

Disasters and 'Responsibility to Protect'

Should Nations Force Aid on Others?

A Cyclone Is Not Enough

By Alex J. Bellamy

ON MAY 3, 2008, Cyclone Nargis struck Burma, leaving much of the Irrawaddy Delta under water. Early estimates suggested around 12,000 people were killed, quickly revised upward to about 100,000 by independent observers. Ultimately even that number proved optimistic. Although estimates still vary, today about 138,000 are believed dead or missing in the cyclone's wake (Haacke 2009).

In addition to the outright casualties, 1.5 million people were displaced. Despite the humanitarian catastrophe confronting the country and the government's obvious inability to respond effectively, Burma's military regime (the nation is also known as the Union of Myanmar, *see page nine*) initially blocked access by agencies offering humanitarian relief, inhibiting the delivery of urgently needed supplies and medical assistance.

The disaster occurred shortly before a May 10 constitutional referendum aimed at legitimizing the military government. The regime went ahead with the vote despite the crisis. During the crucial period immediately after the cyclone, the Myanmar military was primarily focused on the referendum rather than delivering assistance (*Please see "R2P," page nine*).



— Invited Comments —

Rights and Obligations

By George Kent

THE RIGHTS AND obligations of different parties in relation to international humanitarian assistance need to be clarified. There are many different issues that arise from disaster and non-disaster situations, conflict and non-conflict situations, and many other contingencies. There is confusion between the rights of those who provide assistance and the rights of the needy to receive assistance.

This article first

describes the current legal framework for international humanitarian assistance. Then the troubled concept of humanitarian intervention is reviewed, followed by a brief account of the nature of the right to assist and the right to assistance. A framework is suggested in which rights and obligations of providers and receivers can be related to one another. The conclusion calls for more systematic formulation of rights and obligations regarding international humanitarian assistance, to be worked out through agreements among all countries, strong and weak.

Framework

INTERNATIONAL HUMANITARIAN ASSISTANCE may be needed in many different circumstances. The United Nations International Strategy for Disaster Reduction is

(*Please see "Rights," page eighteen*)

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No Nukes is Good Nukes

Casualties From Terrorist Nuclear Device May Be Overestimated

Detonation of a nuclear device by terrorists in Manhattan would be a serious problem, but fatalities from a realistic scenario would be only about 20 percent of standard scenarios, and casualties about 15 percent, according to an analysis of the threat by Robert Harney, associate professor of systems engineering at the Naval Postgraduate School.

In the traditional assessment of a 10-kiloton nuclear blast in the most likely target—Manhattan’s central business district in the area around Grand Central Station—analysts have estimated there would be one million fatalities and nearly 1.7 million injuries, for a total of 2.7 million casualties, far beyond the ability of emergency personnel to respond effectively. There are only 945,000 hospital beds in the entire United States, for instance.

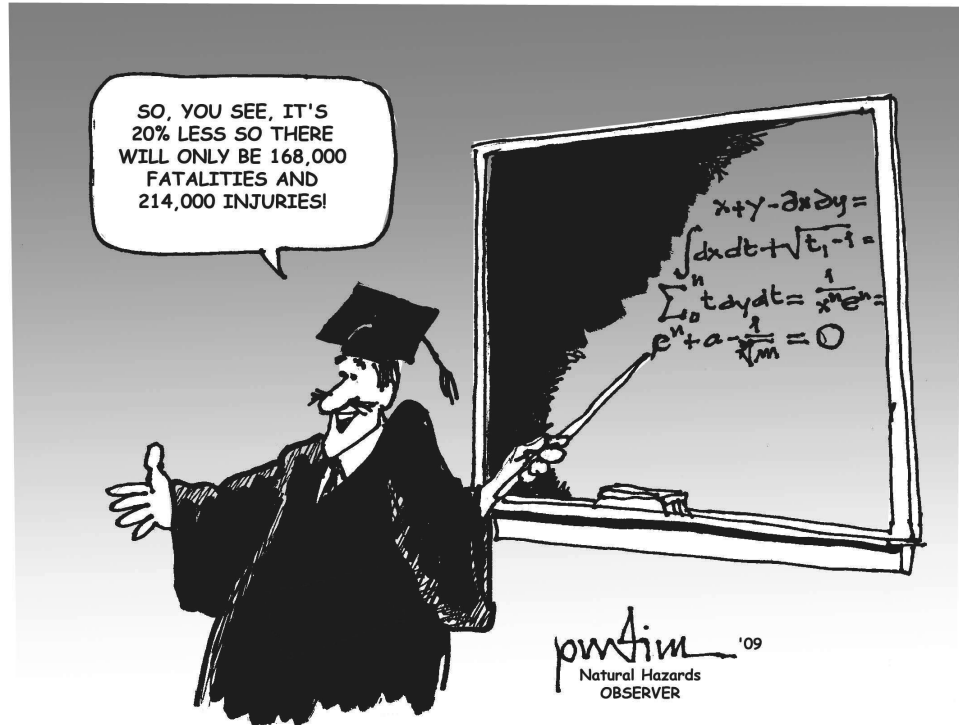
But Harney says this result is too pessimistic. His analysis indicates that there would be about 214,000 deaths and 168,000 injuries. There are important emergency response implications in these assessments.

The chief difference in the analysis is that most assessments of damage from a terrorist nuclear explosion assume that it would be a Hiroshima-type explosion, an air burst at optimum height above the city. But Harney points out that terrorists are unlikely to be able to deliver a nuke via a missile, and some fairly simple air defenses could prevent delivery of the bomb by plane.

So the most likely delivery method for a terrorist nuclear weapon is in a truck, with a ground level explosion. The blast would have to sequentially pass through buildings in its way, destroying some, but losing force over a smaller area than in an optimum air burst. The result from this and other factors should be fewer injuries and deaths.

Emergency planners and response teams have to consider several issues in this more realistic scenario. First, a “no overflight” area has to be established and enforced to prevent a group from using airplanes to deliver a weapon. But, Harney says, “Contrary to the predictions of traditional analysis and experience of Hiroshima and Nagasaki, the more ‘realistic’ analysis presents a picture that is much less dire.

“Fatalities are 20 percent of those predicted by the standard analysis, while injuries are 10 percent of those predicted and the damaged area is five percent. Much of



the infrastructure will survive. Most evacuation routes will remain viable (permitting relocation for fallout mitigation). Food, water, sanitation, power, communications, and transportation will remain available to most of the city,” he says.

“The first response system will remain intact,” Harney writes. “At most one or two police precincts and fire stations will be within damage zones. Only a small fraction of first responders will be among the casualties. The majority of the health care system will remain intact. Few hospitals, clinics, or potential shelter areas may be located within the small damage zones and thus will remain intact and operational. Few health care professionals will become casualties. Regional health care facilities have the theoretical capacity to handle the most badly injured.”

The differences between “traditional” analysis and Harney’s non-traditional one have broader implications for the response to terrorism. He writes, “If we assume the traditional analysis is what will always result, then a weak U.S. government might consider giving in to terrorist demands (if voiced ahead of time), rather than suffer the effects of such an attack. Since permitting such a catastrophic attack would be utterly unacceptable, actions likely to be taken to prevent anticipated attacks might further erode Constitutional rights. As the aftermath of such an attack is ‘hopeless,’ planning for emergency response would probably be inadequately funded. Why prepare for something that is beyond accommodation, especially when there are

always competing priorities for using available funds?"

In a report on nuclear proliferation, *World At Risk: The Report of the Commission on the Prevention of WMD Proliferation and Terrorism* (www.preventwmd.org/static/docs/report/worldatrisk_full.pdf), the authors write, "Terrorist organizations are intent on acquiring nuclear weapons or the material, technology, and expertise needed to build them. Trafficking in nuclear technology is a serious, persistent, and multidimensional problem. The worldwide expansion of nuclear power increases the danger of proliferation."

"The challenges for the United States and the world remain clear. Today, anyone with access to the Internet can easily obtain designs for building a nuclear bomb, but the hardest part for those bent on nuclear terror has always been acquiring the weapons-grade uranium or plutonium required to make the bomb. Our crucial task is to secure

that material before the terrorists can steal it or buy it on the black market."

Harney writes, however, "The unthinkable is probably inevitable. At some time in the future a terrorist group will detonate a nuclear explosive in a major metropolitan area. Nuclear non-proliferation regimes are not working."

Accurate estimates about casualties are necessary to guide planning and response to a disaster, Harney says. "If the policy makers making such statements actually believe these estimates, then inaccurate information is being used to set policy, and something should be done to rectify the situation. Such 'excessive' estimates have been used to establish emergency response planning guidance."

Harney's work appears in the September 2009 issue of *Homeland Security Affairs*.

They Said It ...

Via the Natural Hazards Center Twitter feed (and a few other places):

Security Schemes

"So you're suggesting that a security scheme—or plan as it were—that just takes the colors of traffic light and adds two colors may not be the most precise."

—**Jon Stewart**, to Department of Homeland Security Secretary **Janet Napolitano**, about the National Threat Advisory System on *The Daily Show*, Oct. 12, 2009.

"There was for all intents and purposes no hurricane damage in the United States this year."

—**Robert Hartwig**, president of the Insurance Information Institute, quoted by Reuters.

"We assess that al-Qaeda is in its weakest financial condition in several years and that, as a result, its influence is waning."

—Senior U.S. Treasury official **David Cohen**, quoted by the BBC.

Maldives government ministers took scuba lessons and learned underwater signs to prepare for an unprecedented Cabinet meeting at the bottom of the ocean to highlight the threat global warming poses to the low-lying nation.

—Associated Press

"There was a massive failure in government and the direction of management response. The root

cause is you have a government whose predominant preoccupation is with graft and corruption—how to steal more money from the people. If your officials are not motivated to serve and just motivated to steal, then that's the kind of response you get."

—**Mario Taguiwalo**, of the National Institute for Policy Studies, on the Philippine government response to flooding from Typhoon Ketsana, quoted by Reuters.

"For every \$1 you use on disaster risk reduction, you save \$5, which you would have used in addressing the impact of a disaster when it occurs."

—Red Cross Special Programmes Manager **Abdishakur Othowa** to the government of Kenya. Five people are dying of starvation each day in Kenya's Turkana district.

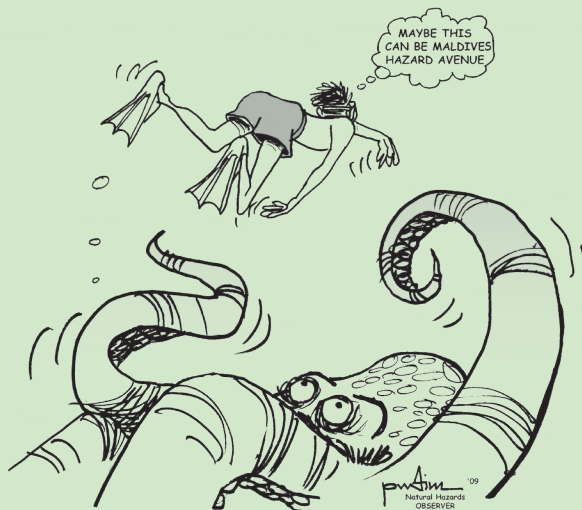
"Thirty minutes after our plane goes up, it rains."
—**Daouda Zan**, an engineer at Mali's meteorology service, on his country's weather modification efforts, quoted by Integrated Regional Information Networks.

"You would have to crazy to believe man can create rain."

—**Amadé Guindo**, a cereal producer from central Mali, quoted by Integrated Regional Information Networks.

"Since I was born, all I have done is farm. Never in my life have I heard of this nonsense—it is not true. Rain is God-given, not man-made. When did men become God?"

—**Bamoussa Diarra**, a farmer in Segou, Mali, quoted by Integrated Regional Information Networks.



No, No, Nibiru!

Revised estimates of the path of the near earth object Apophis (*Observer*, November 2009) find that the odds of a collision between the asteroid and the earth in 2036 have dropped from about one-in-45,000 to one-in-250,000, according to the National Aeronautics and Space Administration's Near Earth Object Program.

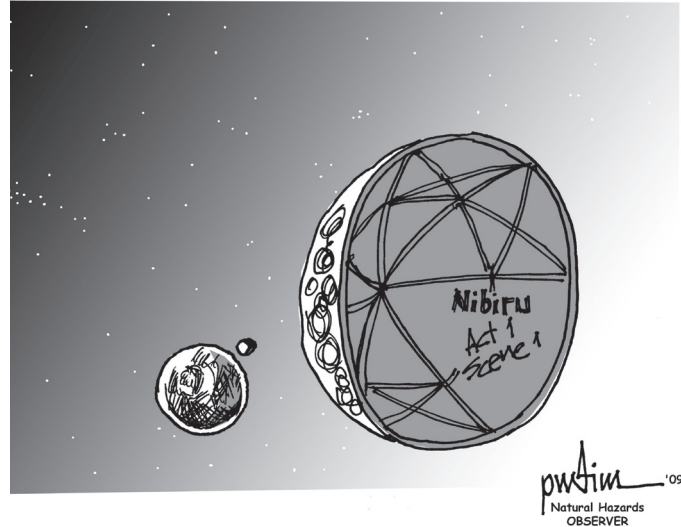
Apophis, which is about the size of Yankee Stadium, is expected to closely approach Earth on Friday, April 13, 2029. At that time, it will be about 18,300 miles above Earth's surface. Apophis will pass nearby in 2036 and again in 2068, when it has a three-in-a-million chance of striking Earth.

While NASA is carefully calculating the chances of Apophis colliding with Earth, a lot of people are worried about Nibiru, a planet supposedly discovered by the Sumerians, which a certain hysterical minority believes is headed toward Earth. This ties in with the film *2012*, which predicts the end of the world. Under one interpretation, 2012 is the year (December 21, 2012, if you're keeping score at home) in which the Mayan "long count" calendar—with a length of 5,126 years—turns over to a new cycle. Some people seem to believe this means the world is going to end that year.

One version of the new apocalypse has it that Nibiru will be the agent of this destruction. How the Sumerians communicated with the ancient Mayans about this issue is

a little unclear.

NASA has not calculated the likelihood of Nibiru impacting Earth, primarily because Nibiru does not exist. This has not stopped people from bombarding astronomers, alleging a cover-up of Earth's impending doom. NASA senior scientist David Morrison has prepared an entertaining FAQ on the topic (www.astrosociety.org/2012/index.html).



More Americans say...

'Show Me the Evidence'

The evidence hasn't changed much, but the perception has. Fewer Americans see "solid evidence" of global warming, says the Pew Research Center for People and the Press.

In April of 2008, 71 percent of Americans agreed that there was solid evidence that the earth is warming. But in October of 2009, only 57 percent thought there was, the center reports.

The decline in perception comes at a time when the evidence for warming appears to be getting more solid, not less. The National Center for Atmospheric Research, for instance, found daily record high temperatures occurred twice as often as record lows in the continental United States over the past ten years.

The United Nations issued a report in September that showed, "The pace and scale of climate change may now be outstripping even the most sobering predictions of the last report of the ... IPCC [Intergovernmental Panel on Climate Change]." Greenhouse gas emissions have increased faster than the IPCC's most pessimistic scenarios.

The *Copenhagen Diagnosis*, an update of climate science prepared by nearly 25 prominent climate scientists in advance of the recent December Copenhagen meeting on greenhouse gas emissions, found that global carbon dioxide emissions from fossil fuels in 2008 were 40 percent higher than in 1990. "Even if global emission rates are stabilized at present-day levels, just 20 more years of emissions would give a 25 percent probability that warming exceeds two degrees Celsius, even with zero emissions after 2030. Every year

of delayed action increases the chances of exceeding 2°C warming," the report says.

The recent temperature pattern further demonstrates the warming is the result of human activities—something that only 36 percent of Americans believed to be the case in the Pew poll—the *Copenhagen Diagnosis* says. "Over the past 25 years temperatures have increased at a rate of 0.19°C per decade, in very good agreement with predictions based on greenhouse gas increases. Even over the past ten years, despite a decrease in solar forcing, the trend continues to be one of warming. Natural, short-term fluctuations are occurring as usual, but there have been no significant changes in the underlying warming trend."

Georgia Tech Professor Brian Stone, meanwhile, published a paper in the December issue of *Environmental Science and Technology* warning that, in addition to curtailing greenhouse gases, policy makers must address global deforestation and urbanization to combat climate change. "Across the United States as a whole, approximately 50 percent of the warming that has occurred since 1950 is due to land use changes rather than to the emission of greenhouse gases," says Stone. "Most large U.S. cities, including Atlanta, are warming at more than twice the rate of the planet as a whole—a rate that is mostly attributable to land use change. As a result, emissions reduction programs—like the cap and trade program under consideration by the U.S. Congress—may not sufficiently slow climate change in large cities where most people live and where land use change is the dominant driver of warming."



Thar's Gold in Them Thar Swamps

The Muthurajawela Marsh, a coastal wetland in northern Sri Lanka is worth an estimated \$1,907 per hectare per year for the "ecosystem service" it provides for flood attenuation, dwarfing its direct economic value of \$150 per hectare for things like agriculture, fishing, and firewood, according to the report *The Economics of Ecosystems and Biodiversity*, sponsored by the United Nations Environment Programme.

The report took a broad look at "natural capital," the services that ecosystems provide but which are usually not valued directly by markets. "They are rarely taken fully into account through economic signals in markets, or in day to day decisions by business and citizens, nor indeed reflected adequately in the accounts of society," the report says.

"The steady loss of forests, soils, wetlands and coral reefs is closely tied to this economic invisibility. So too are the losses of species and of productive assets like fisheries, driven partly by ignoring values beyond the immediate and private."

Intact ecosystems can have a substantial impact on hazard reduction. In the United States, according to the Ecoinformatics Collaboratory at the Gund Institute for Ecological Economics at the University of Vermont,

failed, even if they were overtopped. Along the Mississippi River Gulf Outlet—the levees without wetlands in front of them—they essentially disintegrated."

Katrina and Rita were category three storms, hitting different areas of the Louisiana coast a few weeks apart. Katrina caused 1,600 deaths, Rita—which made landfall about three weeks after Katrina—seven. "The difference was the wetlands, probably," says Southeastern Louisiana University biologist Gary Shaffer.

Wetlands are among the most valuable lands providing ecosystem services, but there are others. The *Economics of Ecosystems* report says that coral reefs are worth up to \$189,000 per hectare per year for natural hazard management. Mangrove forests in southern Thailand are worth nearly \$11,000 per hectare annually for storm protection. India's Yamuna River floodplain is valued at \$843 per hectare annually for a variety of services.

"Investing in natural capital supports a wide range of economic sectors and maintains and expands our options for economic growth and sustainable development," the UNEP report says. "Such investments can be a cost-effective response to the climate change crisis, offer value for money, support local economies, create jobs and maintain ecosystem benefits for the long term."

Auditor General Criticizes Public Safety Canada

Canada Auditor General Sheila Fraser has issued a report critical of Public Safety Canada's coordination of emergency management activities, including infrastructure protection.

The report says Public Safety Canada, the lead agency for coordinating management of emergencies among federal departments and agencies, "has yet to develop the policies and programs that would help clarify its leadership and coordination role for an 'all hazards' approach to the emergency management activities of departments."

The report says that while the agency has developed a strategy to protect critical infrastructure, that strategy is still only a draft. Progress has also been slow on developing protection of cyber infrastructure. And although the 2004 National Security Policy called for interoperable communications, "key gaps remain for voice communications."

(Continued on next page)



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On the plus side, the auditor general said, "The agency has made considerable progress in improving federal emergency coordination through its Government Operations Centre. It keeps other departments informed of the status of events on a real-time basis and also produces regular situation awareness reports for such issues as the H1N1 virus, which allows decisions to be based on a common set of facts."

In its response to the report, the department said that it agreed with all of the issues raised in the review, and planned steps to address them.



The Lows of Kilimanjaro

If Ernest Hemingway had written a short story called, say, *The Snows of Dinwoody Glacier*, then the retreat of the snows of Tanzania's Mount Kilimanjaro might not resonate as deeply.

But since Papa wrote his protagonist named Harry—like the glacier, dying a slow death—dreaming of Kilimanjaro, the decline of the African snow fields attract attention, at least among readers of English literature.

And the remaining ice fields on the mountain could be gone in two decades, according to paleoclimatologist Lonnie Thompson of Ohio State University. "Eighty-five percent of the ice that covered the mountain in 1912 had been lost by 2007, and 26 percent of the ice there in 2000 is now gone," according to an OSU release on Thompson's recent paper in the *Proceedings of the National Academy of Sciences*.

Thompson said the changes occurring on Mount Kilimanjaro mirror those on Mount Kenya and the Rwenzori Mountains in Africa, as well as tropical glaciers high in the South American Andes and in the Himalayas.

"The fact that so many glaciers throughout the tropics and subtropics are showing similar responses suggests an underlying common cause. The increase of Earth's near-surface temperatures, coupled with even greater increases in the mid- to upper-tropical troposphere, as documented in recent decades, would at least partially explain the observed widespread similarity in glacier behavior," he said.

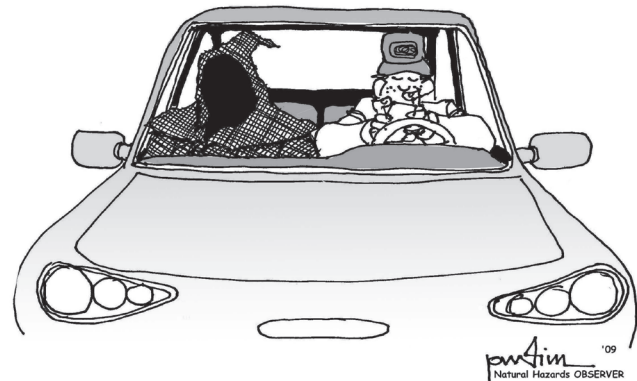
The *Copenhagen Diagnosis*, an update of significant climate change research since the last Intergovernmental Panel on Climate Change report (AR4), says, "A wide array of satellite and ice measurements now demonstrate beyond

doubt that both the Greenland and Antarctic ice-sheets are losing mass at an increasing rate. Melting of glaciers and ice caps in other parts of the world has also accelerated since 1990."

Melting glaciers produce somewhere between 20 and 40 percent of the rise in global sea level. Thermal expansion of sea water provides the rest. The rise is offset somewhat by increasing continental water storage.

The *Copenhagen Diagnosis* says, "By 2100, global sea level is likely to rise at least twice as much as projected by Working Group 1 of the IPCC AR4; for unmitigated emissions it may well exceed one meter. The upper limit has been estimated as approximately two meters sea level rise by 2100. Sea level will continue to rise for centuries after global temperatures have been stabilized, and several meters of sea level rise must be expected over the next few centuries."

Hazards We Hadn't Worried About Before



Don't talk on your cell phone while crossing the street or you'll be mowed down by a genetically impaired teenager text-messaging his girlfriend.

Think you can walk and talk at the same time? Think again.

Two recent studies of pedestrian safety found people talking on a cell phone while walking across the street took about 25 percent longer to cross, and were more likely to be hit by cars than those not so distracted. Among people 60 and older, talking on a cell phone made it 15 percent more likely they'd be hit by a car while crossing the street.

People just listening to music, however, showed no additional pedestrian risk compared to people with no distractions.

But that's not the only way cell phones are trying to kill you. The Pew Research Center's Internet and Daily Life Project found that 26 percent of American teenagers (ages 16 and 17) have sent or received text messages while driving. Forty percent say they've been in a car "when the driver used a cell phone in a way that put themselves or

others in danger.”

According to research from the Virginia Tech Transportation Institute, “Text messaging made the risk of crash or near-crash event [for drivers of heavy vehicles or trucks] 23.2 times as high as non-distracted driving.”

As if that wasn’t bad enough, 30 percent of Americans

have a genetic variant limiting the availability of a protein called brain-derived neurotrophic factor. These people perform 20 percent worse on driving tests than those who don’t have the variant, according to researchers at the University of California-Irvine.

Q & A on ...

Green Disaster Housing

YRG Sustainability is a Boulder, Colorado-based consulting firm specializing in green building design and construction, training, and community development. With more than nine years of experience in the building industry, Stephen Loppnow, YRG research consultant, answers some questions about providing environmentally compatible housing to disaster survivors.

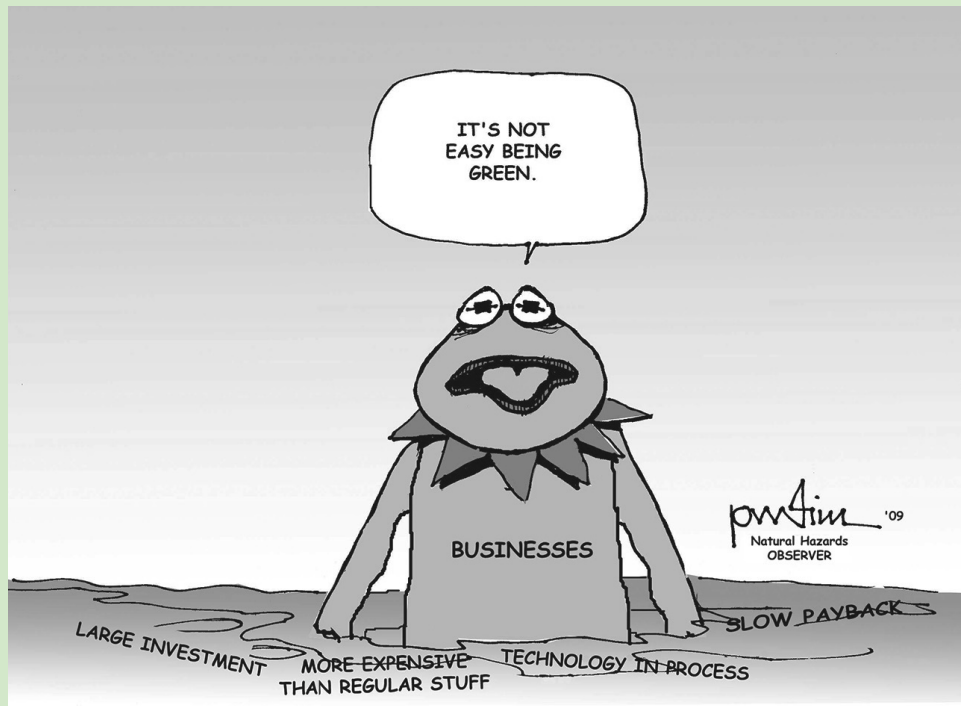
NHO: What is green disaster housing? How is it different from the Federal Emergency Management Agency trailers?

Loppnow: Ideally, it would be low-impact, would use materials and energy efficiently. Ultimately—and most importantly—it would provide an environment that is conducive to recovery from a traumatic event. It would provide a healthy environment for its inhabitants. It isn’t wildly different from FEMA trailers in how it looks or what it would take to make it happen, as far as designing and building the product. But first and foremost, it would provide an indoor environment that wouldn’t poison people. Design phase implementation of green disaster housing strategies must be used if we want to effectively implement change. Beyond that, outfitting schools, public buildings, homes, churches or any other space that could be used as a temporary shelter during a disaster with “passive survivability” standards is important. Relatively easy accommodations that would inherently increase the passive survivability of any community include using building materials that have internal thermal regulation systems—and so don’t require heat or cooling systems to regulate temperature—solar design, improving natural ventilation systems, and implementing daylighting techniques.

NHO: What is the ultimate goal of disaster housing?

Loppnow: I come from the building industry, so my perspective is based on my experience with how buildings work and how they affect people’s lives. I think, obviously, such housing has to meet the basic needs of its inhabitants, providing a safe and functional place for people to live when they have been displaced.

Beyond that, I think the ultimate goal would be to



provide an environment that is regenerative, one that is healthy and that promotes recovery from trauma. There are some really basic green building strategies that could be employed to move this type of housing in that direction with very little cost or changes to the basic design. Some really simple design guidelines and specifications for future construction of disaster relief housing could prevent the situation we saw with the Katrina trailers. Specification of building materials that are urea formaldehyde-free, that use low-VOC (volatile organic compound) paints, adhesives, and sealants—these would be first steps to insure that those being housed in the wake of a disaster don’t end up being poisoned by their temporary home.

These products are readily available for little or no cost premium. It just takes someone to mandate their use.

NHO: Is there a market for green disaster housing?

Loppnow: I think anywhere there is a market for better performance there is a market for green strategies. Performance and efficiency fall under the “green” umbrella catchall along with concern for the environment. I think really wrapping your head around the idea that disaster relief housing deployed to assist victims of our country’s worst storm disaster poisoned the people it was meant to serve, folks who were already

(See “Q&A,” page eight)

displaced and vulnerable, is a pretty strong case for demanding some reevaluation and change.

NHO: *The FEMA trailers on average cost between \$60,000-100,000. The maintenance of the trailers for an 18-month period was upwards of \$140,000. What are the biggest costs?*

Loppnow: I think that considering those numbers there is a lot of opportunity to increase performance in many ways on a cost neutral basis over 18 months. What's most striking is the operating costs, although temporary infrastructure likely has some inherently high cost associated with it, along with a host of challenges related to maintaining what was built to be temporary, that's almost \$8,000 a month to operate a trailer. I think that this type of building could lend itself well to use of passive systems. The orientation of buildings can significantly impact their performance. Use of low-flow plumbing fixtures could reduce demand on temporary water supplies. Efficient equipment and an improved building envelope would reduce the amount of energy required to operate each trailer.

Most trailers have really poor insulation in the walls and roofs. That could easily be improved at very low cost in the manufacturing process. Some really minor improvements could greatly improve the performance.

NHO: *What are the biggest barriers?*

Loppnow: Creating change from the top down, making sustainability and green building part of an organization's culture, that's always a big first step. Sometimes it has to go from the bottom up, but whatever it takes to get to that point, that's important. Then establishing what that means for an organization and how it will be implemented. In our case, once it is required and part of the program, the supply chain and capacity to produce this type of housing is all in place. And, yes, it is financially viable, especially in the case of manufactured, pre-fabricated housing. There are some great efficiencies to be found in the manufacturing process that only contribute to what is already pretty cost neutral, especially in light of the numbers you cited.

NHO: *FEMA says in its National Disaster Housing Strategy that there should be an interoperable and comprehensive national shelter information system. How should this system develop?*

Loppnow: I think there is a lot of low-hanging fruit to be taken advantage of in the basic design of the trailers. Material selection and specification of low-toxicity building materials and finishes is the most obvious. That's how people were most notably hurt by the Katrina trailers.

It's important to establish guidelines based on the ideal scenario for how this type of

housing could benefit and support the people it is designed to serve, and have that as the starting point for revising the approach and strategy—not just being able to provide temporary storage for displaced people. I think there is a whole conversation about setting up social support for people in these types of situations that is certainly as significant as what we do with the built environment. There is a huge opportunity to design with the health of the building occupant in mind first, and then around creating a sense of community with how sites are laid out and managed.

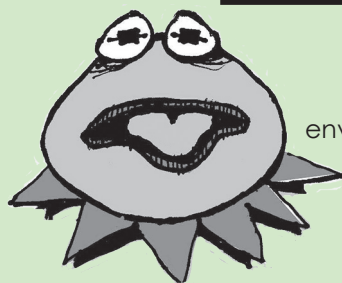
Then there is the actual performance of the building systems, which—with increased efficiency and performance—can take pressure off of temporary infrastructure. There is a lot of opportunity to ease the stress and challenges of this type of situation with some moderate adjustments.

NHO: *There has also been a call for the development of innovative modular housing systems. What are the advantages/disadvantages of a "one size fits all" model?*

Loppnow: Well, there is a lot to be done with pre-fabrication. One can design a variety of building layouts that can be assembled from a combination of the same pieces. Innovative, to me, starts to speak to buildings that are carbon neutral or net-zero energy. Buildings that generate more power than they use ... you can also really push the use of materials, emphasizing salvaged, reused, and recycled materials. Generating power on site with photovoltaics and wind, reducing water demand and wastewater via some of the strategies we mentioned ... this gets toward innovation ... I think there are some steps to take first though, a range of "low-hanging fruit." Material selection, low-flow plumbing fixtures, adding extra insulation to the walls, glazing on the windows, higher efficiency mechanical systems, these are a few of the examples that come to mind. Not every example is a possibility for every situation, but there is certainly something to be said for choosing to design with these principles as a starting point, then moving forward from there.

—Camilla Yamada

(Camilla Yamada is an intern with the Natural Hazards Center.)



"The ultimate goal would be to provide an environment that is regenerative, one that is healthy and that promotes recovery from trauma."

tance to the Irrawaddy region.

Organizations already present in the country—such as *Médecins sans Frontières* and Save the Children—were able to get a few aid workers into the affected areas, but they reported restrictions (*New York Times*, May 13, 2008). For instance, three MSF workers in one hard-hit town were refused government permission to travel or even enter a hospital to consult.

Other NGOs, UN agencies, and nations offered assistance, but the junta was slow to issue visas for foreign aid workers and UN personnel. The government insisted on distributing the aid itself—raising fears that much of the cash and supplies would be siphoned off by the military and would never reach the intended recipients. Aid workers' movements were also restricted, for fear they might distribute pro-democracy propaganda and encourage social unrest.

Aid Obstructed

ABOUT TEN DAYS AFTER THE CYCLONE STRUCK, the UN Office for the Coordination of Humanitarian Affairs and Oxfam independently reported that, at most, only a quarter of the required aid was being allowed into the country. The aid that did arrive was not being effectively distributed. Reports also emerged of military officers hoarding aid for themselves and selling it on the black market (*New York Times* 2008).

Frustrated by the lack of progress, on May 7 French Foreign Minister Bernard Kouchner urged the UN Security Council to invoke the newly agreed upon “responsibility to protect”—often called by the shorthand R2P—in order to deliver aid without the consent of the Myanmar government. This proposal was reiterated by the French ambassador to the United Nations and repeated by commentators, analysts, and politicians, primarily in Europe and North America. When the European Union met to discuss its response to the cyclone and the French proposal to invoke R2P, France’s junior minister for human rights, Rama Yade, told reporters, “We have called for the ‘responsibility to protect’ to be applied in the case of Burma. (*New York Times* 2008)”

EU ministers failed to reach a consensus on the French proposal but EU High Representative for the Common Foreign and Security Policy Javier Solana said the international community “should use all possible means to get aid through to victims of Myanmar’s cyclone.” Media commentators in the United States, United Kingdom, and Australia echoed Kouchner’s call for the international community to live up to its responsibility to protect—proclaimed at the 2005 World Summit—by delivering aid whether the Myanmar government wanted it or not.

Commentators disagreed, however, about the appropriate approach. Many suggested that the “responsibility to protect” could be invoked to bypass the Security Council, where the delivery of aid would be opposed by China, Russia, Indonesia, and South Africa. Some pointed to the international relief efforts in Iraqi Kurdistan in 1991, when the United Kingdom, France, and the United States established

(Please see “R2P,” page ten)

So Which Is It— Burma or Myanmar?

The military regime in Burma/Myanmar calls the country Myanmar. The name Burma has been used in English since British colonial times, according to *Wikipedia*. Burma, says the online encyclopedia, is derived from the Burmese word Bamar, “which in turn is the colloquial form of Myanmar, both of which historically referred to the majority Burmans.”

But while the junta prefers Myanmar, not everyone has gone along. Some sources still call the nation “Burma.” The charge is sometimes made that the name change was imposed on the people, a further symptom of centralized power in the nation. The name Myanmar may also symbolize to some the disenfranchisement of those not belonging to the majority Bamar ethnic group.

Below we list a few prominent entities, along with the way each refers to Burma, er, Myanmar:

New York Times—Myanmar

Washington Post—Burma

U.S. State Department—Burma

British Foreign Office—Burma

Burma—Union of Myanmar

Ministry of Foreign Affairs, People’s Republic of China—Myanmar

United Nations—Myanmar

Wikipedia—Mostly Burma, but sometimes Myanmar

Encyclopedia Britannica—Myanmar

National Geographic Society—
Myanmar (Burma)



R2P...

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“safe havens” to protect Kurds from Saddam Hussein’s army without UN approval. One academic pointed to Kosovo as an example, arguing that the West should invoke the responsibility to protect as a way of bypassing the Security Council and be prepared to fight its way into Myanmar just as NATO fought its way into Kosovo (O’Neil 2008).

Clarion calls notwithstanding, China and the Association of Southeast Asian Nations rejected forcibly delivering supplies without the junta’s consent, arguing that R2P did not apply to natural disasters (Barber 2009).

China, Indonesia, and Vietnam would likely have been skeptical about involving the Security Council in the international response to Cyclone Nargis irrespective of the proposals actually put on the table. Nevertheless, their positions hardened after Kouchner’s invocation of the R2P because, on one hand, they genuinely did not believe that the principle applied in this case, and on the other, they were concerned about the potential to increase coercive interference in a nation’s domestic affairs.

The Asian governments’ position about the applicability of R2P in the post-Nargis context was shared by some senior UN officials and Western governments. UN Under-Secretary-General for Humanitarian Affairs John Holmes described Kouchner’s call as unnecessarily confrontational. UK Secretary of State for International Development Douglas Alexander rejected it as “incendiary” and Britain’s UN ambassador, John Sawers, agreed with the Chinese and

Southeast Asian view that R2P did not apply to natural disasters and should not be invoked to justify the forcible delivery of aid or to coerce the Myanmar government (Borger and MacKinnon 2008).

This article evaluates these judgments about the applicability of R2P to natural disasters. It argues that R2P does not apply. Attempts to apply the principle in natural disasters are likely to damage both the R2P norm and efforts to secure international access. There are other avenues available to international actors in situations where a state refuses to grant humanitarian access. Regional organizations, global humanitarians, and activists concerned about aid delivery in the wake of a natural disaster ought to focus on developing these other mechanisms rather than on expanding R2P to make it apply to every case of major human tragedy.

What is the ‘Responsibility to Protect?’

FIRST, WE NEED TO UNDERSTAND WHAT R2P IS, and what it is not.

One of the few real achievements of the UN 2005 World Summit was the adoption of the “responsibility to protect” principle. As agreed by UN member states, R2P rests on three equally important and non-sequential “pillars” as outlined in the *2005 World Summit Outcome*:

- First, the responsibility of the state to protect its population from genocide, war crimes, ethnic cleansing and crimes against humanity, and from their incitement;
- Second, the international community’s duty to assist the state to fulfill its responsibility to protect;





R2P's intellectual and political origins lay in older ideas about "sovereignty as responsibility." Sovereignty has always entailed both rights and responsibilities. Even theorists most associated with the defense of unbridled sovereign power conceded this point.

- Third, the international community's responsibility to take timely and decisive action, through peaceful diplomatic and humanitarian means and, if that fails, other more forceful means, in a manner consistent with UN Charter Chapters VI (peaceful measures), VII (enforcement measures), and VIII (regional arrangements). The UN Security Council may act in situations where states "manifestly fail to protect their populations" from the four crimes.

In April 2006, in Resolution 1674, the UN Security Council reaffirmed R2P and indicated its readiness to adopt appropriate measures where necessary. There are two important points to stress here: R2P applies only to four very specific crimes—genocide, war crimes, ethnic cleansing, and crimes against humanity—and it does not justify coercion outside the limits of the UN Charter.

R2P's intellectual and political origins lay in older ideas about "sovereignty as responsibility." Sovereignty has always entailed both rights and responsibilities. Even theorists most associated with the defense of unbridled sovereign power conceded this point. Thomas Hobbes, for example, insisted that the contract between individuals and the state would be voided if the sovereign threatened the individual with death or could no longer fulfill the function for which he or she is given power. In this situation, sovereign power is no longer owed obedience. The ruler is no longer indeed a sovereign (Macfarlane and Foong Khong 2006).

Between the eighteenth and twentieth centuries, this idea was enumerated as the principle of "popular sovereignty"—the idea that sovereignty derives from "the people," who have a fundamental right to determine their own form of government. First enunciated in the English, American, and French revolutions, this idea provided the basic legitimizing principle for decolonization and opposition to white minority rule (Bujavansky 2002). In the aftermath of the Second World War, it became one of the organizing principles of world politics (Roth 2000). But it asks as many questions as answers: Who are "the people?" How is the people's will determined? Popular sovereignty rests on the idea that the state is responsible to the people and owes them a duty of care towards them.

These ideas were given new impetus in the 1990s in reaction to a number of decidedly "uncivil" wars. Momentum devel-

oped in two different contexts: a discussion about sovereign responsibilities in the face of internal displacement and a debate about the so-called "right" of humanitarian intervention. Brookings Institution Senior Fellow Roberta Cohen and Francis Deng (1998), then the UN secretary-general's representative on internally displaced persons, developed the contemporary idea of "sovereignty as responsibility."

Their principal challenge was how to persuade governments to improve protection for internally displaced persons (IDPs). They developed the idea of sovereignty as responsibility to fit this purpose (Deng 2004). The concept's starting point was recognition that the primary responsibility for protecting and assisting IDPs lay with the host government (Cohen and Deng 1998). No legitimate state, they argued, could quarrel with the claim it was responsible for the well-being of citizens. Where a state was unable to fulfill its responsibilities, it should invite and welcome international assistance (Deng 2004). Such assistance helped the state by enabling it to discharge its sovereign responsibilities and take its place as a legitimate member of international society (Deng et al. 1996).

During major crises, troubled states face a choice. They can work with international organizations and other interested outsiders to realize their sovereign responsibilities or obstruct those efforts and sacrifice their good standing and sovereign legitimacy (Deng et al. 1996). Sovereignty as responsibility focused on the responsibilities of governments, maintaining that effective, legitimate states were the best way to protect vulnerable populations. However, the theory does not address what to do when a state refused to request assistance or itself committed genocide or mass atrocities, pitting the sovereign right to non-interference—enshrined in UN Charter Article 2, Sections 4 and 7—against a sovereign's putative responsibilities.

This dilemma was most pointed in relation to humanitarian intervention. In the midst of the contentious global debate about the legitimacy of NATO's 1999 intervention in Kosovo, UN Secretary-General Kofi Annan (1999) picked up the concept of sovereignty as responsibility. Mindful of the apparent contradictions between the rights and responsibilities of sovereignty, Annan challenged international society to develop a way of reconciling "fundamental human rights with the principles of sovereignty and protection of national self-determination."

That challenge was taken up by the Canadian government, which created the International Commission on Intervention and State Sovereignty. Chaired by Gareth Evans and Mohammed Sahnoun, the ICISS developed the phrase

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To apply the R2P principle to humanitarian catastrophes other than the four specified is a misapplication with serious consequences. Concerned that Western states will make a habit of expanding the principle's scope, it is likely many states would backtrack from the commitments they made in 2005.



“responsibility to protect,” set out the case for it, and focused on developing ideas in relation to humanitarian intervention (ICISS 2001).

Although UN member states adopted the language of R2P, they chose to not adopt the ICISS recommendations wholesale. Instead they framed the new principle around the idea of sovereignty as responsibility. As Edward Luck (2008) has argued, it is important not to confuse what we would like the R2P principle to be with *what it actually is*.

This gets us to the question of whether R2P should be applied to situations like Cyclone Nargis, where a state cannot effectively respond to immense human suffering following a natural disaster, but where the state does not accept offered international assistance.

R2P and Nargis: Why It Didn't and Shouldn't Apply

IF WE UNDERSTAND THE “RESPONSIBILITY TO PROTECT” properly, it is obvious that it does not apply to natural disasters themselves. As Edward Luck (2008), the UN secretary-general's special advisor, said about Cyclone Nargis:

“It would be a misapplication of ‘responsibility to protect’ principles to apply them at this point to the unfolding tragedy in Myanmar...the Outcome Document of the 2005 [World] Summit limited their application to four crimes and violations: genocide, crimes against humanity, war crimes, and ethnic cleansing. We must focus our efforts on implementing these principles in these four cases, as there is no agreement among the member states on applying them to other situations, no matter how disturbing and regrettable the circumstances.”

What, though, about situations like Burma after Cyclone Nargis, where a government denies access to aid agencies? If it could be demonstrated that the government was deliberately withholding aid to people at immediate risk of death, it has been suggested that the government might be guilty of “crimes against humanity” — thereby committing crimes relevant to the R2P. This is because, according to Article 7, Section 1 of the Rome Statute of the International Criminal Court, a “crime against humanity” includes “other inhumane acts ... intentionally causing great suffering, or serious injury to body or to mental or physical health.”

ICISS co-chair and International Crisis Group CEO Gareth Evans commented in the May 12, 2008, *Guardian* newspaper that it might be time to consider invoking the responsibility to protect because “there is at least a *prima facie* case to answer for [the Burmese generals'] intransigence being a crime against humanity — of a kind which would attract the responsibility to protect principle.” In a similar vein, ICG Southeast Asia Director John Virgoe told reporters that while his organization “was not setting out a blueprint for international intervention — we're one step earlier than that — it is getting close to an R2P situation,” presumably because of the potential commission of crimes against humanity (Phillips 2008). At best, this was a very tenuous line of argument.

Crimes against humanity involve acts committed as part of a systematic attack against any civilian population. The government of Burma was not engaged in such attacks in the Irrawaddy Delta. Burma was not denying *all* aid, or preventing aid agencies already deployed in the region from going about their work. There was no evidence of widespread intent by the authorities to cause suffering. But even if there were, there would still be compelling reasons R2P-based intervention would be an inappropriate path.

First, invoking R2P would not build an international consensus through the UN Security Council on action in such cases. Several Security Council members have made it clear that they would block any attempt to use the council to impose humanitarian assistance against the wishes of the host state. China, for example, argued that the situation in Burma is a natural disaster and not a matter of “international peace and security.” There are other UN avenues, China argued, more appropriate for coordinating the delivery of international assistance.

Indonesia shares China's view, and it can be safely assumed that Asia's other non-permanent member of the Security Council, Vietnam, shares this position as well. South Africa has also indicated its skepticism about the effectiveness and appropriateness of a Security Council resolution on this matter.

Second, the misapplication of the responsibility to protect to natural disasters might damage the R2P principle itself, making it more difficult to mobilize the principle in genuine cases of genocide and mass atrocities. Paragraphs 138 and 139 of the 2005 *World Summit Outcome* were carefully negotiated over more than six months and reflect international consensus. Negotiators insisted that R2P applies only to genocide, war crimes, ethnic cleansing, and crimes against humanity and that the Security Council must authorize coercive measures. To apply the principle to humanitarian catastrophes other than the four specified is a misapplication with serious consequences. Concerned that Western states will make a habit of expanding the principle's scope, it is likely many states would backtrack from the commitments they made in 2005.

This is more than an idle theoretical problem. A reduced commitment to R2P would have practical consequences for the populations that are victims of genocide, war crimes, crimes against humanity, and ethnic cleansing. It will make it harder to forge consensus on the preventive and protective measures needed in those cases; more difficult to appropriate political will and material resources to enact the institutional reforms thought to prevent these crimes (such as improvement of the UN's early warning capacity); and it will slow progress on doctrinal thinking about practical steps that can be taken to better protect threatened populations.

Progress has been made on all these fronts since 2005. Cases like Darfur, the Ituri province in Congo, the continuing abuses perpetrated by the Lord's Resistance Army in Uganda, and attacks on civilians by insurgents and terrorists in Iraq and Afghanistan remind us that much more needs to be done. Misapplying R2P would stall this progress without improving the likelihood of achieving humanitarian access in the wake of natural disasters.

Third, those who have attempted to use R2P to justify the delivery of humanitarian aid against the wishes of the host state have not really considered the practicalities. In

Responsibility to Protect Populations from Genocide, War Crimes, Ethnic Cleansing, and Crimes Against Humanity

138. Each individual State has the responsibility to protect its populations from genocide, war crimes, ethnic cleansing and crimes against humanity. This responsibility entails the prevention of such crimes, including their incitement, through appropriate and necessary means. We accept that responsibility and will act in accordance with it. The international community should, as appropriate, encourage and help States to exercise this responsibility and support the United Nations in establishing an early warning capability.



139. The international community, through the United Nations, also has the responsibility to use appropriate diplomatic, humanitarian and other peaceful means, in accordance with Chapters VI and VIII of the Charter, to help to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity. In this context, we are prepared to take collective action, in a timely and decisive manner, through the Security Council, in accordance with the Charter, including Chapter VII, on a case-by-case basis and in cooperation with relevant regional organizations as appropriate, should peaceful means be inadequate and national authorities are manifestly failing to protect their populations from genocide, war crimes, ethnic cleansing and crimes against humanity.

We stress the need for the General Assembly to continue consideration of the responsibility to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity and its implications, bearing in mind the principles of the Charter and international law. We also intend to commit ourselves, as necessary and appropriate, to helping States build capacity to protect their populations from genocide, war crimes, ethnic cleansing and crimes against humanity and to assisting those which are under stress before crises and conflicts break out.

140. We fully support the mission of the Special Adviser of the Secretary-General on the Prevention of Genocide.

—**Paragraphs 138-140 of the World Summit Outcome Document**
Heads of state agreed to the text at the High-level Plenary Meeting of the General Assembly in September 2005

the case of Cyclone Nargis, at the most extreme end of the scale, it is difficult to see how Andrew O'Neil's proposal for a full-scale invasion would have improved the lot of the victims (O'Neil 2008). It would have taken weeks to mobilize, would have been opposed by most states globally and by every state in the region, and would ultimately have been counter-productive. An invasion would increase rather than mitigate the number of civilian casualties, pose greater risk to humanitarian workers, and hinder efficient aid delivery.

At the more sensible end of the scale are proposals for airdrops of aid or for relief workers to be dispatched into the region without the approval of the host government (Daalder and Stares 2008). In the case of Cyclone Nargis, the U.S. government was associated with proposals for non-

consensual airdrops, but Defense Secretary Robert Gates intimated the United States recognizes the need to operate with Burma's consent.

The most urgent needs in a disaster are food, drinking water, and medical supplies. Food can be dropped from aircraft, but water purification kits and medical supplies need to be distributed by people on the ground. Airdrops are notoriously imprecise. There is a strong possibility that much of the aid would end up in the water or seized by the authorities. Without people on the ground to ensure that aid gets to those who need it, aid dropped from the air tends to find those members of the affected population who are strongest and most mobile.

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Acting without the government's consent is likely to make it more difficult to persuade the regime to permit more international aid workers on the ground. It would make cooperation between NGOs and the military regime all but impossible, hindering rather than helping the international relief work already underway (Chia 2008).

The proposed dispatch of aid workers without government consent could get around some of these problems. Indeed, *Médecins sans Frontières* operated in the affected areas because it deployed there before the military was able to mobilize its response. But this strategy has its own problems. It would be impossible to get the volume of assistance required into the affected areas without government cooperation. It may also harm the efforts by aid agencies such as *Médecins sans Frontières* and Save the Children if the government decided to demand the withdrawal of all foreign aid workers in retaliation. Burma has already shown itself willing and able to deport relief workers who enter without visas.

The problem with these approaches is they threaten to divert attention away from the delivery of humanitarian relief, making cooperation with local authorities more difficult and regional support less forthcoming, ultimately delaying assistance to those who need it most.

What can be done instead?

THE CYCLONE NARGIS EXPERIENCE helped identify two promising avenues for coordinating responses to natural disasters and encouraging states to grant humanitarian access: (1) working with regional arrangements and strengthening their capacity, and (2) developing the UN mechanisms for humanitarian assistance.

The countries and regional associations best placed to assist vulnerable populations are those closest to them. In the case of Cyclone Nargis, ASEAN worked with the UN secretary-general to secure the regime's acquiescence to the delivery of international aid and then played a significant role in coordinating the delivery of that aid. Although painfully slow and uncoordinated, ASEAN eventually persuaded Burma to grant humanitarian access.

Despite lengthy delays in delivering aid supplies and assistance, the much predicted second round of deaths due to disease and malnutrition was avoided. But restrictions placed on aid delivery meant that, while aid was effective in helping forestall an impending catastrophe, reconstruction has been much slower and progress on moderating the regime's abuse of its own population has been virtually nonexistent (International Human Rights Clinic 2009).

The Cyclone Nargis episode highlighted ASEAN's institutional incapacity. It took the organization fully two weeks to organize the humanitarian relief. Had disease broken out rapidly in the affected areas, the consequences might have been catastrophic. Nonetheless, there were many significant "firsts" for the region. Not least, it was the first time that ASEAN had taken the lead in coordinating a major humanitarian effort in partnership with the United Nations.

There are also alternative pathways by which the United Nations could be engaged with the provision of humanitarian relief. Most notably, the UN General Assembly

and Security Council have adopted resolutions on the need for states to grant humanitarian access. The most obvious pathway lies in establishing a framework through which states can expedite the granting of visas to the United Nations and its major relief agencies such as the World Food Program, UNICEF, UNHCR, and the World Health Organization. Important work has already been done to streamline and improve UN relief capacity, most notably through the establishment of the Central Emergency Relief Fund, which has helped expedite the release of funds to support humanitarian relief. The International Law Commission is currently reviewing the question of whether states have a legal duty to grant humanitarian access.

The R2P is a hard won political commitment to prevent particular human-made disasters, not a cure-all for global humanitarianism. Expanding the principle beyond the four crimes to which it applies helps neither the victims of genocide and mass atrocities nor the victims of natural disasters. To strengthen global capacity for responding to natural disasters, much better paths are available—regional arrangements and the UN humanitarian system.

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Wrestling with Generals

Pinning Down the 'Responsibility to Protect'

By Dan Whipple

IN MAY OF 2008, CYCLONE NARGIS struck the Irrawaddy Delta of Burma (Myanmar). The *Post-Nargis Joint Assessment*, published by the United Nations in July 2008, says, "The official death toll stood at 84,537 with 53,836 people still missing, and 19,359 injured. Assessment data shows that some 2.4 million people were severely affected by the cyclone, out of an estimated 7.35 million people living in the affected townships."

According to the *New York Times*, "The cyclone was one of the deadliest storms in recorded history. It blew away 700,000 homes in the delta. It killed three-fourths of the livestock, sank half the fishing fleet and salted a million acres of rice paddies with its seawater surges."

Burma is governed by a particularly insular and unresponsive military junta, which at first refused to allow international humanitarian assistance to be delivered into the country in the days after the disaster. The *Times* wrote, "The generals who run Myanmar did not know what, literally, had hit them. French and U.S. naval ships carrying aid supplies waited just offshore for more than two weeks while the generals dithered. Finally, lacking permission to deliver the aid, the ships withdrew."

"The generals thought it was just another typical cyclone, where the army would hand out some rice and a few tarps and that would be it," said a senior UN program director who spoke anonymously for fear of angering the government. "The regime made some shocking mistakes early on, really horrible, when they blocked the aid. With all the international furor, they finally realized, "This is way, way too big for us." And after that, they did a lot. A huge national response occurred."

"The secretive and xenophobic junta—still fearing a seaborne invasion by Western powers—now readily accepts air shipments of foreign aid, even from the West. Myanmar's neighbors in the Association of Southeast Asian Nations, especially Indonesia and Singapore, have been widely credited with helping the junta to assume a somewhat more relaxed posture." (topics.nytimes.com/topics/news/international/countriesandterritories/myanmar/cyclone_nargis/index.htm)



While the immediate crisis was resolved, it instigated something of its own tidal wave of concern within the international community about how to provide disaster assistance when the affected government refuses it. French Foreign Minister Bernard Kouchner argued that the Burma crisis might be a proper venue for the international community to force the junta to accept aid to its suffering population under the banner of the "responsibility to protect" (R2P), a principle for humanitarian intervention.

Action Against Their Will

GARETH EVANS, A CHIEF AUTHOR of the responsibility to protect principle, wrote in the *Guardian* around the time of the Cyclone Nargis crisis, "If the intransigence of the Burmese generals continues, it is a very real issue whether in the name of humanity some international action should be taken against their will—like military air drops, or supplies being landed from ships offshore—to get aid to the huge numbers who desperately need it right now, in the inaccessible coastal area in particular."

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Generals...

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R2P is a delicately crafted, exquisitely balanced effort to encourage the international community to step in to prevent mass murder and genocide. The movement was inspired by the abject failure of humanitarian intervention in the 1994 Rwandan genocide, when between 500,000 and one million people were killed. R2P doctrine only applies when mass atrocity crimes—genocide, ethnic cleansing, other crimes against humanity, and war crimes—are occurring or are threatened.

The responsibility to protect was originally formulated by the International Commission on Intervention and State Sovereignty, convened by Canada in 2001 in response to a call by UN Secretary-General Kofi Annan and co-chaired by Gareth Evans, had three “elements”—the responsibility to prevent, the responsibility to react, and the responsibility to rebuild—and two “priorities”—prevention of the crimes and that the protective effort “should always involve less intrusive and coercive measures being considered before more coercive and intrusive ones.”

In short, there are no generally accepted standards by which a national government can be forced to accept humanitarian assistance, regardless of the severity of need, unless there is intent to commit a crime against humanity. This problem comes up more than you might think.



R2P does not, however, cover the delivery of humanitarian aid in the wake of natural hazards and disasters, even in situations like Cyclone Nargis in which large-scale loss of life may occur as a result of government inaction. Gareth Evans wrote, “The point about ‘the responsibility to protect’ as it was originally conceived, and eventually embraced at the World Summit ... is that it is not about human security generally, or protecting people from the impact of natural disasters, or the ravages of HIV-AIDS or anything of that kind.”

Evans cautions, “If it comes to be thought that R2P, and in particular the sharp military end of the doctrine, is capable of being invoked in anything other than a context of mass atrocity crimes, then such consensus as there is in favor of the new norm will simply evaporate in the global South. And that means that when the next case of genocide or ethnic cleansing comes along we will be back to the same old depressing arguments about the primacy of sovereignty that led us into the horrors of inaction in Rwanda and Srebrenica in the 1990s.”

Evans did leave open the possibility that the massive denial of aid by the government of Burma—legitimate governments are supposed to protect their citizens, not needlessly endanger them—could rise to the level of a “crime against humanity,” potentially initiating the protections of R2P, including military force. (For a discussion of why R2P should not be invoked in natural disasters, and how these problems might be approached, see the piece by Alex J. Bel-

lamy in this issue of the *Observer*.)

In short, there are no generally accepted standards by which a national government can be forced to accept humanitarian assistance, regardless of the severity of need, unless there is intent to commit a crime against humanity. This problem comes up more than you might think. In June of 2008, Zimbabwe President Robert Mugabe banned Care International from giving food aid to needy areas of Masvingo province. Mugabe claimed that the aid was being used to campaign for his opposition in an upcoming election. Many other nations present their own individual issues—famine in North Korea, chaos in Somalia—for which the populace needs but the host government does not want international assistance for any number of reasons.

In his book *The Responsibility to Protect: Ending Mass Atrocity Crimes Once and For All*, Gareth Evans explicitly says R2P is not intended to cover “all human protection issues ... A further problem with stretching the R2P concept to embrace what might be described as the whole human security agenda is that this immediately raises the hackles of those who see it as the thin end of a totally interventionist wedge—as giving an open invitation for the countries of the North to engage to their hearts’ content in the missions

civilisatrices.” Evans specifically mentions the Cyclone Nargis situation here, saying, “Was this, or was it not, an R2P case of a kind that would conceivably justify coercive military intervention for the explicit purpose of delivering the necessary aid? The short answer is that natural disasters, as such, are not R2P situations, but they can be if mass atrocity crimes are also involved.”

An example of the concerns about the intent of aid is available in Pakistan. A recently passed U.S. aid package has authorized \$1.5 billion in humanitarian assistance and “such sums as are necessary” for military aid. But Pakistani opposition leaders claim that the assistance is just a smokescreen for greater American interference in Pakistani internal affairs. “The tone and tenor of the bill in terms of conditionalities is not just intrusive, it’s also overbearing and bordering on the humiliation of Pakistan,” said Mushahid Hussain, a leader of the Pakistan Muslim League-Q, quoted in the Associated Press. “We are not being treated kindly.”

Prevent, React, Rebuild

BUT WHILE THERE IS NO LEGAL CASE for disaster relief under the “responsibility to protect” rubric, the terminology of those standards will be familiar to any hazards professional, offering perhaps a basis for future consideration of a “responsibility for relief” (for lack a better term). In his book, Evans speaks of the “responsibility to prevent,” then the “responsibility to react,” and finally the “responsibility to rebuild.” If you’re real quiet and listen carefully, you can probably hear “preparedness,” “response,” “recovery,” and “mitigation” snaking through all that responsibility.

A watered-down version of the R2P principle was unanimously passed—somewhat surprisingly—by the UN General Assembly in September 2005 (see sidebar for resolution text). The revolutionary subtext of this resolution is the tentative acknowledgement that sovereignty

may not be absolute. Many of the issues addressed by R2P could be solved simply by good governance. First of all, a government has the responsibility to take care of its citizens, not to endanger them. When governments are “manifestly failing to protect their populations from genocide, war crimes, ethnic cleansing, and crimes against humanity,” the international community has an acknowledged responsibility to act. So don’t starve them (North Korea) or drown them (Burma) or allow them to be murdered with machetes (Rwanda). The fundamental relationship between a government and its people obviously remains an issue. And not just in developing countries—consider the U.S. government’s inept response to Hurricane Katrina.

Most of the attention on R2P focuses on armed intervention to protect the populace, but the framers of the principle argue that it’s much more subtle than that. In the original ICISS incarnation of the principle, there were five “criteria of legitimacy” for the use of force. First, was the threat sufficiently clear and serious to justify the use of force? Two, is it clear that the primary purpose of the proposed military action is to avert the threat in question? Three, is it a last resort? Has every other means of prevention been exhausted? Four, is the action proportional to the threat? And five, will the consequences of an action be better than doing nothing? In his book Evans writes, “Military intervention for human protection purposes is a desperately serious, extraordinary, and exceptional matter that must be judged not just by one prudential criterion but a whole series of them.”

A ‘Right to Health’

IN OCTOBER OF 2008, John D. Kraemer, Dhruvajyoti Bhattacharya and Lawrence O. Gostin, all from the Georgetown University Law Center, wrote an essay in the British medical journal *Lancet* citing the Burma situation and asking, “Can a right to health overcome barriers of national sovereignty?” You won’t find a “right to health” anywhere in the UN Charter, or in the criteria for an R2P intervention. But the authors write, “The rights to life and health are so widely accepted that they are part of international customary law. [The World Health Organization’s] constitution also requires nations to seek to attain the highest possible level of health for all peoples. But it stops short of mandating countries to accept international aid during crises.”

Kraemer et al. conclude, “Nations should be justifiably cautious about using or threatening intervention to stop crimes against humanity. Policy makers must carefully consider risks to relief workers, civilians, and troops, as well as the danger of complicating future health-promotion activities. Forced intervention is a complex policy question, but blanket rejection may condemn innocent civilians and prevent deterrence of crimes against humanity. Where leaders engage in intentional acts of cruelty toward their populations, wealthy nations should be prepared to intervene beyond their borders to safeguard health and human rights.”

The differences between American liberals and conser-

When governments are “manifestly failing to protect their populations from genocide, war crimes, ethnic cleansing, and crimes against humanity,” the international community has an acknowledged responsibility to act. So don’t starve them (North Korea) or drown them (Myanmar) or allow them to be murdered with machetes (Rwanda).



vatives’ views on these points are subtle and not really far apart. Many conservatives argue that the United States can and should intervene when its interests are threatened, but that the nation should cede none of its sovereignty. Liberals think the United States should intervene where it is morally compelling to do so, preferably with international and UN support.

U.S. conservatives have to a certain extent handcuffed themselves on the humanitarian intervention issue, because many of them ended up justifying the invasion of Iraq as a humanitarian intervention after the other justifications fell apart. (For the record, most supporters of R2P are appalled by this assertion, arguing that the Iraq War fails every one of the ICISS criteria listed above.) But Steven Groves of the Heritage Foundation wrote of the emerging responsibility to protect doctrine, “The R2P doctrine strikes at the heart of the Founders’ notion of national sovereignty. The Founders would have deplored the idea that the United States would cede control—any control—of its armed forces to the caprice of the world community without the consent of the American people.”

Groves also wrote in an online debate sponsored by the Council on Foreign Relations, “Take the current crisis in Burma, for example. First, does R2P apply under these circumstances? While the behavior of Burma’s military junta is deplorable and merits worldwide condemnation, the actions (or lack of action, more accurately) of the junta do not amount to genocide, war crimes, ethnic cleansing, or crimes against humanity, at least under the generally accepted definitions of those atrocities. Then again, at what point does the junta’s intransigence create a death toll among the innocent Burmese population so high that it amounts to a ‘crime against humanity?’ Who is to judge when that macabre calculus is reached? The answers to those questions remain elusive. The U.S. should therefore not worry about supporting R2P, but should rather focus its efforts on persuading China to pressure the junta to allow international aid to flow freely into Burma.”

In a letter to the United Nations on R2P, then-U.S. Ambassador to the United Nations John Bolton implied some limited support for the principle, although not if it meant a U.S. obligation to assist: “For its part, the United States stands ready to take collective action, in a timely and decisive manner, through the Security Council under Chapter VII of the UN Charter and, as appropriate, in cooperation with relevant regional organizations, should peaceful means be inadequate and national authorities be unwilling or unable to protect their populations.” But he also said, “We do not accept that either the United Nations as a whole, or the Security Council, or individual states, have an obligation to intervene under international law.” (For more on international obligations and duties of humanitarian

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Generals...

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intervention, see George Kent's article in this issue of the *Observer*.)

A Moral Policy?

A MAJOR CONCERN about humanitarian interventions—whether they are for relief in a natural disaster like Nargis or prevention of genocide in Kosovo—is that the motivation of the intervenor is self-serving. In fact, it's probably safe to say that a big difference between liberals and conservatives on this topic is that foreign policy "realists" don't believe that nations have a moral impulse, while liberals believe that they do—or at least that they should.

In his book *Freedom's Battle: The Origins of Humanitarian Intervention*, Princeton University professor Gary J. Bass writes, "The realists correctly remind us that humanitarian intervention is most likely to occur against militarily weak states. In hard cases, it takes power to impose human rights ... Realists are also right to point out the frequent hypocrisy of the national security establishment ... It is right to be deeply suspicious of any government that claims its wars are for the good of humanity."

Nonetheless, Bass says, there are also cases where nations have acted on a moral code in apparent opposition to their own self-interest. "Sometimes states are genuinely driven by morality," he writes. "The prime example is the

campaign against the slave trade, and then slavery itself—properly seen as the root of all modern human rights activism. Britain drove hard to stop the African slave trade—even to the point of using military force ... This principled commitment cost Britain the lives of some 5,000 troops in various antislavery missions, soured its relations with the United States and France, and badly damaged the British economy by undermining its own sugar industry. Still British leaders backed the policy with remarkable vigor."

In an age of increasing threat and damage from natural disasters, and with the examples of Burma's, Zimbabwe's, and North Korea's resistance to aid, separating out these motivations of morality and menace will become increasingly important in the international marketplace of ideas.

Rights...

(Continued from page one)

the focal point in the UN System to "promote links and synergies between, and the coordination of, disaster reduction activities in the socio-economic, humanitarian and development fields, as well as to support policy integration." ISDR's definition of disaster is:

A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources (UNISDR 2006).

ISDR makes no distinction between natural and human-caused disasters. Assistance is called for when there is a serious disruption of the community's functioning, regardless of the underlying cause.

International human rights law does not address the right to protection and relief from disasters, but it's implied. Article 3 of the Universal Declaration of Human Rights says, "Everyone has the right to life, liberty, and security of person." Article 25 says, "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, or old age or other lack of livelihood in circumstances beyond his control." These rights are fur-



ISDR makes no distinction between natural and human-caused disasters. Assistance is called for when there is a serious disruption of the community's functioning, regardless of the underlying cause.

ther elaborated in subsequent human rights agreements, particularly the International Covenant on Economic, Social and Cultural Rights.

At an international colloquium held at UNESCO—the United Nations Educational, Scientific and Cultural Organization—in Paris in January 1995, one participant proposed seven rules summarizing international law on rights and duties to humanitarian assistance:

- States have a duty to provide humanitarian assistance to victims in their territory or under their control.
- States, IGO's [intergovernmental organizations such as UN agencies] and non-governmental organizations have a right to offer humanitarian assistance to other states.
- States, IGO's and NGO's have a right to provide humanitarian assistance to victims in other states with the consent of these states or, in case of disintegration of governmental authority and of civil war, with the consent of the relevant local authorities.
- States have no duty to provide humanitarian assistance to victims in other states but they have a duty



to facilitate humanitarian assistance lent by other States, IGO's or NGO's. If measures of coercion are taken against a particular state, supplies for essential humanitarian needs have to be exempted from them.

- The Security Council, by virtue of Chapter VII of the charter, may determine that the magnitude of a human tragedy constitutes a threat to international peace and security and authorize states or UN forces to take all measures necessary to bring humanitarian assistance to the victims.
- States have a duty to admit humanitarian assistance furnished by other states, IGO's or NGO's in accordance with international law. They may not arbitrarily refuse their consent.
- Individuals have a right against the state under whose control they are to receive humanitarian assistance insofar as this state has a duty to provide humanitarian assistance or to permit its distribution according to rules 3, 4, and 6. (Schindler 1993)

So currently states have a right—but not a duty—to provide international humanitarian assistance. The central argument of this essay is that states should have a duty to provide international humanitarian assistance under some circumstances.

Humanitarian Intervention

THE IDEA OF INVIOLENT NATIONAL SOVEREIGNTY, based on the Peace of Westphalia of 1648, served the international system well from the seventeenth century into the twentieth. That agreement established the basic principles of the modern nation-state system. Countries are sovereign, and thus have no formal authority above them. They are not permitted to involve themselves in the internal affairs of another country without that country's permission. But in the modern era, many now feel that the international community should act to protect those whose human rights are

violated, at least when these violations are widespread.

One response has been the emergence of the doctrine of humanitarian intervention. Under this doctrine, the traditional Westphalian principle of immunity from outside interference remains in place, but with the qualification that under some extreme circumstances and with appropriate legal processes, the international community may forcibly intervene to protect human rights.

In international law, intervention generally refers to forcible intrusion, usually with military force, into the affairs of nations by outsiders (Haass 1994;

Lyons 1994). Despite extensive debate, the doctrine of humanitarian intervention remains ill formed. Some writers equate humanitarian intervention with any sort of humanitarian assistance in armed conflict. Some use the term to refer to military action to free civilians from situations in which there are serious violations of human rights. Perhaps humanitarian intervention is best understood as humanitarian assistance provided to people within a nation by outsiders without the consent of the national government.

Humanitarian intervention occurs when there is a claimed right to deliver humanitarian assistance despite the absence of consent from the government of the receiving nation. A distinction should be made between the simple absence of consent to the delivery of assistance and the clear refusal of such assistance. In the intervention in the civil war in Somalia in 1992 and 1993, for example, there was neither approval nor refusal. Civil order there had collapsed to such a degree that there was no government in place to either grant or deny consent. Perhaps intervention in the absence of consent should have different guiding rules than intervention in the face of clear refusal.

The needy are sometimes viewed as having a right to assistance, but only in the limited sense that no third party may interfere with its delivery if it is offered. This is quite different from a full right of the people to assistance in the sense of an entitlement, in which the suppliers of assistance have an obligation to provide it.

While many define humanitarian intervention as armed intervention into states for humanitarian purposes, it has been argued that this historical understanding "has no place in the system established by the UN." In the legal framework based on the UN Charter, unilateral state intervention is allowed solely for protecting national independence (Sandoz 1992).

The International Commission on Intervention and
(Please see "Rights," page twenty)

Rights...

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State Sovereignty tried to address the legitimacy issue by advancing a new doctrine on the responsibility to protect—colloquially called R2P—clarifying guidelines for humanitarian intervention. The approach was highlighted in a UN report on A More Secure World (High-level Panel 2004), a 2005 UN declaration, and again in the 2006 G8 Summit. On April 28, 2006, in Resolution 1674, the UN Security Council made similar assertions of the right of the international community to provide protection to people whose human rights were being violated. It acknowledged that under some circumstances the international community has a responsibility to provide such protection—but the extent of this responsibility was not spelled out.

R2P has been viewed mainly as the duty of national governments on the receiving end of an intervention. The R2P terminology may suggest intervening countries have specific obligations to intervene when necessary for humanitarian purposes, but a close reading of the discussions indicates that the international community really uses the R2P principle to assert its right to intervene. The Guardian recognized this when it referred to “the UN declaration of a right to protect people from their governments” (Williams 2005). Similarly, the African Union proclaims, in its Constitutive Act, “the right of the Union to intervene in a member state . . . in respect of grave circumstances, namely war crimes, genocide and crimes against humanity.”

The assertion of a right to intervene with no counterpart obligation to intervene invites the politicization of intervention decisions. My view is that those who intervene within nations on humanitarian grounds should not be free to choose whom to help and when. Interventions in situations like the genocide in Darfur or the widespread malnutrition in North Korea or Zimbabwe should not be optional, at least so long as they can be undertaken with reasonable safety.

In October 2006, Vaclav Havel, Kjell Magne Bondevik, and Elie Wiesel issued a report (2006a) arguing that because of the widespread malnutrition and other humanitarian problems in North Korea, “the international community now has an obligation to intervene through regional bodies and the United Nations, up to and including the Security Council” (2006b). Their call for recognition of obligations, in addition to rights, of those who would intervene was not well received.

It is not surprising that the providers of assistance tend to emphasize their rights rather than their obligations. However, one would think that if the powerful are going to claim a right to assist under some conditions, they should also have an obligation to assist under some conditions (Kent 2008).

Right to Assist Versus Right to Assistance

A RIGHT TO ASSISTANCE MEANS that people meeting criteria specified in the law are entitled to receive services specified in the law. If there is a right of those in need to receive assistance under specified conditions, then there must also

be an obligation for others to render assistance. These obligations are specific responsibilities for action. Typically, in the area of human rights, individuals have specific rights, and the government has specific obligations to fulfill those rights. When rights are described in the law, the counterpart obligations of government and the specific agencies responsible for their implementation ought to be described as well. The rights-obligations nexus can be understood as a kind of contract, explicit or implicit, that establishes who is to do what under what conditions.



Many would agree that there are some extreme situations in which needy people should have a clear right to receive help. In any decent social order, if a child falls down a well, there should be a requirement that the child will be rescued. But the idea of the right to assistance has a very checkered history.

Whether within nations or internationally, the challenge is to determine the nature of the contract: who should be entitled to what sort of assistance from whom under what conditions at whose expense? Different sorts of answers would be appropriate for different kinds of situations or needs: poverty, armed conflict, refugees, famine, chronic malnutrition, floods, droughts, terrorism, and so on. Some general principles would apply across broad categories of cases.

Many would agree that there are some extreme situations in which needy people should have a clear right to receive help. In any decent social order, if a child falls down a well, there should be a requirement that the child will be rescued. But the idea of the right to assistance has a very checkered history. U.S. law is characterized by “the missing language of responsibility” (Glendon 1991). In 1964, Kitty Genovese was murdered in New York City while 38 people watched without helping or calling for help. They were not under any legal obligation to help. Under the no-duty-to-rescue principle, bystanders are not required to come to the assistance of strangers in peril if they did not cause that peril.

In contrast to the United States, “most European countries do impose a legal duty on individuals to come to the aid of an imperiled person where that can be done without risk of harm to the rescuer. And the constitutions of many other liberal democracies obligate the government to protect the health and safety of citizens” (Glendon 1991).

There is a well-established international duty to come to the assistance of the needy in the case of ships in distress on the high seas. Captains failing to meet this obligation have been prosecuted. However, there is no general duty of nations to respond to distress in other nations.

The major international human rights instruments are concerned primarily with the responsibilities of nations to their own people, not to people elsewhere. Those instruments do call for international cooperation in their implementation. For example, the International Covenant on Economic, Social and Cultural Rights requires states “individually and through international cooperation to take the

measures needed” to implement the agreement. In practice, however, there is no clear hard duty to provide humanitarian assistance internationally.

A clear distinction should be made between (1) rights of providers to provide assistance to the needy without interference, and (2) rights of the needy to receive assistance. The latter implies that there are obligations of others to assist, i.e., receivers have an entitlement. Figure 1 may help in sorting out the concepts.

	Rights	Obligations
Providers	A. right to provide	B. obligation to provide
Receivers	C. right to receive	D. obligation to receive

Figure 1. Rights and Obligations of Providers and Receivers

Humanitarian intervention is about the right of providers to provide assistance, cell A in the figure. Where that right to assist is claimed under the right to protect doctrine, it is implied that governments of receiving countries have an obligation to accept assistance, cell D. This relationship is in the A-D diagonal of the matrix. However, little attention has been given to the idea that under some conditions providers might be obligated to give assistance (cell B), because under some conditions receivers might have a right to receive assistance (cell C). This relationship is in the B-C diagonal.

While people of poor countries would be the primary beneficiaries of assistance, their governments sometimes resist because of concerns about their sovereignty. They fear that humanitarian intervention might be used against them for political purposes. The governments of weak countries do not want powerful countries, which might have ulterior political motives, intervening without their consent under the pretense of providing assistance.

If a party has a right to receive assistance under some conditions, arguably that party also should accept an obligation to receive assistance under some conditions. And if a party has a right to provide assistance under some conditions, perhaps that party also ought to have the obligation to provide assistance under some conditions. These relationships are in the rows of the matrix, A-B and C-D.

Why should weak countries accept the idea that outsiders can intervene when they see fit, but not be under any obligation to assist when it is not politically convenient for them? There should be more symmetry in the doctrine. If the international community is to have the right to intervene to provide assistance in some circumstances, there also should be some circumstances in which the international community has an obligation to provide assistance.

Rights of the needy to receive international assistance, as distinguished from the rights of outsiders to provide assistance, are rarely discussed. Where the rights of the needy are considered, it seems mainly to clarify the conditions under which intervention may be undertaken (Guiding Principles 1993). In 1988, France proposed a UN General Assembly resolution on disaster relief based on an explicit recognition of the rights of the needy to receive assistance,

yet those rights are completely missing from the final text of Resolution 43/131 (Beigbeder 1991).

If it were agreed that the international community had an obligation to assist under some circumstances, the obligation would have to be mitigated in the face of extreme danger, as in armed conflict situations. However, in such situations, the combatants often give consent and assurances of safe passage to the International Committee of the Red Cross, UNICEF, and other humanitarian agencies. Indeed, ICRC specializes in obtaining such consent. The key problem in providing international humanitarian assistance in conflict situations is not so much the presence of the conflict as the absence of consent.

There is now no hard duty to provide international assistance based on explicit rights of the needy to receive assistance. There should not only be a right but also an obligation to provide international humanitarian assistance under some circumstances. More precisely, there should be an obligation on the part of the international community to provide assistance at least when such assistance is welcomed by the receiving nation. The international community could recognize an obligation to offer assistance even in conflict situations or other situations in which there are doubts about whether it would be accepted. There would then be an obligation to deliver that assistance if the parties controlling the situation consented and safe passage was assured.

There is a need to create a new global regime of clear rights and obligations for those who provide humanitarian assistance and those who receive it. This would make the system more effective and more just, and thus contribute to the steady strengthening of overall global governance.

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Resources

Below are brief descriptions of some of the resources on hazards and disasters that have recently come to the attention of the Natural Hazards Center. Web links are provided for items that are available free online.

Other materials can be purchased through the publisher or local and online booksellers.

All of the material listed here is available at the Natural Hazards Center Library. For more information contact librarian Wanda Headley at wanda.headley@colorado.edu

All Hazards

Heads Up! Early Warning Systems for Climate-, Water- and Weather-Related Hazards. Michael H. Glantz, editor. 2009. ISBN: 978-92-808-1169-8. 195 pp. \$19 (softcover). United Nations University Press. www.unu.edu.

This small book packs a large punch for those interested in early warning systems. It starts with basics and moves on to particulars of letting a community know about impending hazards. "Because what one person sees as a warning may not be viewed as a warning by others, several basic questions must be addressed while an EWS (early warning system) is being developed or when its effectiveness is being evaluated. Do people agree on what is meant by 'early'? What constitutes a 'warning,' exactly? Who is to be warned? Does everyone (e.g., the government, the media, the public, the military) need to be warned at the same time, in the same way and by the same warning system?"

Good questions all. The book explores warnings through many natural hazards, primarily those related to climate systems, but also tsunamis and volcanoes. It is nicely illustrated with color photos and graphs.

The Human Side of Disaster. By Thomas E. Drabek. 2009. ISBN: 978-1-4398-0864-1. 308 pp. \$47.96 (hardcover). CRC Press. www.crcpress.com.

In his preface, Thomas Drabek says that he never felt he had the right textbook during the 30 years he taught the class on "Community Responses to Natural Disasters" at the University of Denver. So, after retiring, then being called back to teach again, he wrote this one. It's an entertaining case-based look at human response to disaster—puncturing myths, pointing out truths, and exploring the progress of disaster from warnings to "why me?"

A more careful narrative style could have helped tell the stories, though. The footnote on page one says, "The events described in this chapter are real. The stories, actions, and names used are fictional." This makes it difficult to figure out how much of what follows is true. If the stories and actions are fictional, what's left?

Environmental Justice and the Rights of Ecological Refugees. By Laura Westra. 2009. ISBN: 978-1-84407-797-7. 302 pp. \$108.00 (hardcover). Earthscan. www.earthscan.co.uk.

Environmental and climate problems, including the displacement of populations, represents one the greatest threats to society. But the limitations of existing international law regarding environmental refugees exacerbate these. In light of this new diaspora, Westra asks what legal instruments and regulatory regimes might extend protections to these forced migrants. This book offers an ideal introduction to the questions about the status of eco-refugees in the framework of international law.

This book concludes a series by Westra that began with *Ecoviolence and the Law* and continued through an in-depth examination of the legal implications and application to the "most powerless individuals." Here she presents a series of extended case studies resulting from eco-crimes. The seven chapters build her argument for the rights of ecological refugees. Westra divides her discussion into three main parts to examine existing refugee laws and provisions, defining ecological refugee, and the steps to move forward within the boundaries of the existing legal system. She also suggests new provisions to the international community. Each chapter contributes to the understanding that international law and the rights of refugees fail to protect those fleeing ecological degradation.

Westra provides a detailed perspective into the contemporary state of international human rights and human health. For any reader interested in vulnerability and international dimensions of hazards, especially those related to climate change, this book provides the legal context that underpins the plight of these populations.

Geospatial Information Technology for Emergency Response. Sisi Zlatanova and Jonathan Li, editors. 2008. ISBN: 978-0-415-42247-5. 381 pp. \$195.95 (hardcover). Taylor & Francis Group. www.taylorandfrancis.com.

The lessons learned from disasters have highlighted the importance of geospatial information technology in the critical period immediately following an event. The information provided by geospatial technologies is invaluable in supporting emergency and disaster management. New developments and applications from the field of geospatial information continue to stream into contemporary practice. Zlatanova and Li present a new collection of work from 33 researchers to “represent the very best of current thinking from a number of pioneering studies over the past four years.”

This edited volume is the sixth in a series from the International Society for Photogrammetry and Remote Sensing. The authors consolidate an incredible amount of information into 17 chapters, divided into six parts: (1) policy and legislation, (2) data collection and products, (3) 3D data management, (4) emerging technologies, (5) integration of heterogeneous data, and (6) applications and solutions. Key topics include real-time data, 3D modeling, and recommendations on the management of data in a changing and uncertain environment. The chapters offer a high level of technical detail to be appreciated by both the novice and experienced user.

Unlike many other collections, this book includes an international perspective and the insights of researchers from 10 countries. One of its limitations, inevitable in this fast-moving field, is the reality that within the next decade certain aspects of this volume will become obsolete as the technology advances. However, the underlying principles and concerns will remain relevant and useful. This book will be most useful to advanced students and professionals engaged with the application of geospatial information technology. For the interested reader, it is an accessible volume that offers a considerable breadth of current knowledge.

Pandemics

Pandemic Influenza: Emergency Planning and Community Preparedness. Jeffrey R. Ryan, editor. 2009. ISBN: 978-1-4200-6087-4. 252 pp. \$69.95 (hardcover). CRC Press. www.crcpress.com.

If the United States suffers a flu pandemic as severe as the 1918 Spanish flu, the year following would see a reduction in gross domestic product of about five percent. A severe pandemic could result in the deaths of more than 1.8 million Americans.

These statistics are only the surface of the coverage of this book, which encourages comprehensive planning for the next influenza outbreak and outlines the steps by which these plans can take shape. The goal, writes editor Jeffrey Ryan, should be “to employ prudent and timely disease containment measures to limit the rapid spread of illness

due to pandemic influenza, preserve the economy, and return the community to normalcy with short- and long-term recovery activities.”

The book offers step-by-step advice for planning in considerable detail, depending upon the severity of the outbreak. A category one outbreak, for instance, wouldn’t ordinarily require decreasing social contact in the community, while it should be considered for categories two and three, and definitely implemented in category four and five pandemics.

This book also has some brief history of the world’s major pandemics, from the Plague of Justinia, through the medieval Black Death, and the three big flu pandemics of the 20th century.

Pandemic Influenza Preparedness and Response. By the World Health Organization. 2009. ISBN: 978-92-4-154768-0. 58 pp. \$20.00. Free PDF download. World Health Organization. www.who.int/csr/disease/influenza/pipguidance2009/en/.

This WHO guidance document crams a lot of planning into a little space. It is carefully organized by the nine WHO-defined pandemic phases. An update of similar 2005 guidelines, the guidance covers what WHO and affected nations should do as an influenza pandemic builds, crests, and passes through.

The plan acknowledges, “Pandemic preparedness is centered around health sector planning but must also be broader. WHO therefore advocates a ‘whole-of-society’ approach to sustainable and ethical pandemic preparedness while focusing in more detail on the role of the health sector.” Especially prominent the preparedness and response are communication and openness.

Searching Eyes: Privacy, the State, and Disease Surveillance in America. By Amy L. Fairchild, Ronald Bayer, and James Colgrove. 2007. ISBN: 978-0-520-25325-4. 342 pp. \$19.95 (softcover). University of California Press. www.ucpress.edu.

There is always tension between privacy and disease reporting as a public health measure. “Disease reporting always involves trade-offs among competing social, ethical, and legal interests and values,” the authors write. “Whether these tensions become manifest is a matter of historical contingency.”

With the onset of modern pandemics like HIV/AIDS and the still-developing H1N1 flu, the potential for conflict between public benefit and private rights is more than theoretical. *Searching Eyes* is a sophisticated historical survey of these and other public health conflicts, beginning at about the turn of the 20th century.

In 1916, the *New York Times* published the “names and addresses of those stricken with infantile paralysis,” presumably so its readers could avoid infection by polio. In the early 1980s, the Centers for Disease Control “called upon all local health departments to forward the names and full case reports of those with AIDS to Atlanta ... Although by 1982, the CDC in Atlanta had a list of more than 200 such names, distrust of the intentions of the federal authorities and anxieties about how such a national list might be misused led a gay leader to oppose such efforts.” The CDC—apparently without the clout of the turn-of-the-century *New York Times*—was reluctantly

compelled to accept a coded reporting system to track the spread of the disease.

While the conflicts between private lives and public health have been dragged for a century through the courts of law and public opinion, they have not been resolved. The authors write, "We believe that it is clear that there is an enduring tension between privacy and public health surveillance, though it has been expressed differently as conceptions of privacy and the scope of surveillance have changed over time and played out in different domains ...

"Enduring tension then, does not produce either inevitable or unending conflict ... On occasion, debates about disease notification have come to an end because one side has triumphed over the other. In other instances compromise has, at least temporarily, removed the source of contention."

The book sees this as a kind of creative tension in pursuit of two goals: "The vitality of democratic communities necessitates an ongoing effort to negotiate and renegotiate the boundaries between privacy, society's 'limiting principle,' and public health, which at its best has sought to expand the role of government as a guardian against disease and suffering."

Terrorism

When Terror Comes to Main St.: A Citizens' Guide to Terror Awareness, Preparedness and Prevention.

By Joseph A. Ruffini. 2008. ISBN: 978-0-9816987-0-0. 282 pp. \$20 (softcover). Special Operations Association. www.specialoperations.org.

This book is a curious amalgam of anti-Islam hysteria and cultural myopia. Ostensibly a book about preparing individual Americans for terrorist attacks, it is more of brief for a religious war against Islam with increased American global military might.

It would be foolish to argue after September 11, 2001, that Islamist extremism doesn't present a threat, but it is equally foolish to ignore domestic terrorism after the April 19, 1995, Oklahoma City bombing that killed 168 people. Nonetheless Ruffini, a retired U.S. Army lieutenant colonel, offers an 18-page listing of terrorist groups that includes many international groups but not, for instance, the domestic Aryan Nations or the Ku Klux Klan, both of which have made Federal Bureau of Investigation watch lists. The only domestic group on the long list is the "eco-terrorist" Earth Liberation Front.

In a couple of chapters on school violence—which at least he doesn't blame on Islam—the author offers four-and-a-half pages of school shootings, but doesn't mention the two that have become synonymous with the issue—Columbine High School and Virginia Tech University.

If there's an overarching theme to *When Terror Comes to Main St.*, it's that the military knows best. But we may not all want to consider ourselves "citizen soldiers in the War against Islam," as Ruffini urges. His remedy for our current lack of preparedness is, in part, for ordinary citizens to be more vigilant and take more responsibility for their own preparations in case of attack. This sound advice seems almost tangential to his larger crusade of "fighting ... against the infidels." The author wants to beef up the military, although it isn't clear why increasing the strength of conventional forces would deter unconventional attacks from terrorists.

The parts of Ruffini's book that aren't anti-Islam take the uncontroversial position that we should "support our troops." He argues that the chief goal of Islamic terrorism is to reduce American support for its citizens in uniform. There are others, however, who think their goal is reduce citizens' faith in the national ideals. Using this latter scale, Ruffini has already surrendered. He has little interest in defending the right to peaceably assemble or in freedom of expression, for instance. "Keep UnAmerican Politicians in Check," he writes. His un-American politician of choice is former Democratic presidential contender Howard Dean, but you may have your own nominee. I know I do.

Desertification

Water Scarcity, Land Degradation and Desertification in the Mediterranean Region: Environmental and Security Aspects. J.L. Rubio, U. Safriel, R. Daussa, W.E.H. Blum, and F. Pedrazzini, editors. 2009. ISBN: 978-90-481-2525-8. 156 pp. \$89.95 (softcover). Springer. www.springer.com.

The Mediterranean region is considered one of the world's environmental "hotspots," vulnerable to climate change and resource deterioration. It is also a central focus for many of the world's current security concerns. This report in the *NATO Science for Peace and Security Series-C: Environmental Security* examines the role of changing land use, potential water conflicts and resource issues in this culturally diverse and globally important region.

Floods

Making Communities Safer in Times of Flood: The Story of the Floodplain Management Authorities of New South Wales. By Chas Keys. 2008. ISBN: 978-0-646-48612-3. 160 pp. Price unavailable (softcover). Floodplain Management Authorities of New South Wales. www.floods.org.au/fma+book.aspx.

Australia's made more headlines recently as a continent of drought and fire than water and flood. But this book reminds us these things move in cycles. On April 14, 1999, Sydney was struck by a single severe hailstorm which did about \$2.3 billion in damage in less than an hour. "Flooding is a serious threat in Australia," Keys writes. "Indeed it is amongst the most serious natural hazards which the community faces. Nationally, of the common perils of nature, only heat waves have killed more people over the past two centuries than floods."

This book chronicles the efforts of flood control in New South Wales since the Floodplain Management Authorities of New South Wales came into existence in 1961.

Mapping the Zone: Improving Flood Map Accuracy. By the National Research Council of the National Academies. 2009. ISBN: 978-0-309-13057-8. 122 pp. \$28.80 (softcover). \$24.50 PDF download. The National Academies Press. www.nap.edu.

If cool books alone can improve flood map accuracy, The National Academies is well on the way. This is a handsomely produced, four-color treatise that can serve as an introduction to flood mapping or an advanced course in the knowns and unknowns surrounding the science. Did you know, for instance, that the height of a Colorado mountain might vary by as much as 5.2 feet depending

on whether you measure it using the data from the North American Vertical Datum of 1988 or the National Geodetic Vertical Datum of 1929? Neither did I.

Of course, the mountain isn't likely to be in a floodplain. The book offers five recommendations to the Federal Emergency Management Agency's map modernization program. Better maps are the first stage in floodplain planning to promote better floodplain management and less loss of life and property. Ed Thomas and Sarah Bowen wrote in the November 2009 *Natural Hazards Observer*, "Map modernization is a major effort by the Federal Emergency Management Agency to digitize, update, and revise flood maps. This effort will significantly increase our understanding of which areas are most susceptible to flooding."

Earthquakes

Earthquakes and Tsunamis in the Past: A Guide to Techniques in Historical Seismology. By Emanuela Guidoboni and John E. Ebel. 2009. ISBN: 978-0-521-83795-8. 590 pp. \$160 (hardcover). Cambridge University Press. www.cambridge.org.

A book about hazards, but not exactly a hazards book, this volume examines historical methods for uncovering earthquakes and tsunamis. A collaboration between a historian and geologist, it cuts a wide swath, from the mythology of earthquakes, to their geological causes, to their literary description—Johann Wolfgang von Goethe, for instance, takes a mild bruising from the authors for

applying his imagination to a 1787 quake in Calabria.

Technological

Risk of Vessel Accidents and Spills in the Aleutian Islands: Designing a Comprehensive Risk Assessment. By the Transportation Research Board of the National Academies. 2008. ISBN: 978-0-309-11332-8. 225 pp. \$36.00 (softcover). www.TRB.org.

More than 4,500 vessels annually traverse Unimak Pass at the western end of Alaska's Aleutian Islands, a 1,200-mile-long economically and ecologically important chain offering the shortest transportation route for ships traveling between western North America and Asia. This intensity of commerce makes the area particularly vulnerable to maritime accidents, illustrated by the 2004 oil spill of 336,000 gallons from the wreck of the tanker Selendang Ayu.

The settlement of the Selendang Ayu case provided that a portion of the funds be used to conduct a risk assessment for the region's transportation. This book provides an outline for the design of that assessment. The TRB offers an outline of the proposed assessment, not conclusions. But a graph in the appendix on page 211 of the report provides an indication of where things might be headed. Of 3,158 incidents examined of all vessel types, 1,964 of them—62 percent—had as their "top-level root cause" either "situational awareness" or "situational assessment"—what we might call "operator error."

Contracts and Grants

Below are descriptions of some recently awarded contracts and grants related to hazards and disasters.

Reconsidering the New Normal: The Impact of Trauma on Urban Ecological and Social Diversity. National Science Foundation award #0948993. Three years. \$299,551. Principal investigator Kevin Gotham, Tulane University, kgotham@tulane.edu.

In recent years, scholars and researchers have used the phrase "new normal" to refer to the complex and multi-faceted outcomes of post-disaster recovery and reconstruction processes. Generally, the volatility and chaos occurring immediately after a trauma are followed by a relative stabilization, usually at levels and configurations different from the pre-trauma normal. This research project will investigate the impact of trauma on urban ecological and social systems using post-Katrina New Orleans as a study area. The investigators will use ecological and social measures to track and characterize the transition from trauma to stabilization. Data will be analyzed to measure patterns of ecological and social diversification. "Ecological diversification" refers to species richness and dominance, community structure and composition, succession stage, land cover, and other measures. "Social diversification" tracks human population differentiation in terms of class (median household income), race, ethnicity, age, education, nativity, gender, renter/homeowner status, and other metrics. Toward this end, the investigators have identified two major research objectives. The first will entail a GIS-based spatial analysis of pre- and post-trauma landscape and social metrics derived from satellite imagery and the

2000 and 2010 federal census. These data will be analyzed for diversification and compared to stabilization metrics. This citywide study will be supplemented with three fine-grained studies in the neighborhoods of the Lower Ninth Ward, Hollygrove, and Pontchartrain Park. Qualitative data collected in these neighborhoods will provide insight into the relationships between trauma and ecological and social diversity, and identify variation in the timing, pace, and trajectory of neighborhood recovery. The second objective will involve the organization and coordination of a network of scholars and practitioners to exchange experience and knowledge

Enabling Large-Scale, High-Resolution, and Real-Time Earthquake Simulations on Petascale Parallel Computers. National Science Foundation award #0941735. Three years. \$38,610. Principal Investigator Liqiang Wang, University of Wyoming, wang@cs.uwyo.edu.

This award facilitates scientific research using the new computational resource named Blue Waters being developed by IBM and scheduled to be deployed at the University of Illinois in 2011. It provides travel funds to support technical coordination between the principal investigators, the Blue Waters project team, and the vendor technical team. The project involves porting to the Blue Waters system and refining two codes for the propagation of seismic energy and their use in constrained optimization problems to determine the geological structure of the Earth

from seismic data. The award will enable the project team to evaluate whether the use of these codes on Blue Waters is likely to lead to breakthrough science in the following areas: the deep structure of the Earth, including the topography of the core-mantle boundary and the structure of the inner Core; a better understanding of the geological formations in regions with high seismic risks, and predictions of ground motion that will allow engineers to explore performance-based design of built structures; and more accurate pictures of geology in mineral-rich areas to reduce the risk and cost associated with drilling in complex geological environments.

Workshop/Collaborative Research: Vision 2020: An Open Space Technology Workshop on the Future of Earthquake Engineering; St. Louis, Missouri; January 2010. National Science Foundation award #1004951. One year. \$111,164. Principal Investigator Shirley Dyke, Purdue University, sdyke@seas.wustl.edu

This award supports a workshop in January 2010 to formulate a vision for earthquake engineering in the United States for 2020. Workshop participants will gather, distill, and formulate principal and potentially transformative new directions in earthquake engineering research, practice, education, and outreach. The next 10 years are crucial for development of this engineering discipline. The lack of focus induced by damage in a major earthquake is also a unique opportunity to set the stage for development of areas of earthquake engineering that would not have emerged when driven by an earthquake emergency. Open space technology will be used to conduct the two-day workshop. This is a radically new way to conduct a workshop. It is based on a single strong theme and relies on self-organization of the meeting participants to generate, develop, refine, and formulate the meeting outcomes.

Innovative Use of Vegetation to Mitigate Overtopping Hazard of Levees Due to Hurricane-induced Waves. National Science Foundation award #1005627. One year.

\$38,990. Principal Investigator Daniel Cox, Oregon State University, dan.cox@oregonstate.edu.

This project will quantify the ecosystem services provided by trees on the seaward side of a levee to minimize wave overtopping. Since it is extremely difficult to conduct small-scale studies that correctly mimic the biomechanical properties of plants, it is necessary to approach this problem using prototype-scale testing with natural plants. The experiments will be conducted in the 104-meter-long Large Wave Flume at the O.H. Hinsdale Wave Research Laboratory at Oregon State University. The U.S. Army Corps of Engineers will be involved in an advisory role. Results will be provided to USACE to develop further collaborative projects on sustainable approaches to mitigating natural coastal hazards.

Data Dynamic Simulation for Disaster Management. National Science Foundation award #0963973. Six months. \$29,371. Principal investigator Wei Zhao, Temple University, zhaow3@rpi.edu.

This project will develop advanced information technology tools, mathematical models, and prototype infrastructure for disaster modeling and management. The project will bring comprehensive information and numerical prediction where it is needed, at the disaster command center, in real time. The system will incorporate a large volume of information from data streams, e.g., as map, sensor, surveying, and weather data. The mathematical model will run on remote supercomputers. The core of the modeling system will be an existing computer model of wildland and weather around the area. These models will be rewritten using modern software engineering methodology as a data driven application, and enhanced by new mathematical modeling techniques together with advanced statistical techniques to manage uncertainty. The system will be designed to tolerate interruptions of communication, increased latencies, and node disappearances.

Conferences and Training

January 17-19, 2009

Asian Conference on Disaster Reduction 2010
Japan, UNISDR, and the Asian Disaster Reduction Center
Kobe, Japan

Cost and Registration: Not posted

This conference reviews progress and identifies challenges in implementing the Hyogo Framework for Action. Best practices, disaster risk reduction challenges, and lessons learned will be discussed with the aim of strengthening regional cooperation in Asia.

www.adrc.asia/acdr/2010_index.html

January 17-21, 2009

90th American Meteorological Society Annual Meeting
American Meteorological Society

Atlanta, Georgia

Cost and Registration: \$205-\$545, open until filled

The theme of this year's meeting, "Weather, Climate, and Society: New Demands on Science and Services," will address ecosystem adaptation and socioeconomic services affected by climate and weather extremes.

www.ametsoc.org/MEET/annual/

January 25-29, 2010

Fourth Regional Training Course on Mainstreaming Disaster Risk Reduction in Local Governance
Asian Disaster Preparedness Center

Manila, Philippines

Cost and Registration: \$1540, open until filled

This course increases local authorities' knowledge of urban development and disaster risk reduction, builds

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Copies of the *Observer* and the Natural Hazard Center's electronic newsletter, *Disaster Research*, can be downloaded free from the Center's Web site:

www.colorado.edu/hazards/

training capacity, and helps at-risk communities create safer and more sustainable development.

www.adpc.net/v2007

February 1-19, 2010
39th Regional Training on Disaster Management
Asian Disaster Preparedness Center
Bangkok, Thailand

Cost and Registration: \$2,740, open until filled

This course addresses strategies and systems for disaster prevention, mitigation, response, and recovery, as well as disaster management implementation issues and how to best use emergency coordination centers during disasters.

www.adpc.net

February 3-5, 2009
National Evacuation Conference
Stephenson Disaster Management Institute and the Gulf Coast Research Center for Evacuation and Transportation Resiliency
New Orleans, Louisiana

Cost and Registration: Open until filled

This conference encourages an interdisciplinary exchange on a range of evacuation issues, including mass evacuations from disasters, challenges of special needs populations, evacuation planning and modeling improvements, and national policy development.

www.nationalevacuationconference.org

February 4-6, 2010
Ninth Annual New Partners for Smart Growth
Local Government Commission, U.S. Environmental Protection Agency, and others
Seattle, Washington

Cost and Registration: \$359, open until filled

This conference examines the latest smart growth research, implementation, best practices, policies, and codes. Session topics include models for adapting to urban climate change impacts, recovery and resilience planning, stormwater management, and more.

www.newpartners.org

February 9-11, 2010
Cat Modeling 2010: Probabilities and Possibilities
Reinsurance Association of America
Orlando, Florida

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Cost and Registration: \$1650, open until filled

This conference examines catastrophe models and their impact on risk management. The strengths and weaknesses of modeling concepts, the impact of variability on decision processes, and alternate understandings of the relationship between models and risk management will be examined.

www.reinsurance.org/i4a/pages/Index.cfm?pageID=3292

February 21-24, 2010
Ninth International Workshop on Seismic Microzoning and Risk Reduction
Mexican Society of Seismic Engineering and the Universidad Nacional Autónoma de México
Cuernavaca, Mexico

Cost and Registration: \$400 before January 31, open until filled

This workshop discusses earthquakes, earthquake engineering, seismic hazard assessment and risk, and earthquake disaster management in urban areas.

eventos.iingen.unam.mx/9thIWSMRR/en/index.html

February 22-27, 2010
Modeling Floods
Newcastle University
Newcastle, United Kingdom

Cost and Registration: \$1912, open until filled

This course introduces the theory and practice of flood risk modeling using flood estimation frameworks, as well as a flood risk management context.

www.ncl.ac.uk/cegs.cpd/cpd/floodmodel.php

April 8-15, 2010
2010 Hazard Mapping and Environmental Summit
Resource Recovery Movement
Manila, Philippines

Cost and Registration: Not posted

This conference aims to improve risk mapping approaches in the Philippines and other tropical countries. Establishing necessary preparedness plans and estimating the cost of implementing safety measures will also be covered.



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Support Center Operations—Provide support for core Center activities such as the *Disaster Research* e-newsletter, Annual Workshop, library, and the *Natural Hazards Observer*.

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Boost the Mary Fran Myers Scholarship Fund—Enable representatives from all sectors of the hazards community to attend the Center’s Annual Workshop.

To find out more about these and other opportunities for giving, visit:
www.colorado.edu/hazards/about/contribute.html

Or contact Ezekiel Peters at ezekiel.peters@colorado.edu or (303) 492-2149 to discuss making a gift.

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THE MISSION OF THE NATURAL HAZARDS CENTER is to advance and communicate knowledge on hazards mitigation and disaster preparedness, response, and recovery. Using an all-hazards and interdisciplinary framework, the Center fosters information sharing and integration of activities among researchers, practitioners, and policy makers from around the world; supports and conducts research; and provides educational opportunities for the next generation of hazards scholars and professionals. The Natural Hazards Center is funded through a National Science Foundation grant and supplemented by contributions from a consortium of federal agencies and nonprofit organizations dedicated to reducing vulnerability to disasters.

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