diego Arango, National Seismologic Research Center, referred to the need for what he called a comprehensive social model to prepare the population in view of the risk such devastating phenomena pose.

From: http://www.indianmuslims.info/news/2007/march/23/international/cuba_ready_for_tsunami_warning_system.html ♦

INFREQUENTLY ASKED QUESTIONS

COMPILED BY LEE WALKLING

Who won the Aryabhata Award in November 2006 for which tsunami device?

Shibnath Maity, senior scientist of Central Mining Research Institute, Dhanbad, India, won for developing the “tsunami shield,” an affordable and foolproof device to combat the natural calamity, according to the press release at http://www.telegraphindia.com/1061206/asp/jamshedpur/story_7101018.asp

“I had a feeling of immense loss after the tsunami hit the coastal areas, mainly those of Chennai and Andaman on December 26, 2004. it was only then that I started working on this life-saving device, which not only assures safety but is also affordable,” the scientist said.

The shield weighs about 100 grams and can help a person up to 250 kg to float for hours. It takes 15 seconds to put on and about the same time to take off.

What new group of scientists is studying mega tsunamis, caused by asteroid impacts?

The Holocene Impact Research Group, made up of scientists from U.S., Australia, Russia, France and Ireland. This group of scientists have been working on a theory that such mega tsunamis may happen, not every half a million years as astronomers had predicted, but every couple of millennia.

For more information, go to Researchers claim link between tsunamis and outer space at <http://www.abc.net.au/pm/content/2006/s1788687.htm> (posted Nov 14, 2006; reporter Mark Colvin).

What unusual friendship came about as a result of the 26 December 2004 tsunami in Kenya?

“Mzee, a 130-year old Aldabran tortoise, became a surrogate parent and inseparable friend to baby hippo Owen who was washed out to sea off the coast of Kenya, rescued by villagers and taken to a wildlife park where the tortoise lived.”

For updates on the two animals by their caretaker Stephen Tuei, go to <http://www.owenandmzee.com/omweb/>. The website includes a documentary of the amazing relationship.

Owen and Mzee—The true story of a remarkable friendship has been followed by a second book *Owen and Mzee—The language of friendship*.

From:

http://www.reuters.com/article/gc08/idUSN2829663720070301?src=030107_1648_ARTICLE_PROMO_also_on_reuters



Picture from: <http://www.lafargeecosystems.com/main/blog.php?m=01&y=05> ♦

VIDEO-CD-DVD RESERVATIONS

To reserve tsunami videos, CDs or DVDs, contact *TsuInfo Alert* Video Reservations, Lee Walkling, Division of Geology and Earth Resources Library, 1111 Washington St. SE, MS 47007, Olympia, WA 98504-7007; or e-mail lee.walkling@dnr.wa.gov

Adventures of Disaster Dudes (14 min.). Preparedness for preteens. American Red Cross.

The Alaska Earthquake, 1964 (20 min.) Includes data on the tsunamis generated by that event.

Business Survival Kit for Earthquakes & Other Disasters; What every business should know before disaster strikes (27 min.). Global Net Productions for the Cascadia Regional Earthquake Workgroup, 2003. With CD disaster planning toolkit & other data.

Cannon Beach Fire District Community Warning System (COWS) (21 min.) Explains why Cannon Beach chose their particular warning system.

Cascadia: The Hidden Fire—An Earthquake Survival Guide (10 min.). Global Net Productions, 2001. A promo for a documentary about the Cascadia subduction zone and the preparedness its existence demands of Alaska, Oregon and Washington states. Includes mention of tsunamis.

Disasters are Preventable (22 min.) Ways to reduce losses from various kinds of disasters through preparedness and prevention.

Disaster Mitigation Campaign (15 min.). American Red Cross; 2000 TV spots. Hurricanes, high winds, floods, earthquakes.

Earthquake...Drop, Cover & Hold (5 min.). Washington Emergency Management Division. 1998.

Forum: Earthquakes & Tsunamis (2 hrs.). CTV-23, Vancouver, WA (January 24, 2000). 2 lectures: Brian Atwater describes the detective work and sources of information about the Jan. 1700 Cascadia earthquake and tsunami; Walter C. Dudley talks about Hawaiian tsunamis and warning systems.

International Tsunami Information Centre, 2004, Tsunami warning evacuation news clips and video footage, UNESCO/IOC International Tsunami Information Centre, 1 DVD, 12 min.

Killer Wave: Power of the Tsunami (60 min.). National Geographic video.

Mitigation: Making Families and Communities Safer (13 min.) American Red Cross.

Not Business as Usual: Emergency Planning for Small Businesses, sponsored by CREW (Cascadia Regional Earthquake Workgroup) (10 min.), 2001. Discusses disaster preparedness and business continuity. Although it was made for Utah, the multi-hazard issues remain valid for everyone. Websites are included at the end of the video for further information and for the source of a manual for emergency preparedness for businesses.

Numerical Model Aonae Tsunami—7-12-93 (animation by Dr. Vasily Titov) and Tsunami Early Warning by Glenn Farley, KING 5 News (The Glenn Farley portion cannot be rebroadcast.)

Ocean Fury—Tsunamis in Alaska (25 min.) VHS and DVD. Produced by Moving Images for NOAA Sea Grant College Program, 2004.

The Prediction Problem (58 min.) Episode 3 of the PBS series "Fire on the Rim." Explores earthquakes and tsunamis around the Pacific Rim

Protecting Our Kids from Disasters (15 min.) Gives good instructions to help parents and volunteers make effective but low-cost, non-structural changes to child care facilities, in preparation for natural disasters. Accompanying booklet. Does NOT address problems specifically caused by tsunamis.

The Quake Hunters (45 min.) A good mystery story,

explaining how a 300-year old Cascadia earthquake was finally dated by finding records in Japan about a rogue tsunami in January 1700

Raging Planet; Tidal Wave (50 min.) Produced for the Discovery Channel in 1997, this video shows a Japanese city that builds walls against tsunamis, talks with scientists about tsunami prediction, and has incredible survival stories.

Raging Sea: KGMB-TV Tsunami Special. (23.5 min.) Aired 4-17-99, tsunami preparedness in Hawaii.

The Restless Planet (60 min.) An episode of "Savage Earth" series. About earthquakes, with examples from Japan, Mexico, and the 1989 Loma Prieta earthquake.

Run to High Ground (14 min.). Produced by Global Net Productions for Washington Emergency Management Division and Provincial Emergency Program of British Columbia, 2004. Features storyteller Viola Riebe, Hoh Tribe. For K-6 grade levels. Have video and DVD versions.

Tsunami and Earthquake Video (60 min.) "Tsunami: How Occur, How Protect," "Learning from Earthquakes," "Computer modeling of alternative source scenarios."

Tsunami: Killer Wave, Born of Fire (10 min.). NOAA/PMEL. Features tsunami destruction and fires on Okushiri Island, Japan; good graphics, explanations, and safety information. Narrated by Dr. Eddie Bernard, (with Japanese subtitles).

Tsunami: Surviving the Killer Waves (13 min.). 2 versions, one with breaks inserted for discussion time.

Tsunami Chasers (52 min.). Costas Synolakis leads a research team to Papua New Guinea to study submarine landslide-induced tsunamis. Beyond Productions for the Discovery Channel.

Tsunami Evacuation PSA (30 sec.). DIS Interactive Technologies for WA Emergency Management Division. 2000.

TsunamiReady Education CD, 2005, American Geological Institute Earth Science Week kit.

Understanding Volcanic Hazards (25 min.) Includes information about volcano-induced tsunamis and landslides.

UNESCO/IOC International Tsunami Information Centre, 2005, U.S. National Tsunami Hazard Mitigation Program public information products—B-roll footage, tsunami science, warnings, and preparedness: UNESCO/IOC International Tsunami Information Centre, 1 DVD, 57 min.

The Wave: a Japanese Folktale (9 min.) Animated film to start discussions of tsunami preparedness for children.

Waves of Destruction (60 min.) An episode of the "Savage Earth" series. Tsunamis around the Pacific Rim.

Who Wants to be Disaster Smart? (9 min.). Washington Military Department/Emergency Management Division. 2000. A game show format, along the lines of *Who Wants to be a Millionaire?*, for teens. Questions cover a range of different hazards.

The Wild Sea: Enjoy It...Safely (7 min.) Produced by the Ocean Shores Wash. Interpretive Center, this video deals with beach safety, including tsunamis. ♦



NATIONAL TSUNAMI HAZARD MITIGATION PROGRAM STEERING GROUP

NOAA

Jeff LaDouce, Chairman
NOAA/NWS Pacific Region,
737 Bishop St., Suite 2200
Honolulu, HI 96813-3213
Ph: 808-532-6416; Fax: 808-532-5569
Jeff.Ladouce@noaa.gov

Landry Bernard, NOAA/NDBC
Bldg 1100 Room 361C
Stennis Space Center, MS 39529-6000
Ph: 228-688-2490; Fax: 228-688-3153
Landry.Bernard@noaa.gov

Eddie Bernard, NOAA/PMEL
7600 Sand Point Way NE
Seattle, WA 98115-6349
Ph: 206-526-6800; Fax: 206-526-6815
Eddie.N.Bernard@noaa.gov

Frank González, NOAA/PMEL
7600 Sand Point Way NE
Seattle, WA 98115-6349
Ph: 206-526-6803; Fax: 206-526-6485
Frank.I.Gonzalez@noaa.gov

Laura Furgione, Alaska Region Dir.
NoAA/NWS, Alaska Region HQ
222 W. 7th Ave. #23
Anchorage, AK 99513-7575
Ph: 907-271-5136; Fax: 907-271-3711
Laura.Furgione@noaa.gov

James Partain, Alaska Region NOAA/NWS,
222 W. 7th Ave., #23
Anchorage, AK 99513-7575
Ph: 907-271-5131; Fax: 907-271-3711
James.Partain@noaa.gov

Laura Kong, ITIC, Director
737 Bishop St., Suite 2200
Honolulu, HI 96813
Ph: 808-532-6423; Fax: 808-532-5576
Laura.Kong@noaa.gov

Brian Yanagi, ITIC
737 Bishop St., Suite 2200
Honolulu, HI 96813
Ph: 808-532-6422; Fax: 808-532-5576
Brian.Yanagi@noaa.gov

DHS/FEMA

Chris Jonientz-Trisler, DHS/FEMA
Region X, 130 228th St. SW
Bothell, WA 98021-9796
Ph: 425-487-4645; Fax: 425-487-4613
Chris.jonientztrisler@dhs.gov

Michael Hornick DHS/FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607
Ph: 510-627-7260; Fax: 510-627-7147
michael.hornick@dhs.gov

USGS

David Oppenheimer, USGS

345 Middlefield Rd., MS 977
Menlo Park, CA 94025
Ph: 650-329-4792; Fax: 650-329-4732
oppen@usgs.gov

Craig Weaver, USGS,
c/o Geophysics, Box 351650
University of Washington
Seattle, WA 98195-1650
Ph: 206-553-0627; Fax: 206-553-8350
craig@ess.washington.edu

NSF

Richard Fragaszy
The National Science Foundation
ENG/CMS
4201 Wilson Blvd., Room 545
Arlington, VA 22230
Ph.: 703-292-7011; Fax 703-292-9053
rfragasz@nsf.gov

Alaska

R. Scott Simmons
Alaska Division of Homeland Security and
Emergency Management
P.O. Box 5750, Suite B-210, Bldg. 49000
Fort Richardson, AK 99505-5750
Ph: 907-428-7016; Fax: 907-428-7009
scott_simmons@ak-prepared.com

Ervin Petty (Alt.), Alaska Division of
Homeland Security and Emergency
Management
P.O. Box 5750, Suite B-210, Bldg. 49000
Fort Richardson, AK 99505-5750
Ph: 907-428-7015; Fax: 907-428-7009
ervin_petty@ak-prepared.com

Roger Hansen, Geophysical Institute,
University of Alaska, P.O. Box 757320
903 Koyukuk Dr.
Fairbanks, AK 99775-7320
Ph: 907-474-5533; Fax: 907-474-5618
roger@GISEIS.alaska.edu

Rodney Combellick (Alt.)
Alaska Dept. of Natural Resources
Div. of Geological & Geophysical Surveys
3354 College Road
Fairbanks, AK 99709
Ph: 907-451-5007; Fax: 907-451-5050
rod@dnr.state.ak.us

California

Richard Eisner, FAIA
Governor's Office Of Emergency Services
1300 Clay St., Ste. 400
Oakland, California 94612
Ph: 510-286-0888; Fax: 510-663-5339
Rich_Eisner@oes.ca.gov

Michael S. Reichle, Chief Seismologist,
Dept of Conservation
California Geological Survey
801 "K" Street, MS 12-32
Sacramento CA 95814-3530

Ph: 916-327-1813; Fax 916-322-4765
Michael.Reichle@conservation.ca.gov

Don Hoirup, Jr., California Geological
Survey, Dept. of Conservation
801 K Street, MS 12-31
Sacramento, CA 95814-3531
Ph: 916-324-7354 ; Fax: 916-445-3334
dhoirup@consrv.ca.gov

Hawaii

Jeanne Johnston
Civil Defense Division, State of Hawaii
3949 Diamond Head Road
Honolulu, HI 96816-4495
Ph: 808-733-4301 ext. 552; Fax: 808-733-4287
jjohnston@scd.hawaii.gov

Walter C. Dudley, Civil Defense Division,
State of Hawaii
Pacific Tsunami Museum,
200 W. Kawili St., Hilo, HI 96720
Ph.: 808-933-3905; Fax: 808974-7693
dudley@hawaii.edu

Oregon

Jay Wilson, Oregon Emergency
Management, P.O. Box 10370
Salem, OR 97309-5062
Ph: 503-378-2911 Ext. 22237;
Fax: 503-373-7833
jmwilson@oem.state.or.us

George Priest, Oregon Dept. of Geology &
Mineral Industries, Coastal Field Office
P.O. Box 1033
Newport, OR 97365
Ph: 541-574-6642; Fax: 541-265-5241
george.priest@dogami.state.or.us

Jonathan C. Allan (Alt.) Oregon Dept.
of Geology & Mineral Industries
Coastal Field Office, P.O.Box 1033
Newport, OR 97365
Ph: 541-574-6658; Fax: 541-265-5241
jonathan.allan@dogami.state.or.us

Washington

George Crawford, Washington. State
Military Dept., Emergency Management
Division
Camp Murray, WA 98430-5122
Ph: 253-512-7067; Fax: 253-512-7207
g.crawford@emd.wa.gov

Timothy Walsh, Division of Geology &
Earth Resources
P.O. Box 47007
Olympia, WA 98504-7007
Ph: 360-902-1432; Fax: 360-902-1785
tim.walsh@wadnr.gov

From: <http://www.pmel.noaa.gov/tsunami-hazard/tsuhaz.htm>
Updated Mar. 31, 2006

Researchers apply ag shelterbelt design to coastal tsunami protection

Iowa State University, College of Agriculture
News release 4-13-07

AMES, Iowa -- Iowa State University researchers are applying their knowledge of agricultural shelterbelts to protect coastal areas from tsunamis at the request of the United Nations' Food and Agriculture Organization (FAO)

Following the devastating aftermath of Hurricane Katrina and the December 2004 tsunami in Southeast Asia, many international planning agencies have searched for ways to prevent such tragedies in the future. Gene Takle, professor of agronomy and geological and atmospheric sciences, and colleagues Mike Chen and Xiaoqing Wu in atmospheric science were asked to develop a set of guidelines for rebuilding coastal forests based on their research on wind reduction by the use of agricultural shelterbelts.

The Iowa State group was commissioned to write a paper on designing coastal forests and shelterbelts, which are known as "bioshields." Takle represented the group at a workshop under sponsorship of the FAO last summer in Khao Lak, Thailand, where hundreds of bodies had washed up on the beach after the 2004 tsunami.

"Much loss of life from this tsunami was attributed to destruction of coastal forests. Villages in India and Southeast Asia that preserved their coastal mangroves suffered far less damage," Takle said. "FAO requested guidelines for rebuilding these bioshields based on our work and understanding of agricultural shelterbelts."

Their suggested guidelines include planting trees as close to the sea as possible; using short salt-tolerant and sparse shelters on the seaward edge; using tall species of high wind resistance on the landward side; and leaving gaps between rows and irregularly within the rows to extend the protected zone, but allowing for onshore flow of the cooling sea-breeze in nonhazardous conditions.

"Very little research has been done on this topic, so we used our computer model and previous experience on flow through living barriers to evaluate alternative shelter designs like tree heights, density, spacing and orientation to develop our recommendations," Takle said.

Federal managers in Southeast Asia and India will consider the guidelines when rebuilding damaged coastal areas.

Takle has teamed with meteorology graduate students Dan Rajewski and Sarah Schmidt to conduct additional studies to refine the preliminary guidelines he presented at the Thailand workshop and explore additional uses of bio-shields against high winds.

Contacts:

Gene Takle, Agronomy, (515) 294-9871, gstakle@iastate.edu
Melea Reicks Licht, Agronomy, (515) 294-1890, mreicks@iastate.edu <<mailto:mreicks@iastate.edu>>

Teddi Barron, News Service, (515) 294-4778, tbarron@iastate.edu <<mailto:tbarron@iastate.edu>>

Iowa State University
News Service/University Relations
1015 Communications Building
Ames, Iowa 50011
(515) 294-4778
tbarron@iastate.edu
Reprinted with permission ♦

Ireland to participate in EU tsunami warning system

IRISH Marine Minister Noel Dempsey today announced that the Government has decided to form an inter-departmental committee to draft proposals for the creation of a tsunami warning system for Ireland as part of an internationally co-ordinated system.

Reported February 13, 2007 at

http://www.fishupdate.com/news/fullstory.php/aid/6657/Ireland_to_participate_in_EU_tsunami_warning_system_.html

STOP THE PRESSES (Last minute news items)

UN Sasakawa Award for Disaster Reduction

The United Nations International Strategy for Disaster Reduction (ISDR) is calling for the nomination of individuals or institutions for the 19th U.N. Sasakawa Award for Disaster Reduction.

The United Nations Sasakawa Award for Disaster Reduction is worth approximately \$50,000, to be shared among the Sasakawa Laureate and recipients of the Certificates of Distinction and Merit. It is presented annually on the International Day for Disaster Reduction, the second Wednesday of October.

The candidate can be an individual or an institution, distinguishing herself/himself/itself through outstanding and internationally recognized action in the following fields:

1. The implementation, at international or regional level, of activities designed to strengthen people's awareness of disasters triggered by natural hazards;
2. The launching of scientific activities contributing to technological innovation facilitating disaster prediction;
3. The launching of scientific or social activities contributing to the strengthening of disaster risk reduction;
4. The promotion of activities which reduce the economic impact of disasters and contribute to sustainable development;

STOP THE PRESSES (continued)

5. Any other activities recognized as essential in promoting disaster risk reduction (early warning, environmental management, land use planning, promotion of building codes, awareness-raising, education, etc.).

Those interested should complete the nomination form by June 29, 2007. The nomination form and the information in support of the nomination should be submitted to the ISDR Secretariat.

More information, along with the nomination packet, is available here:

<http://www.unisdr.org/eng/sasakawa/2007/Sasakawa-Award-2007-English.pdf>.

From: Disaster Research 472, Feb. 22, 2007, p. 2.

Tsunami Information Sources

<http://www.lib.berkeley.edu/WRCA/tsunamis.html#wiegel>

Robert L. Wiegel, professor emeritus in the Department of Civil and Environmental Engineering at the University of California-Berkeley, has compiled "Tsunami Information Sources," a comprehensive, three-part series of lists noting research, bibliographies, journals, newsletters, photographs, organizations, and more dealing with tsunamis.

From: Disaster Research 472, Feb. 22, 2007, p.5.

15th World Conference in Disasters and Emergency Management

Amsterdam: The Netherlands: May 13-16, 2007.

Organizer: World Association for Disaster and Emergency Medicine. This congress aims to catalyze thought processes and to come up with very clear products to better prepare experts, organizations, and governments for the next disaster or crisis. The central themes will be preparedness, knowledge, training, and networks. Attendees will include policy makers, researchers, clinicians, responders, planners, administrators, and other experts from around the world who have interest in the most urgent medical and humanitarian problems of the 21st century.

To learn more, see <http://www.wcdem2007.org/>.

From: Disaster Research 472, Feb. 22, 2007, p.7.

DHS Awards \$194 Million to States for Emergency Management

The U.S. Department of Homeland Security (DHS) has released \$194 million to help states and local governments prepare and implement emergency management activities through the Emergency Management Performance Grant (EMPG) program. Emergency managers have been awarded more than \$750 million since fiscal year 2004 through the program.

State emergency management agencies use EMPG funds to enhance their emergency management capabilities in a range of areas that include planning, equipping, and training; conducting exercises; and providing for all-hazards emer-

gency management operations. In addition, EMPG funds are used to pay for personnel who write plans, conduct training and exercise programs, maintain emergency response programs, and educate the public on disaster readiness.

The full press release is available here, http://www.dhs.gov/xnews/releases/pr_1172607027848.htm.

A list of grant allocations, by state, is available here, http://www.dhs.gov/xgovt/grants/gc_1172607766048.shtm.

From: Disaster Research 473, March 8, 2007, p. 2.

Munich Re's NatCatSERVICE

<http://www.munichre.com/>

With more than 22,000 entries, the Munich Re-assurance Group in Australasia's NatCatSERVICE is one of the world's leading databases for natural catastrophes. Every year between 600 and 900 events are recorded and analyzed. The site presents reports of the number of disasters by year, information on disaster losses, longterm disaster data, and lists of the deadliest and costliest catastrophes.

From: Disaster Research 473, March 8, 2007, p. 3.

"Stop Blaming the Radio"

<http://www.hsaj.org/?article=3.1.5>

This article, which appears in "Homeland Security Affairs," looks at radio interoperability and solutions to miscommunication during disasters, and explains that impediments to successful communication include insufficient radio infrastructure, behavioral reactions by people in stressful situations, intergovernmental relations, inadequate procedures and training, and general lethargy over the need to institute special operating policies distinct from routine practices.

From: Disaster Research 473, March 8, 2007, p. 4.

Risk Communication Challenge: Theory, Tools, and Practical Skills for Communicating About Risk

Boston, Massachusetts: May 21-23, 2007. Offered by: Harvard School of Public Health. Making wise choices requires understanding risks and benefits, and risk communication is a key tool for creating that understanding. This conference will demonstrate the scientific foundations for effective risk communication by featuring the latest findings on risk perception, highlighting case studies from around the world, and introducing practical tools for communication. Visit

<http://www.hsph.harvard.edu/ccpe/programs/RCC.shtml>.

From: Disaster Research 474, Mar. 22, 2007, p. 5 ♦



Emergency Preparedness A Personal Responsibility - Your Responsibility

By Tommy Rainey

Since the mid 80s, the emergency management community has preached a clear and consistent message: Prepare yourself and your family to be self sufficient for 3 days. Way back then, some even suggested 7 days! All agreed that after a major disaster, it could be days before outside help arrives. The importance of personal preparedness was re-emphasized after 9/11 by former Homeland Security Secretary Tom Ridge: "We can be afraid or we can be ready."

In the aftermath of Hurricane Katrina, there was plenty of blame to go around! The government failed. Too many assumptions were made about the magnitude of the event and who was going to do what. FEMA failed. Only one year prior, FEMA had conducted a drill on a "Worst case New Orleans disaster". Where was the follow through? And in some cases the people failed. Many assumed someone else would jump in to take care of their situation. Bad assumption! But whenever we say someone made a wrong decision, we must remember those decisions were based on perceived risks and limited resources.

The emergency management community has known and preached a clear message for more than two decades: Preparedness is a personal responsibility. It takes time and money to prepare, and the money spent may never really be needed. But in a disaster, the investments in preparedness will return dividends a thousand-fold.

1. Prepare to Meet Basic Needs

Think of what your family might need in case of a quick evacuation from your home. Assemble or buy an emergency kit for your home and automobile. Be sure to include long shelf-life food and water, a medical response kit, and supplies to meet basic needs: light, warmth, communication and sanitation. Don't forget critical medications. Ask about preparedness at your children's school and at work.

2. Pull Together Vital Personal Information

Take time now to ensure access to your important paperwork. You may want to store some documents in your emergency kit. Copies of some documents might also be sent to family members living in other areas. A partial list:

- Medical records
- Insurance policies
- Credits cards and bank account information
- Household inventory
- Deeds
- Important telephone numbers
- Spare keys
- Cash

3. Develop a Family Communications Plan

Your family may not be together when disaster strikes, so plan how you will contact one another and review what you will do in different situations. Ready.gov has excellent information on how to develop a family plan. Out-of-town contacts may be in a better position to communicate among separated family members. Be sure every family member knows the phone number of your emergency contact.

4. Know What Could Happen in Your Community and What to Do

Visit Ready.gov for information on various threats: biological threats, chemical threats, explosions, nuclear blast, radiation threats and natural disasters.

Preparing our country must be done at the grassroots level--family by family, business by business, and community by community. Is your family prepared? Your company? Your community?

About the Author

Tommy Rainey is Executive Publisher of the annual Disaster Resource GUIDE and the weekly Continuity e-GUIDE, and Vice President of Emergency Lifeline, a California Corporation founded in 1985 to help businesses, government agencies and families prepare for emergencies or disasters. He can be reached at (714) 558-8940 or www.emergencylifeline.com

Copyright ©2007 DISASTER RESOURCE GUIDE P.O. Box 15243, Santa Ana, CA 92735 714/558-8940
Fax 714/558-8901

http://www.disaster-resource.com/articles/06p_030.shtml

reprinted with permission