

## Research Note

### Lessons Learned – Where Are They?

By Emily Oxenford

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Abstract: In the wake of many large and devastating disasters around the globe, there is almost always an attempt to identify the lessons to be learned from the experience. From preventative measures to responders, to recovery measures and long-term impact studies, the impact of studying disasters can potentially influence preparation and planning for disasters. But there is a concerning lack of integration of the identified lessons learned into standards and implemented best practices. This absence seems to come from the complexity of disasters, a lack of high-level enforcement, and gaps in information flow.

## **FACING GLOBAL DISASTERS**

The devastation of environmental disasters can be epic – ranging from the damage to individual lives, to the communities and their businesses, all the way up to governments and the devastation of entire regions. In just the last few years, the world has witnessed catastrophic events that have ravaged populations, economies, and infrastructures. A few of the most prominent disasters have been:

- Indian Ocean Tsunami (2004)
- Hurricane Katrina (2005)
- Pakistan Earthquake (2005)
- Deepwater Horizon Oil Spill (2010)
- Eyjafjallajökull Volcanic Eruptions (2010)
- Haitian Earthquake (2010)
- Japanese Earthquake (2011)

Following disasters of this scale, it is normal for scholars, practitioners, and communities to reflect on the preventative measures, responses, and recovery steps surrounding the disaster. As time goes on, more knowledge is often gathered or generated about how to better handle disasters in the future. Regardless of sector or field, governments, businesses, health organizations, emergency responders, and individuals all have something to learn from the experiences during previous disasters. But these lessons learned often are not integrated into standards and best practices. The lessons that are being listed now from the 2011 earthquake in Japan do not seem to be different than those already in existence, built from the experiences with previous earthquakes.

## **WHERE ARE THE LESSONS?**

The reasons behind low-levels of incorporation seem to be because of 1) the complexity of large-scale disasters 2) the lack of high-level decision-making and enforcement and 3) the gaps and barriers in information flow between all parties.

The complexity makes lessons learned both difficult to document and tricky to apply across sectors and needs. The lessons for local governments preparing for disaster, for example, might appear to be quite different from those of humanitarian organizations arriving at a disaster zone bringing aid. A local government is going to have to deal with the politics of legislators and taxpayers, for example, who may not approve the funds to cover in-depth disaster planning. This might be especially difficult if the community has not suffered a disaster for a period of time, and public interest is low.

The lack of decision makers and power to enforce decisions is particularly tricky for large-scale disasters. The problems with organizing relief and charity organizations in a disaster environment have been both identified and discussed, but there are still very implemented best practices for how to solve the coordination and logistics issues. This is closely related to the troubles of information flow.

The flow of information surrounding lessons learned seems to be quite stunted across various channels. Regardless of level, there is a lack of sharing and collaboration when it comes to building lessons learned. Governments often do not share with other governments, businesses keep disaster plans internal because of security concerns, scholars publish to limited academic journals, and grass-roots efforts are sometimes never seen beyond the communities they are grown from. Regardless of why, the lessons learned are not reaching many of the organizations and people that they could.

Ewing and Synolakis cite Jonientz-Trisler et al., who identified five factors for resilience when it comes to disasters, which emerged out of research about the 2004 Indian Ocean tsunami. These five characteristics identify how to increase resilience in the face of disaster.

- (1) understand the nature of the hazard
- (2) have the tools needed to mitigate the risk
- (3) disseminate information about the hazard
- (4) exchange information with other at-risk areas
- (5) institutionalize planning for a disaster

To reach a robust level of resilience, these elements require cooperation beyond an individual level. They also sum up the importance of an integration of lessons learned. Each step requires knowledge about how previous disasters have been handled, and the identification of information flows.

## **CREATING A RISK FRAMEWORK**

The goal of documenting and implementing lessons learned is to develop standards and good practice, regardless of industry. One of the struggles in integrating lessons learned, building on the three factors earlier identified, is the lack of a risk framework.

For example, one area that lacks the implementation of lessons learned is the health standards and protection for emergency responders. Local, national, and international teams make up the emergency and disaster responders, and depending on the location and disaster, there are limited standards for how to best protect the people who put themselves on the line to help the victims of disasters. Budgets often dictate what procedures are followed, sometimes just the bare minimums rather than established best practices. From the approach of mitigating future risks (often health related), the lessons of the past need to be integrated into the standards for emergency responders.

The question of who is in charge of enforcing and regulating the implementation of lessons learned is a key one. Especially during large-scale environmental

disasters such as the Deepwater Horizon oil spill and the Japanese earthquake, there are many different players and the problems of politics and jurisdiction must be taken into account. The issues of risk can be more easily addressed within such a complicated environment if there is a clear framework to approach disasters. The recent efforts of FEMA to integrate Public-Private Partnership models is one step in the right direction for creating cross-sector frameworks for approaching the risks in disaster preparation and response. Collaboration and communication are keys to creating better standards that take the lessons of disasters and build the future plans upon them.

## CONCLUSION

Unfortunately, it seems that the multi-dimensional nature of environmental disasters leaves many organizations and individuals feeling overwhelmed. The lack of lessons learned being part of future practical disaster management is a critical gap in the approach towards coping with the inevitable disasters that will strike. Businesses, governments, and individuals must strive to not only capture and document the lessons to be learned from disasters, but also work to find practical ways to implement and integrate lessons into standards and practices.

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