Emergency Management Professionals:

Roles and Competencies in an Evolving Environment

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The current disaster and emergency management environment across the United States, as well as the international community, is one of dynamic and unique conditions that continue to unfold in remarkable ways not seen in recent times. Scientific consensus far exceeds a majority; approximately 90-97% of scientists agree that anthropogenic (human caused) global warming is in progress. (Cook, 2016). Regardless of the cause, the earth's climate is changing from established and observed patterns and shifting to produce effects that are only now beginning to be well understood. (Cook, 2016). Management techniques must then be adjusted and applied to mitigate these new effects on the human population and earth's environment. When examining the people who will manage this change, it is important to acknowledge the continuous undercurrent of evolving risk sets. "*Interactions between the evolving social, built, and physical environments are creating greater risk complexities." (Feldmann-Jensen et al, 2017).* Emergency managers must tactfully navigate through these dynamic and intertwined risks to identify what is necessary to maintain a modicum of resiliency, preserve quality of life, and to foster new cultural mores and traditions within our communities.

A professional who works to counter the environmental and anthropogenic effects currently in play must possess the necessary skills and competencies to work within a range of dynamic risks and situations to achieve desired end-states for the community within which they are situated, while making that community more resilient and forward looking. In this report, I will detail some key attributes of the professionals that comprise the emergency management field. No one person can hold a set of skills that are necessary to achieve desired outcomes for a community; rather, a collection of trained professionals with key skill sets, knowledge, and

competencies, relevant to the risks in play, is needed to be effective. Additionally, I will describe what principles define emergency managers, and why defining success isn't as simple as increasing profit margins or returns on investment might be in the business world. Finally, I will show that certain competencies are always needed within community leadership throughout our history, and that the evolving types and scope of risks demand emergency managers to evolve and rise to the challenge.

Professional emergency managers bring a unique blend of experience, knowledge, and expertise to bear in preparing for and responding to situations affecting humanitarian, historical, sociological and infrastructure aspects. FEMA generated a set of emergency management principles that lay out the factors allowing a manager to be successful in the field. In their principles document, FEMA defines emergency management: *"Emergency management is the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters."* (FEMA, 2007). In this respect, an emergency manager creates frameworks with and end point vision in mind. However, we must look further to decide what aspects separate the professional emergency manager from the emergency planning and response practitioner.

FEMA's eight principles of emergency management are the pillars that hold up a successful program of hazard mitigation, response, and recovery from disaster. They state that emergency management must be: comprehensive, progressive, risk driven, integrated, collaborative, coordinated, flexible, and professional. (FEMA, 2007 pg 4). Further, comprehensive emergency management can be defined as "*the preparation for and the carrying out of all emergency functions necessary to mitigate, prepare for, respond to, and*

recover from emergencies and disasters caused by all hazards, whether natural, technological, or human caused." (FEMA, 2007 pg 5).

Professional emergency managers can then be said to embrace the principles of emergency management, while creating frameworks that enable the community to increase resiliency from hazards and risks, and to recover from disasters. Additionally, as professionals, these managers *"value a science and knowledge-based approach based on education, training, experience, ethical practice, public stewardship and continuous improvement."* (FEMA 2007, pg 9). Another aspect that distinguishes the professional includes embracing the work as a profession rather than a trade or vocation. Thus, the emergency management profession includes characteristics such as professional associations. These associations provide for industry board certifications, a code of ethics, a specialized body of knowledge, and best practices and standards. The most widely used standards are the National Fire Protection Agency (NFPA)1600 and the Emergency Management Accreditation Program (EMAP) Standard.

The International Association of Emergency Managers (IAEM) provides two board certifications, the Associate Emergency Manager (AEM) and the Certified Emergency Manager (CEM). Both have various stipulations that include some or all of the following: work history, experience with actual disaster involvement or exercises, professional contributions, education, references, training hours, a management essay, and an exam. (IAEM, 2019). Additionally, the IAEM code of ethics includes five values: respect, commitment, professionalism, ethics, and integrity. (IAEM, 2019). These values are somewhat generic and could be applied to any profession, however, they do serve to solidify that there is an expectation of high standards and engendering trust in those served by emergency managers. The standards used by emergency

managers include the NFPA 1600 series and the Emergency Management Accreditation Program (EMAP) Standard. The National Commission on Terrorist Attacks Upon the United States (the 9/11 Commission), recognized NFPA 1600 as our National Preparedness Standard, the Standard on Continuity, Emergency, and Crisis Management. Additionally, it has been adopted by the U.S. Department of Homeland Security as a voluntary consensus standard for emergency preparedness. (NFPA, 2019)

Clearly, a professional emergency manager is someone who has a broad understanding of many aspects of the community around them, is supported by a wealth of past knowledge, experiences, and scientific research, has industry standards and manuals from which to work and adhere to, and uses all of these resources effectively to provide support and commitment to ethically assisting in the preparation and recovery from emergencies and disasters. This definition of the profession tells us who we are or one day might be as aspiring disaster experts, but it does not go into great detail about which knowledge is most important, what areas of research might be most beneficial, how to train effectively, or how one measures up against their peers. To this end, we must examine the core competencies within the profession.

FEMA has divided professional emergency management core competencies into three categories; competencies that build the individual, competencies that build the practitioner, and competencies that build relationships. Within each category are the competencies themselves. These are further divided into behavioral anchors and training guiding objectives, which I will discuss in further detail later. Returning to the competencies, under building the individual: disaster risk management, community engagement, governance and civics, and leadership. Under building the practitioner: scientific, geographic, sociocultural, technological,

and systems literacy. Finally, under building relationships: operate within the EM framework, principles, and body of knowledge, possess critical thinking, abide by professional ethics, and value continual learning. (*Feldmann-Jensen et al, 2017*). These provide a set of competencies from which a professional may begin to align themselves for growth and development, training, and literacy, as well as measure competency itself. FEMA further broke down the competencies into behavioral anchors and training guiding objectives. Using Blooms taxonomy (fig. 1) to align wording with growth, the anchors and guiding objectives allow various levels of education and proficiency to flourish while maintaining the same metrics and standardization.

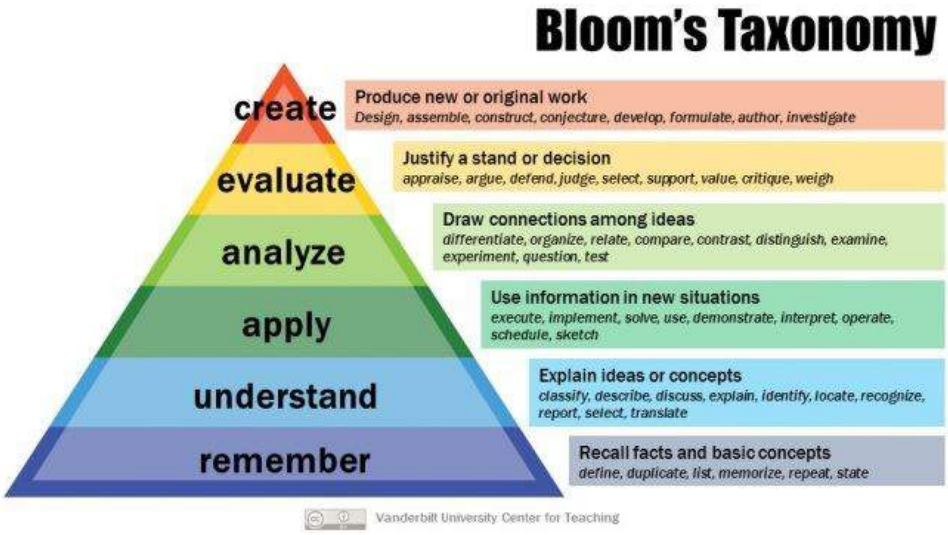

Fig. 1 (Armstrong, 2019)

For example, the behavioral anchor 3 of 9, risk driven, key actions at the master/executive level include statements such as “Utilizes available resources effectively and efficiently to manage presented and anticipated risks.”, and “Analyzes present hazard, risk, and vulnerability conditions and predicts how their evolution over time will dictate/shape practice.” Notice the words utilize falls under the level of apply, and analyzes falls under its own level of analyze.

Generally, the team aligned training guidelines and behavioral anchors such that the undergraduate level falls within the “understand” and “remember” levels, the graduate level falls within the “analyze” and “apply” levels, and the doctorate level contains the “evaluate” and “create” levels. There are certainly some areas where these bleed into each other, but the framework is an excellent way to begin a roadmap for self-assessment, organizational assessment, and training objective development. “*The action words describe the cognitive processes by which thinkers encounter and work with knowledge.*” (Armstrong, 2019).

In the face of a changing climate and interdependent hazards and risks, the emergency management professionals of the next thirty years will have a unique situation with which to contend. Change is happening at an exponential pace on all fronts. Technology for assistance and recovery has never been more advanced. Cities are looking for ways to mitigate climate change and sea level rise. If we consider the level of expertise of our elected officials charged with making decisions during emergencies, the data suggests that it is a mixed bag. So with rapidly changing conditions, both for the better and for worse, community leaders who may be ill prepared to make critical decisions, and a framework of competencies and behavioral anchors grounded in the past, it is a difficult road ahead. Looking back to the history of disaster management in the United States, one can make the case that since the congressional act of 1803, (one of the first examples of the federal government addressing a local disaster) all the way to 2019, significant strides have been made in creating frameworks and funding streams without completely solving the problem of ineffective response due to undue influence of political pressures and unscrupulous actors. With all of this information, emergency

management professionals must develop their current core competencies to adapt to the new information age and all the trappings of the modern world.

The current FEMA competencies list includes systems literacy, technological literacy, scientific literacy, and continual learning. These would seem to be the correct competencies for emergency management professionals to embrace in order to gain the knowledge and skills required to adapt to the changing climate and technological environment. However, in practice today, there are undue influences that have not yet been incorporated into the training guidelines and behavioral anchors. These influences result in end-state outcomes that do not meet the expectations of the community, the emergency managers working each project, and the government of the people. For example, should the response to Hurricane Maria in Puerto Rico be considered acceptable if only one third of funds to be disbursed have arrived after two years? (NBC, 2019) Clearly most would agree that when emergency managers work with government officials to develop frameworks for response and recovery that include identified loans, grants, and assistance, if the agreement is not completed then some kind of influence has affected the plan. The emergency management profession in general and FEMA specifically is replete with examples of plans made but completed poorly or not at all. (Sullivan, 2018). So the competencies that are currently identified and trained to are either not the right fit for the situation, or the situation is changing so fast that those competencies involving adaptation are not emphasized to account for a changing environment. The best designed recovery frameworks and plans often fail to account for the political environment, (such as Puerto Rico) location specific tendencies and vulnerabilities (such as California wildfires), and don't acknowledge existing problems or risks within the FEMA organization.

Competencies are also proficiencies. As one loses proficiency, they become less competent. Balancing the resources available to maintain both is a challenge that a good framework and organizational training program can help to maintain. Expanding the five competencies that comprise those that build the practitioner, as well as expanding the governance and civics competency will provide the resiliency within the profession that is currently lacking. The idea of literacy within each of the five areas identified, systems, technology, geographic, scientific, and sociocultural, is one that is expansive; that one understands each area as it pertains to a particular subject or field. (Feldmann-Jensen et al, 2017). However, the underlying behavioral anchors and training guidelines lack necessary definition to cover today's hazards, risks, and political climate. Governance and civics currently focuses on building relationships, but the exercises are insufficient to gain proficiency in this area, leaving major disasters as the learning experiences that mold our relationships, good and bad. Increasing the scope of relationship building and specifically governance and civics will help boost competencies, to the left of events rather than after the fact.

Professional emergency managers have a broad swath of responsibilities, capabilities, and required competencies. They are faced with understanding the science behind nature's fury, as well as the bureaucracy and policies of the local, state, and federal governments. In an environment challenged by systems with constantly changing interrelations, evolving technological needs and tools, and rising costs, the professionals working in this field will have a far different experience than those in the previous thirty. Making adjustments to training and exercises continually while modifying expectations for certifications and practicum will help to ensure these leaders success.

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