

Project Management for Emergency Response & Disaster Recovery – A Call to Arms!

David L. Pells

Over the last few months, we have again seen natural disasters strike around the world, including earthquakes, fires and floods. In addition to the human lives lost and affected, these events have also had significant impacts on local and regional economies and on the projects and project management profession in those places. This month, as we pass the two year anniversary of Hurricane Katrina's devastation in the United States, we find that thousands of Louisiana and Mississippi residents have not returned to their homes, cities and towns have not been rebuilt, and local and regional economies have not recovered.

In Darfur, Iraq, Somalia and other conflict zones around the world, rebuilding has gone slowly or not occurred at all. Lack of security and continued conflict has hampered rebuilding efforts. But according to news reports and governmental audits, corruption, bad contracting practices, poor project management and lack of oversight have also been major problems. In my opinion, these last four issues are clearly within the realm of professional project management, suggesting that those in charge have either not been serious about PM or have not known enough about project management to take advantage of its power. It is now time to take action!

Current Trends increase the need for Project Management

It has become increasingly clear to me that an important area of application for modern project management must be in the fields of emergency response (ER) and disaster recovery (DR). This is true for several obvious reasons. Due to climate changes, population growth and demographic changes around the world, natural disasters are increasing in both frequency and impact (in both human and economic terms). In addition, regional conflicts have continued and based on global communications, globally interconnected economies, and population migrations (including refugees), we are all aware of and affected by them. Accidents and industrial emergencies also occur on a regular basis, often leading to evacuations or significant damage. Finally, terrorism may be a semi-permanent phenomenon, with international criminals causing harm in countries worldwide on a regular basis.

These trends create the need for ER/DR programs and projects. I believe it is time for the project management profession to get serious about the need for better program and project management in these areas. Just as more and better project management is needed for economic development, so is it needed to save lives in emergencies and to rebuild homes, cities, infrastructure and regions hit by disasters, be they created by other humans or by the weather.

A Reminder – recent natural disasters

As PMForum has added International Correspondents and Advisors around the world, we have been directly affected by accidents and disasters. We have learned immediately and through first person accounts about the impact and results of emergencies in those countries, have seen the need for ER/DR program and project management increase. Here are a few natural disasters that we are familiar with:

Fires in Greece (August 2007) – According to news media, and reports filed by our correspondent in Athens **Theofanis Giotis**, extreme heat in southern Europe led to more than 200 forest fires across the Greek countryside in August. According to the Washington Post on 2 September, "Fires have destroyed an estimated 469,000 acres of mostly forest and farmland over the past 10 days, prompting a massive relief effort but also criticism of Greece's government for allegedly responding to the crisis slowly and failing to safely evacuate villages before they were burned. The death toll rose to 65 Sunday..." According to Theofanis, "The title "Project Manager" as a career path does not exist for the Greek Government and local agencies. Project Management and proactive risk management are terms that have been introduced very lately in Greece. Project planning for dealing with fires in Greece was inadequate."



Devastation in Peru

Earthquake in Peru (August 2007) – A magnitude 7.9 earthquake hit the coast of Peru just south of Lima on Wednesday, 16 August. At least 540 people were killed in towns along Peru's southern coast, with another 1,500 people injured and 80,000 suffering the quake's impact through the loss of loved ones or destroyed and damaged homes.

Peru's president, Alan Garcia, who flew to the region to take charge of response operations personally, vowed to rebuild the southern city of Pisco that was devastated by the deadly earthquake. According to PMForum International Correspondent **Jose Machicao** in Lima, disaster recovery teams were being formed and he had been invited to help.

Floods in the UK (July 2007) – According to an article in the Telegraph on 27 July, Britain's worst floods in modern history are likely to leave 350,000 homes without drinking water, while 50,000 are without power as levels in two major rivers continue to rise. "We have not seen flooding of this magnitude before," said Anthony Perry, an Environment Agency flood risk official. "The benchmark was 1947 and this has already exceeded it." In Oxfordshire and Berkshire, where 700

homes have been flooded last night, 1,500 people were evacuated to Oxford United's football stadium.



Since Friday, almost 1,000 people - including 40 elderly residents at a care home in the rural village Hampton Bishop - have been rescued from flooded properties or cars in Herefordshire and Worcestershire. The Army this morning ferried food parcels to Upton-upon-Severn, Worcs, which is completely cut off by flood water on all sides. The cost of the summer floods could top £2 billion, making 2007 one of the worst years for insurers.

According to **Miles Shepherd**, PMForum's International Correspondent in the UK, "these floods will have a major impact on projects and the economy for months!"

Monsoon rains & Floods in Southeast Asia (August 2007) - Weeks of continuous monsoon rains and severe flooding have wreaked havoc across South Asia, including Bangladesh, Nepal, India, and Pakistan. According to the UN OCHA Regional Office for Asia Pacific, over 40 million people have been affected. Flood waters have submerged entire villages, devastated over a million acres of agricultural crops, and left people stranded on river embankments and rooftops. There is a severe shortage of food, drinking water, and shelter, and outbreaks of waterborne diseases pose a significant public health threat. Concern Worldwide provided immediate disaster relief in Pakistan, Bangladesh and India, and is currently scaling up its response in all three countries. Concern has launched an emergency appeal to meet the urgent and ongoing survival needs of flood victims in the affected areas.



Floods in China (June – August 2007) - Parts of China, especially along the eastern Huai River, have had some of the heaviest rainfalls in 50 years. Continuous rain since mid-June has resulted in widespread flooding, affecting over 119 million people. Anhui, Sichuan and Hubei are the worst-hit provinces. At least 3.6 million people have been evacuated, over one million houses have been damaged and another 452,000 destroyed.

It is estimated that at least 7.87 million hectares of farmland have been ruined. Economic losses are estimated at \$US 6.9 billion, but are expected to rise. More than 650 people have been killed so far this flood season. Last weekend alone, storms killed 17 in four provinces. Last Wednesday, a three-hour rainstorm in

Jinan, the capital of Shangdon province, killed at least 34 people. Many died from electric shocks or drowned in cars that were swept away. Meanwhile, in Henan province, 69 coal miners were trapped underground when rainwater flooded a pit. (source: <http://www.wsws.org/articles/2007/aug2007/>)

Floods in the USA (July-August 2007) – In late August, after a week of powerful storms and record flooding in the USA, Governor Ted Strickland on Sunday called on the Bush administration to declare north central Ohio a major disaster area and provide emergency relief. The damage caused by the flooding is of devastating, historic proportions. Severe storms and flooding throughout the central US Plains and Midwest have displaced thousands of people and left hundreds of thousands without power. At least 26 deaths have been attributed to two storm systems that moved through the area in the past week. Emergencies were declared in five states in the upper Midwest and Plains states. Heavy flooding has damaged or destroyed at least 6,000 homes throughout Iowa, Wisconsin, Illinois, Indiana, and Ohio—states not historically known for flood problems. Consequently, many residences were not insured for flood damage. In flood-stricken southwest Wisconsin, for example, only 5 to 10 percent of homeowners, about 1,400, had flood insurance. Flooding was so severe in Findlay, Ohio, after the Blanchard River rose 7 feet above flood stage, that at least 500 residents were forced to evacuate and hundreds sought sanctuary in emergency shelters. Earlier in the summer, Texas, Oklahoma and Arkansas were hit with severe flooding as well. (source: www.wsws.org).



Floods & Extreme Heat in Romania (July – August 2007) – In July at least seven people died in floods following days of torrential rain in Romania. Thousands of people were evacuated from their homes, as flood water rose to 3m (9ft) in places. Dozens of roads were closed and many areas left without electricity or gas. Romanian Prime Minister Calin Popescu Tariceanu said the damage was so bad he was considering appealing for international help. In the eastern village of Ivesti, residents were stranded on rooftops, while the nearby city of Galati was put on alert as the River Siret reached record levels. A few weeks later, extreme hot weather hit southeastern Europe where heat was blamed for 30 deaths in Romania and several elsewhere in the region.

The record-breaking heat has also been blamed for widespread forest fires. According to PMForum correspondent in Bucharest, **Florin Gheorghiu**, “disaster recovery projects should be subject to project risk management methodology.” (Sources: <http://news.bbc.co.uk/>)



Rebuilding and recovery from conflicts

Afghanistan & Iraq (2005-2007) – We have been hearing and reading about rebuilding efforts in Afghanistan and Iraq for several years now, although we do not get a lot of information due to security concerns. According to latest reports, including assessments from US government agencies, rebuilding is behind schedule and over budget. Because these rebuilding activities are well covered in the international press, I don't want to dwell on these countries here. But it is clear that rebuilding these countries is requiring billions of dollars, thousands of projects and project managers, and massive investment in project management. Why are there still so many problems with rebuilding programs and projects in Iraq, when American and European governments and companies are involved? Can all the problems be blamed on security problems? I don't think so! (see: <http://www.gao.gov/new.items/d061130t.pdf> and <http://www.gao.gov/new.items/d071195.pdf>)

Darfur (2006-2007) - An estimated 2.5 million people have been displaced by the conflict in Darfur, and the numbers keep growing, with new families arriving in refugee camps every day. Supplies such as plastic sheeting, blankets, mosquito nets, cooking pots, and water containers are needed in the camps before the onset of torrential rains. It is estimated that two-thirds of the population of Darfur have been affected by the interethnic conflict that erupted in 2002. What projects and programs are being launched by international aid agencies and NGOs to respond to this crisis? What special factors, issues and approaches are involved? How can project management help?



Chad (2007) - A staggering 4 million people have been affected by the cross-border crises. Displaced from their homes, forced to abandon all they own, and with heavy rains imminent, over 140,000 displaced people need humanitarian assistance. Concern has launched an emergency appeal to help meet the survival needs of vulnerable families who have lost everything. Villages burned. People massacred. The escalation of violence and the growing humanitarian crisis has been largely overshadowed by the conflict in Darfur. At present, the total number of people directly affected by internal conflict and other threats in Chad is in excess of 1 million. In addition to the 260,000 Sudanese and 50,000 Central African refugees present in Eastern and Southern Chad, an upsurge of violence in the eastern regions has prompted a new wave of displacement.

These are but a few examples of conflict zones today where emergencies and disaster relief projects and project management are needed.

Who are the stakeholders? Who is responsible or in charge?

Stakeholders of emergencies and natural disasters are rather easy to identify. They include those directly affected, often dramatically, and those indirectly affected. As our economies and societies become more interconnected on a global basis, however, it seems to me that most of us are now affected to a lesser or greater degree by many more disasters than in the past. Our proximity to the emergency or disaster will normally dictate our involvement in the response and recovery efforts however.

The more important questions, in my opinion, are:

- Who is responsible for emergency preparations and response? and
- Who is in charge of disaster recovery efforts?

These are the agencies, organizations and people who need and should be using the best project management methodologies and technologies available to help save lives and accelerate recovery and rebuilding efforts.



Generally, responsibility for the planning and management of ER/DR programs and projects falls to three types of organizations: governmental organizations, non-governmental (aid) organizations (NGOs) including charities, and private organizations (either responding to their own interests or as contractors for governments and NGOs). Response to large disasters normally falls to governmental agencies, as they are generally the only ones with the resources available to respond to large-scale emergencies and disasters. Large-scale emergencies and disasters require global or international governmental cooperation and coordination, as well as funding. Regional and local emergencies generally become the responsibility of regional or local governmental agencies, with cross border situations requiring international responses, although often with international or global financial aid and assistance.



In the United States, the **Federal Emergency Management Agency** (FEMA) is responsible for national and regional emergency response planning and implementation. However, each US state also has an emergency management agency, most of which belong to the National Emergency Management Association. Following the terrorist attacks in the USA on September 11, 2001 and based on increased emphasis on homeland security since then, most US counties and cities also have emergency response teams, organizations or programs established. In addition, there are many Red Cross offices and public aid organizations throughout

the country that respond to local emergencies and disasters, with local police and fire departments being first responders. I believe this same general model applies to most countries, with national, state and local organizations having associated ER/DR responsibilities.

NGOs are playing an increasingly critical role in ER/DR projects, bringing more and different types of resources to bear on emergencies and disasters. This especially includes money and volunteers, with religious groups actively involved worldwide. Emergencies also often create responses by local teams of volunteers and citizens, especially where fires and flood grow and where damages can be anticipated.

It should also be noted that military organizations often play a critical role in responding to emergencies and disasters, and that there is significant ER/DR experience and expertise residing in military organizations. All of these governmental and non governmental organizations that are involved in ER/DR programs and projects should know, understand and use modern project management. In how many cases is that true today?

What is the PM Profession currently doing?

Generally speaking, project management professional organizations have done little or nothing in this area, with a few minor exceptions. In the USA, the Project Management Institute (PMI®) responded admirably to the 2001 September 11, 2004 Asian Tsunami, and Hurricane Katrina disasters, offering assistance and launching financial aid initiatives. Local PMI chapters also responded. After rebuilding itself, the Greater New Orleans PMI chapter is now focusing attention on rebuilding neighborhoods around that city. In Greece, the PMI Greece chapter is offering to help the government. In addition, PMI launched a project that resulted in a PM methodology for managing post-natural disaster rebuild projects, along with a course for training relief agencies in using the methodology. Today, however, there is still very little information available on the PMI website related to ER/DR projects or project management – only four papers in the last three years (two about post Tsunami relief projects, one about the Canadian Red Cross and one about PMI's methodology for managing rebuilding projects).

In Europe, there seems to have been some research and a few papers published on this topic, most notably by Morten Fangel (Iceland, 1987), Gennar Torfason (Iceland, 1998), and Stephen Wearne (UK, 2004-2005). Professor Wearne won the APM's Sir Monte Finnesten Award in 2005 for his research and papers related to the management of urgent and emergency projects. However, I can find no reference to emergency management or ER/DR projects or project management on either the APM or IPMA websites. Undoubtedly there have been papers presented on this topic at IPMA congresses in Europe in recent years, but where are they available?

What more can be done?

In my opinion, it is time for the PM profession to get serious about helping the world in this area, a field of project management application where we can create enormous value. Here are some ideas:

PM Research – research initiatives should be launched immediately by individual researchers, universities, and consortia of universities to determine the real status of project management among emergency response organizations worldwide, ER methodologies, tools and issues. Like any other industry or application area, ER/DR project management should be studied much more aggressively. Research is needed into each specific type of natural disaster and associated projects, and for nation rebuilding and recovery from conflict.



PM Methodologies – More and better methodologies and models for ER/DR project management should be developed and promulgated. Newest developments in the PM profession should be incorporated, including project life-cycle management, program and portfolio management, risk management, stakeholder management and communications management. Project planning models and templates should be available for most types of projects. The single methodology approach promoted by PMI in 2006 is not sufficient. There should be good program planning models for each type of natural disaster (floods, earthquakes, fires, tornadoes, etc.) and for different conditions. These should be program and project life cycle models, covering pre and post event projects and activities.



PM Tools & Technologies for ER/DR Projects – This is an area where project management tools and technology vendors should take the lead. ER/DR project planning can utilize many existing tools and techniques. ER/DR projects and project managers in the field who are responding to actual accidents and emergencies must have more mobile and responsive tools and resources. This is also an area where more cross-technology and multi-functional technologies will be needed in the future.

Attention Raised & Information Shared – The whole issue of PM for ER/DR programs and projects should be showcased and promoted. There should be conferences on this topic, training sessions, papers and entire publications devoted to it. The leading PM organizations should take active steps to encourage research, writing and methodology development in this area. And the PM professional

organizations should reach out to emergency management, aid and humanitarian organizations to advance the state of the PM profession in those sectors.

PM Education for ER/DR professionals – In the USA, FEMA sponsors training workshops for emergency management personnel from other organizations around the country. (<http://training.fema.gov/IS/crslist.asp>) It is not enough. There should be seminars and workshops available on the subject of PM for emergency management, emergency response and disaster recovery programs and projects. Here again, the world's PM professional associations and societies should take the lead, developing and offering opportunities for ER/DR project managers and volunteers to learn modern PM methodologies, terminologies and technologies. Certainly many in the ER/DR business would welcome the attention and resources.

Funding for ER/DR Project Management – The above suggestions must be financed somehow. Here again, I suggest that the PM profession step up to the plate and begin to finance activities, programs and products to promote and support better project management on ER/DR programs and projects. Let PMI budget significant funds for this purpose, to finance or assist global ER/DR organizations and programs. Individual PMI chapters and local PM associations can set aside some percentage of their annual budget, say 10%, to assist or educate local emergency response teams and organizations in project management. In so doing, the PM profession can not only help the world but also gain tremendous visibility and good will.

In Conclusion

Now as category 5 Hurricane Felix bears down on Honduras and Central America with 165 mph (270 km/h) winds, we can expect flooding, landslides and another natural disaster in a region slammed just two weeks ago by Hurricane Dean. Meanwhile Tropical Storm Henrietta may become a hurricane before it hits Baja California later this week.



Whether in rich countries or poor, we all suffer now from natural disasters and periodic emergencies. It is time the project management profession began to promote PM experience, knowledge and expertise in order to minimize the impact of those events and to help with response, recovery and rebuilding projects.

Before ending, here are a few good resources of information on the web:

- Global Disaster Alert & Coordination System at <http://www.gdacs.org/>

- Natural and Environmental Disaster Information Exchange Service at <http://nedies.jrc.it/index.asp?ID=67>
- Center for Disease Control & Prevention Emergency Preparedness & Response site at <http://www.bt.cdc.gov/>
- Federal Emergency Management Agency in the USA at <http://www.fema.gov/>
- National Emergency Management Association in the USA at <http://www.nemaweb.org/>
- Jump Start International at <http://www.jumpstartinternational.org/>
- International Committee of the Red Cross at <http://www.icrc.org/eng>
- Disaster and Emergency Management on the Internet at <http://www.keele.ac.uk/depts/por/disaster.htm>
- Disaster Center at <http://www.disastercenter.com/agency.htm>

I am sure that I have missed some important issues in the above article. I also think this might be only part 1 of a series on this very important subject. Comments or articles related to project management on ER/DR programs and projects will be welcomed. Please contact me.

Good luck on your projects!

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Editor's note: This paper was originally published some years ago so some of the links to websites may no longer be active or accurate.

About the Author



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David L. Pells is Managing Editor of the **PM World Journal** (www.pmworldjournal.net) and Managing Director of the PM World Library (www.pmworldlibrary.net). David is an internationally recognized leader in the field of professional project management with more than 35 years of experience on a variety of programs and projects, including engineering, construction, energy, defense, transit, technology and nuclear security, and project sizes ranging from thousands to billions of dollars. He has been an active professional leader in the United States since the 1980s, serving on the board of directors of the Project Management Institute (PMI®) twice. He was founder and chair of the Global Project Management Forum (1995-2000), an annual meeting of leaders of PM associations from around the world.

David was awarded PMI's Person of the Year award in 1998 and Fellow Award, PMI's highest honor, in 1999. He is also an Honorary Fellow of the Association for Project Management (APM) in the UK; Project Management Associates (PMA - India); and Russian Project Management Association. Since 2010 he is an honorary member of the Project Management Association of Nepal. From June 2006 until March 2012, he was the managing editor of PM World Today. He occasionally provides high level advisory services for major programs, global organizations and the U.S. federal government. David has a BA in Business Administration from the University of Washington and a Master's degree in business from Idaho State University in the USA. He has published widely, spoken at conferences and events worldwide, and can be contacted at editor@pmworldjournal.net.

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