

HIGHER EDUCATION PROGRAM

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FEMA

A PROPOSED

FEMA Case Study Development Process

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Executive Summary

This report explains the rationale, potential uses, essential elements, and resources needed for FEMA to implement a program for post-disaster case study development. The reasons for FEMA to do so are clear – a program for the regular development and use of case studies focuses attention on critical learning and helps to bridge the gap between theory and practice. Furthermore, such a program requires extensive collaboration that is the paradigm of the *whole community* concept which FEMA champions. A collaborative program for case study development can improve how FEMA and others work together to provide disaster assistance; can expand the knowledge base for evidence-based practice and policy development; and, can advance the professions that serve disaster survivors.

The following key areas discussed in this report are:

- An overview of case study types and uses, such as those used for teaching, research, and for policy and practice;
- Case study design and development considerations, to include underlying principles and skill emphases; and,
- A case study development program approach that offers a preliminary vision of the case study development planning process, formative evaluation, and implementation needs.

Efforts to support case study development are already underway. FEMA Higher Education Special Interest Groups have formed to share information about Teaching and Learning with Cases and the Scholarship of Teaching and Learning. The University of Puerto Rico and FEMA operations supporting Hurricane Maria are collaborating on case study development. Incorporating case studies in training materials is a frequent practice at the Emergency Management Institute, the Center for Domestic Preparedness, and FEMA's Workforce Development Division. While these efforts are laudable, this report makes the case for a formal program of case study development to enable a process that is of high quality, efficient, pedagogically sound, and properly tested. Such an investment would appear to pay major dividends in supporting a better trained work force and whole community and promoting adaptive and innovative emergency management. Next steps include focused discussions with key stakeholders, beginning with FEMA leadership and the Federal Coordinating Officer (FCO) cadre, for input and validation.

A Proposed FEMA Case Study Development Process

Introduction

This report outlines a process to implement and institutionalize a program for the ongoing development of post-disaster case studies. Led by FEMA, this initiative would involve extensive collaboration with local universities in disaster affected areas, numerous stakeholders including those of disaster and emergency management educators and researchers, FEMA leadership and program offices, and representatives from the practice community. The report highlights numerous ways that a collaboration between the higher education community and FEMA will produce cases that can be used in educational and training settings, for policy and program discussions, and to identify gaps in and potential changes to doctrine, plans, and programs.

At a basic level, a case is an instance and example of something situated in a specific context. In teaching, cases are commonly presented in the form of stories. As teaching tools, cases can provide a rich environment for development of critical thinking and problem-solving skills, and in doing so, help to deepen understanding of the human endeavor in disaster work. We can link case examples to specific concepts we want users to understand or to specific skills we want them to acquire. We can also use cases to highlight professionalism, ethical dilemmas, and cultural competence. Cases can help users develop professional competency in analysis, strategy development, and decision making. Cases can capture context and circumstances surrounding real-world challenges and provide time to reflect on alternative courses of action and/or better understanding of causation and impact. Case studies are also used in research, and have been particularly useful for studying innovation, evaluating programs and program elements, and informing policy. They help to “bridge the gap between theory and practice and between the academy and the workplace.”¹

This report offers a preliminary vision of a case study development process that reflects continuous learning to improve emergency management practice and advance the profession. It is intended for disaster and emergency management leaders, trainers, educators, researchers and practitioners.

Purpose

Cases can stimulate ideas, encourage creativity and innovation, inspire people to take on leadership roles, and promote a willingness to take risks and assume personal responsibility for achieving results.² The purpose of the FEMA Case Study Development Process is to build a prototype program and suggest plans of action for developing case studies in post-disaster contexts in partnership with FEMA. Cases developed through this program will be used for training, workforce development, senior leadership training, and education of the next generation of emergency managers. They will also inform and influence the development and revision of policy and doctrine. Cases will be made available for use by educators, trainers, administrators, and program managers throughout the disaster and emergency management community.

¹ Barkley, E. F, Cross, K. P. & Major, C. H. (2005) *Collaborative Learning Techniques: A Handbook for College Faculty*. San-Francisco: Jossey-Bass, p. 182.

²Lynn (1999). *Teaching and Learning with Cases: A Guidebook*. Chappaqua, NY: Seven Bridges Press, LLC.

Background

The FEMA Higher Education Program sponsored a well-attended four-part webinar series entitled *Teaching and Learning with Cases* in 2016-17. A Case Teaching and Learning Special Interest Group (SIG) subsequently formed to offer a forum for educators interested in developing disaster and emergency management cases and the pedagogical approaches to use them. The SIG facilitates the exchange and co-creation of case and instructional materials and supports skill development related to the use of this method. A challenge for case development, however, is ease of access to disaster contexts, practice settings, and informants who provide realistic and relevant case examples.

Following the back-to-back hurricanes in 2017, representatives from FEMA were discussing the need to capture, for teaching and learning purposes, the many stories from these disasters that illustrate the unique challenges, opportunities, successes, and shortfalls related to recent operations. Events led to the convening of a focus group to begin to envision how a case study development process might be crafted. The Higher Education Program Manager reached out to various FEMA program offices, SIG leadership, disaster researchers, and leaders from the emergency management community to identify participants and define the focus group meeting agenda, in collaboration with representatives from the FEMA Workforce Development Division. This office has been working with academic representatives in Puerto Rico who seek to establish a Caribbean Center of Excellence, to include supporting the development of case studies from Hurricane Maria.

Approach

On February 6 and 7, 2018, twelve people gathered in Anniston, AL at FEMA's Incident Workforce Academy with an additional group participating remotely from Puerto Rico via virtual teleconferencing. (See Appendix A for a list of participants.)

Several goals were established for the focus group, including: a review of case study types and uses, considering their value and potential impact; case design and development considerations; the case development process model; and, plans for dissemination. Participants were asked to complete a brief survey about their experience with the use of case studies in advance of the meeting (See Appendix B for survey results), complete some read-ahead assignments, and consider the following questions:

- What measurable ways do case studies help the EM workforce develop and improve practice?
- What are the current resources and efforts, e.g. FEMA Reservist, FEMA Corps, EM Students, EM Faculty, and Researchers, which could be leveraged for case study development?
- What will be the biggest process challenge?
- What is the most impactful thing we can do to guarantee our best chance of success in creating and implementing a case study process during disaster operations? (See Appendix C for the full agenda.)

The focus group began with introductions, a review of the focus group purpose and initial reactions to the “questions to ponder,” and a reflection about the use of [Gracious Space](#) to set the climate for focus group learning and discussion.³

Focus group participants then considered [Galbraith’s Star Model](#)⁴ and the [Theory of Change](#)⁵ as possible ways to structure discussions. A stakeholder identification activity and empathy maps helped to broaden and sensitize thinking about underlying assumptions and end users. Participants then divided into two groups to: 1) help explore a possible case study development pilot for Puerto Rico and 2) consider case studies to support a senior leader initiative.

Notes taken during this meeting served as the initial basis for this report. The group agreed to a collective writing approach, and each focus group member agreed to work on the draft report for a scheduled period. The focus group chair prepared the initial draft and coordinated development and completion of the final draft report.

Focus group participants will continue collaborating to further develop the program concept, collaboration network, and implementation strategies. Relevant documents will be posted to the [FEMA Higher Education Program website](#)⁶ and participants will assist in community-wide dissemination to ensure the process and resulting program are conveyed. A webinar was held on April 10, 2018 to share outcomes from the focus group and receive feedback. The final report was delivered on May 21, 2018.

The remainder of this report organizes insights and recommendations from participants to address the goals for the focus group.

Case Study Types and Uses

Case studies have a long history of use in teaching, research, and practice. This section will provide a brief overview of each of these distinct types of case studies, which while differing in their initial purpose, can be used for teaching in the emergency management field. Although there has been limited formal development, to date, of using case studies as a teaching method in the emergency management field, the use of case studies in research and professional practice is common. This section will also present ideas about how each of these three types of case studies can inform the case study development process.

³ Gracious Space is a practice created and shared by the Center for Ethical Leadership (URL: <http://www.ethicalleadership.org/gracious-space.html>). It consists of four areas related to welcoming, the physical environment, creating space for diversity, and promoting learning in public.

⁴ URL: <http://www.jaygalbraith.com/images/pdfs/StarModel.pdf>

⁵ URL: <http://learningforsustainability.net/theory-of-change/>

⁶ URL: <https://training.fema.gov/hiedu/latest/2018.aspx>

Case-based Teaching

Cases serve a variety of purposes in teaching and can be used to support instructional, programmatic, or institutional objectives. In many programs of study, the approach to the use of cases is reflective of an individual instructor's pedagogical preferences and instructional design decisions. While the focus of a particular case is necessarily tied to the content of a course, there are commonalities in types of instructional cases, which include: 1) decision-forcing cases, 2) policymaking cases, 3) problem-defining cases, 4) concept-application cases, and 5) illustrative cases.⁷ In some fields of study, distinctive approaches to the use of cases were developed and these have become integral to the design and delivery of these programs at different universities. Pedagogical practices that are unique to a program of study, but common across universities, are *signature pedagogies*.⁸

The development of signature methods for using cases in law, medicine and business has a shared history. The first recognized *case method* was developed in 1870 by the Harvard Law School, in response to perceived challenges with existing pedagogies.⁹ The legal case method placed emphasis on studying original legal cases in which precedents were set, and the pedagogical approach was designed to support the development of the kinds of thinking skills needed in legal practice. In the early 1900s, the case method was adopted by the Harvard Business School, however this approach placed emphasis on developing students' ability to make business decisions, and instructors were hired to write cases based on real work business problems.¹⁰ In the 1950s, the case method was adopted and further adapted by the Harvard Medical School.¹¹ With this method, students were presented with an initial case, which served as a prompt for them to gain the knowledge needed to deal with the issues presented in the case.¹² The case pedagogy, which came to be known as the *problem method*, was also designed to develop the hypo-deductive thinking skills used in medical practice. Over time, these case-based pedagogies were further adapted and adopted by other universities as a common practice; the expansion of case methods has been supported by the development of case libraries and training on case-based pedagogical practices.

Case-based learning has also become a frequent practice in other professionally oriented fields of study, such as education, nursing, environmental sciences, and political science.¹³ While case libraries have been developed to support the use of cases in these fields, less attention has been given to the development of disciplinary-specific pedagogical approaches to the use of cases. The broader use of cases in teaching has also been supported by several books on this subject.

As a newer field of post-secondary study, there is yet, no signature practice associated with the use of cases in the emergency management field, however the development of such a practice remains a possibility. Further, there is no central source for cases that have been specifically written for use in teaching in emergency management academic programs, although relevant cases can be found in

⁷ Lynn (1999). *Teaching and Learning with Cases: A Guidebook*. Chappaqua, NY: Seven Bridges Press, LLC.

⁸ Shulman, L.S. (2005). Signature pedagogies in the professions. *Daedalus*, 134 (3), 52-59.

⁹ Garvin (2003). Making the Case. *Harvard Magazine*, 106(1), 56-65.

¹⁰ Cruikshank, J. L. (1987). *A delicate experiment: The Harvard Business School, 1908–1945*. Boston, MA: Harvard Business School Press.

¹¹ Tosteson, D. C. (1979). Learning in medicine. *New England Journal of Medicine*, 301(13), 690–694.
<http://dx.doi.org/10.1056/NEJM197909273011304>

¹² Barrows, H. S. (1986). A taxonomy of problem-based learning methods. *Medical Education*, 20(6), 481–486.
<http://dx.doi.org/10.1111/j.1365-2923.1986.tb01386.x>

¹³ Naumes, W., Naumes, M. (1999). *The Art & Craft of Case Writing*. Thousand Oak, CA: Sage Publications

existing case books and case libraries (e.g., Harvard Business, Electronic Hallway), with cases written by scholars in other fields who have an interest in topics related to emergency management. Some of this interest was generated by FEMA. For example, in the early 1980s, FEMA and the National Association of Schools of Public Affairs and Administration (NASPAA) launched an initiative to engage scholars in the study of emergency management. In 1988, a case book on the topic of crisis management was published, with this initiative being led by public administration scholars.¹⁴ Later, as part of the development of resources to support the advancement of emergency management higher education programs, FEMA sponsored the production of a casebook in 2004 for use in emergency management programs that is still available as an online resource.¹⁵ FEMA's support of the Case Teaching and Learning SIG and the Case Study Development Process are recent efforts to advance the practice of teaching with cases in the emergency management field.

While there are no signature practices related to the use of cases in emergency management, recent research has identified patterns in how cases are used in this field.¹⁶ Three distinct types of learning outcomes associated with the use of cases were identified and the function of cases was found to be relative to these outcomes. When cases were used for their *intrinsic* value, the learning outcome was to develop students' *knowledge about* a specific disaster event; reasons for doing this were because of the social significance of certain events, as well as the opportunity for learning from particular events. Cases were also found to be used for their *instrumental* value as tools to support learning. One instrumental reason for using cases was to develop students' *knowledge about* a concept, theory, or practice; with this approach, a case helps to bring abstract concepts to life, and thus generate deeper understanding about something. A second instrumental reason was to develop students' *knowledge of* how to do something; with this approach, a case functions as a problem to solve, and offers students a simulated form of experience where they can integrate and apply knowledge gained in a course or program of study. Thus, rather than there being one distinctive approach to the use of cases in the emergency management field, there appear to be three main approaches, each supporting the development of different learning outcomes.

A case study development process could contribute to teaching with cases in the emergency management field in several ways. A list of existing case libraries, along with associated relevant search terms, can be developed and maintained to facilitate access to existing teaching cases that have already been published. Sessions can also be offered at the annual FEMA Higher Education Symposium to support competencies in developing and writing teaching cases, as well as instruction on how to use cases in teaching practice. Teaching cases should be piloted before being formally published. The symposium, case study SIG, and FEMA Higher Education Newsletter all offer opportunities for building a community of educators who could help with developing and piloting teaching cases.

¹⁴ Charles, M., Kim, J. (Eds). (1988). *Crisis Management: A Casebook*. Springfield, IL: Charles C. Thomas.

¹⁵ Haddow, G. (2004). *Case Studies in Emergency and Risk Management*. Emmitsburg, MD: Department of Homeland Security/FEMA.

¹⁶ Slick, J. (2016). *An exploration of the characteristics of case-based learning activities in disaster and emergency management post-secondary programs: What is and what might be*. ([Doctoral dissertation](#)). Retrieved from URL: <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0305799>

Case-based Research

Any field-based research that studies phenomena situated in real world contexts can be considered a case study,¹⁷ and thus much of the research conducted following disasters is a type of case study. Research case studies can have *instrumental* or *intrinsic* value, like the teaching case studies described above.¹⁸ Cases that have intrinsic value¹⁹ offer a unique opportunity for learning. For example, research conducted after the 9/11 event provided unique insight into how people and organizations adapted their response to deal with the impact and magnitude of this event.²⁰ Cases have instrumental value when they provide insight into how and why something occurs. While there are limits to generalizing from any one case, the insights developed through case studies have helped to dispel myths about human behavior and in understanding the kinds of prosocial behaviors that are common after disaster.²¹ Further, *comparative* case studies—which focus on examination of the same phenomenon across multiple contexts—provide an opportunity to validate previous findings, as well as extend knowledge about different phenomenon. For example, examination of the forms of online convergence following different types of disaster events sheds light on how social media is being used, as well as the constancy of motivations related to prosocial forms of behavior.²² The research questions for a case study will inform the methodological approach, which can be qualitative or quantitative, or use mixed methods.

Research case studies have value in the disaster and emergency management field. Major disasters are becoming more frequent and intense. If lessons from each event are not properly documented through research, the mistakes and successes from past disasters will not be passed on to others who have the capacity to improve disaster response in the future. As responders move on to the next disaster, vital details are lost that help us to make sense of what happened, identify challenges that arose, and suggest changes that need to be implemented. This challenge is especially acute in the US disaster management philosophy, which relies on temporary systems that are built and dismantled from event to event. Case-based research methods have also been used to formally investigate other dimensions of emergency management practice, such as preparedness and mitigation activities. Although there is a valid argument that we do not always systematically capture the lessons learned from practice, multiple research studies suggest that there is an ample body of literature available to help advance emergency management practice that is not being utilized. One of the limitations is that knowledge generated through research is not effectively translated in a way that is useful for implementing into practice.²³ Similarly, lessons from disaster operations can fail to be documented and later translated to needed policy, programmatic, and service delivery changes.

¹⁷ Yin, R. K. (2014). *Case study research: Design and methods*. Thousand Oaks, CA: Sage

¹⁸ Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

¹⁹ Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

²⁰ Wachtendorf, T. (2004). *Improvising 9/11: Organizational improvisation following the world trade center disaster* (Doctoral dissertation, University of Delaware).

²¹ Kendra & Wachtendorf. (2003). Reconsidering convergence and converger legitimacy in response to the world trade center disaster. *Research in Social Problems and Public Policy*, 11, 97-122.

²² Hughes, Palen, Sutton, Liu & Vieweg. (2008). “Site-Seeing” in disaster: An examination of online social convergence. Washington, DC: ISCRAM Proceedings.

²³ Weichselgartner, Juergen and Patrick Pigeon. 2015. “The Role of Knowledge in Disaster Risk Reduction.” *International Journal of Disaster Risk Science* 6(2):107-16. doi: 10.1007/s13753-015-0052-7.

To be useful, research case studies should be relevant to and document both current contexts and the historical trends and patterns of issues that have been recurrent in disasters over the years. Further, research findings must be translated into best practices, with recommendations from the research community for practitioners and other stakeholders provided in a usable format. Therefore, we are proposing a framework for a case study development process that is translational and scalable for multiple uses and end-users. To achieve these ends, a modification of the *Translational Research Theory*—tailored to emergency management—may be useful. *Translational Research Theory* is used in the medical field to translate research into clinical practice and policy. The framework focuses on three key components: *awareness*, *acceptance*, and *adoption*. To achieve effective translation, researchers envision a problem and then engage multidisciplinary teams centrally and locally to summarize the evidence, identify barriers, implement into practice, measure performance, and ensure policy is adopted.

Case study development should be collaborative and interdisciplinary to reflect the field of emergency management and the post-disaster context. The inclusion of both qualities allows space for more holistic learning and practice. Based on the ample amounts of past and current research, identifying relevant case study topics should reflect collaboration by FEMA with the research community. For each disaster, including the 2017 season, research is conducted with or without knowledge of the role of government and FEMA operations. Improved communication and coordination between researchers, practitioners, and government agencies involved in emergency management can help to translate existing and ongoing research to policy and practice more quickly, ultimately saving the lives and livelihoods of those most impacted by extreme events.

Furthermore, a network for ongoing research efforts could be developed along the lines of an online repository, virtual forum, or inter-collaborative website that includes all current emergency management projects that can benefit the emergency management community and be used to improve policy and practice.²⁴ The relationship between FEMA-desired research and concurrent research studies should be explored, with emphasis on evidence-based practice. In 2018, FEMA drafted, “A Proposed Research Agenda from the Emergency Management Academic and Research Community” that established five guiding principles and five research thrusts to help bridge the gap between research and practice in hazards, disasters, and emergency management. This report can help guide case study development and align new research projects with the broader goals of FEMA to increase evidence-informed action.

The primary purpose of research case studies is to generate new knowledge. Research cases can be used in teaching, where they are commonly assigned as readings, and they can also be adapted to support the development of best practices, by enhancing students’ *knowledge of* how to analyze a situation, solve problems, and make informed decisions.²⁵

Case Study Use in Policy and Practice

There is a long-standing practice in the emergency management field of generating reports following disasters to inform both policy and practice. These “after-action” reports, which often

²⁴ For an example, see the Natural Hazards Center SSEER/ISEEER platforms, which are being created to improve rapid reconnaissance research by identifying and mapping researchers and teams from a range of disciplines across the United States to better coordinate research projects in the event of a major disaster. <https://hazards.colorado.edu/research-projects/eager-interdisciplinary-and-social-science-extreme-events-reconnaissance>

²⁵ Vega, G. (2017). *The case writing workbook: a self-guided workshop*. Taylor & Francis.

differ in their foci across events, can be self-generated or produced by an external auditor or evaluator. Further, the reports can vary in terms of their purpose and approach, which can be to describe, analyze, or evaluate the response to an event.

After-action reports are a critical part of the FEMA response protocol. However, these reports are typically not written with the intention to serve as case studies. Rather, they are created to help assess what went right or wrong and what could be done better in similar situations in the future. Yet, after-action reports have the potential to inform the case development process and provide efficiencies in the collection and analysis of data. These reports could also be adapted for use in teaching. Given that many of the complex, or “wicked”²⁶ problems faced in practice have many good answers, but no right answer, reports can be used in a teaching context to generate thinking about alternative ways for dealing with specific situations.

A principal concern for disaster and emergency management practitioners is how to implement processes that promote learning and improve both policy and practice. In addition, operational reviews need to incorporate methods that help to distinguish when a practice is truly a success/improvement as opposed to a stop-gap or band-aid measure used because of a lack of standards, training, policy, and so forth. Case studies can be used to highlight successes, failures, recurring problems, and operational challenges. To gain the most benefit from the case method, institutional norms must be created and nurtured that encourage honest assessments and candid discussions of events when researchers or others are collecting narratives and descriptions of events, decisions, and contexts. The highest levels of leadership should be involved in this institutional development.

The best organizations have the inclination to look introspectively at their operations. A hallmark of High Reliability Organizations (HRO), for example, is unremitting candor in reflecting on procedures. HROs emphasize characteristics of mindfulness, where the goal is to be alert and actively thinking about operations and connecting those operations to improvement goals. HROs navigate contradictions: they pay close regard to procedures, but also close attention to whether the procedures are working.²⁷ The need for this kind of research was stated by Auf der Heide in his classic text.²⁸ He is blunt in his assessment, but time has not lessened the wisdom of his guidance: that organizations in disaster are themselves often too preoccupied with response to gather the kinds of data needed for strong analytical studies; that people on the ground may lack objectivity; that after-action reports can be justifications of what was done rather than vehicles for learning; and that individuals are often too focused on their own duties to have a comprehensive view of the response milieu.

Emergency management, as a professional field of practice, needs to place a higher value on research. Programs, models and frameworks identified through research should be implemented on smaller scales across local, state, tribal or territorial communities and regularly evaluated. Evaluation is crucial because it enables programs to be scrutinized, and errors to be fixed, to create the best possible plan for future practice. Given Auf der Heide’s critique above, there is likely tremendous value in partnering with researchers—who are not embedded in disaster response—to develop case studies, co-develop and/or review after action reports for authenticity, and recommend

²⁶ Rittel, HW, and Melvin M Webber (1973). “Planning Problems are Wicked.” *Polity* 4: 155–169.

²⁷ Weick, Karl E., Kathleen M. Sutcliffe, and David Obstfeld. 1999. Organizing for High Reliability: Processes of Collective Mindfulness. *Research in Organizational Behavior* 21: 81–123.

²⁸ Auf der Heide, E. (1989). *Disaster Response: Principles of Preparation and Coordination*. Retrieved June 6, 2013 from <http://www.coe-dmha.org/Media/DisasterResponsePrincipals.pdf>.

programmatic changes. If proven successful, those programs can be translated to national standards of practice and policy.

Despite considerable formal and informal research providing opportunities to learn from disaster, the policy environment for emergency management remains complex with significant implementation challenges. Emergency and disaster management is a large and diverse field of study which has implications for almost every aspect of daily life. Many policymakers engage with the field on a limited basis that may be restricted to certain geographical areas, groups of individuals, or programs of interest to a policymaker or policy interest community. Case studies can illuminate the need for policy and programmatic changes and underscore the complexity of the intergovernmental system and barriers for implementation.

Although case studies and after-action reports can be used to inform policy decisions, it is important to recognize that they are only one set of tools informing the broader disaster and emergency management policy debate. Case studies have the relative advantage of being research-based, politically agnostic, and interdisciplinary, and provide perspectives from multiple levels of government. However, cases must always be taken in context of the unique circumstances facing any emergency management practitioner or policymaker. While no two disasters are alike, the emergency management community should strive to learn from all disasters on a continuous basis.

Case Study Design and Development Considerations

Case design and development requires a collaborative approach between subject matter experts, instructional designers, and the numerous stakeholders who share their stories, help to identify needs, and define end users.

According to the focus group, case study development for emergency management ought to include the following considerations:

- Cases that are designed ethically with minimal impact to the communities where they are created
- Cases that improve the emergency management practice and profession
- Cases that build strong leadership and teamwork
- Cases that build cultural competency
- Cases that build and sustain community resilience
- Cases that teach the application of systems thinking in emergency management
- Cases that emphasize collaboration between practitioners and researchers, and translate the knowledge gained into improved practice
- Cases that can be readily applied and utilized by end users
- Cases that leverage the current workforce to support case development
- Cases that have multiple potential uses and users

In addition, the use of a clear case development process, with defined goals and metrics was considered important, as was the use of a standardized case format with associated guidance to support case development across the disaster lifecycle.

Case Study Development Program Model

Theory of Change

The Theory of Change (TOC) planning process has roots in program practice and the use of *program theory* in evaluation. It includes the use of logic models, which set out causal chains consisting of inputs, activities, outputs, and outcomes, coupled with long-term goals. It is a rigorous process whereby stakeholders identify the conditions they believe need to unfold for long term goals to be met.

The TOC process involves six stages:

1. Identify long-term goals
2. Map backwards to connect the root causes of a problem to the intended outcomes
3. Identify basic assumptions about the context
4. Identify interventions to create the desired change
5. Develop indicators to measure outcomes and assess program performance
6. Write a narrative to explain the logic of the program²⁹

For purposes of the proposed Case Study Development Process the following contextual factors were identified as important to future success:

- Cases should be grounded in current and emerging doctrine and philosophy, e.g., agency planning guidance, [FEMA core capabilities](#),³⁰ [core competencies](#),³¹ and [research agenda](#)³²
- Cases should reflect academic rigor and sound pedagogical approaches
- The process should help improve relationships between academicians and practitioners
- The process should maintain broad and sustained stakeholder engagement, e.g., potential informants for cases, case developers, and end users

Possible limiting factors or barriers to overcome include:

- Sustaining interest
- Competing priorities
- Coordination requirements
- Ethical considerations
- A culture of secrecy
- Organizational requirements for reviews or permissions

Implementation strategies to explore include:

- Creating a “strategic studies” environment

²⁹ [How Does Theory of Change Work?](http://www.theoryofchange.org/what-is-theory-of-change/how-does-theory-of-change-work/) (URL: <http://www.theoryofchange.org/what-is-theory-of-change/how-does-theory-of-change-work/>)

³⁰ URL: <https://www.fema.gov/core-capabilities>

³¹ URL: https://training.fema.gov/hiedu/docs/emcompetencies/final_%20ngcc_and_measures_aug2017.pdf

³² URL: [https://training.fema.gov/hiedu/docs/latest/2018_fema_research_agenda_final-508%20\(march%202018\).pdf](https://training.fema.gov/hiedu/docs/latest/2018_fema_research_agenda_final-508%20(march%202018).pdf)

- Leveraging the current workforce, previous students, and the broad disaster network to support case study development
- Establishing the Puerto Rico center as a “learning laboratory” for case study development
- Establishing a reservist category for faculty/embedded researchers in disaster operations

Figure 1: A Preliminary Logic Model for the Case Study Development Program

Program Context	Program Efficiency			Program Effectiveness
Current Situation Missed learning opportunities	Inputs	Activities	Outputs	Outcomes - Impact Intermediate ... Long-Term
Desired Vision Continuous learning Harness the wisdom of the collective Research-informed practice Pedagogically sound case development Adaptive, innovative emergency management Cutting-edge applications Bolster bringing science and experience to the practice domain	What we invest 1. A program “home” and resources to support case study development 2. Policies to guide development and establish priorities 3. Clear linkages to curriculum development process 4. Program coordination and buy-in	What we do 1. Collaborate on case development process and templates 2. Facilitate researcher access to disaster sites 3. Develop competencies in writing and using teaching cases 4. Build and maintain stakeholder engagement 5. Leverage all available resources	Goods & services produced 1. Cases! 2. Teaching notes, etc. 3. Case writing templates, training, and consultation 4. Clearinghouse exchange	What happens because of our activities? 1. Better systems thinking 2. Disaster risk reduction/resilience 3. Improved decision making 4. Better trained workforce and whole community 5. Individual and collective performance development 6. Reduced suffering from disaster 7. Improve learning process 8. Better connection to end users

Evaluation

To ensure academic rigor of the case studies process, a small evaluation team from Frostburg State University Doctor of Education Leadership Program, proposed the use of CIPP (Context, Input, Process, and Product) Evaluation Model Checklist developed by Dr. Daniel Stufflebeam³³. The CIPP model considers the context, inputs, process and products of a program or product with the objective of improving the evaluation³⁴. The evaluation team selected this context-grounded model, as contextual relevance is critical to the success of this practice-oriented process. The CIPP model incorporates long-term goals and is conducive to a formative evaluation. The team took care to ensure the evaluation design process responds to the program and implementation theory and can address potential failure points. This specific evaluation design aligns with the theory of change logic model informed by program and implementation theory to ensure that inputs and outputs result in the desired outcomes.

Context

The underlying concept of the CIPP Model and checklist are to assess the programs merit, worth, probity and significance with an eye toward improving the program. As stated, the hurricane season of 2017 was one that put the response and recovery operational capability of FEMA to the test. As a result, there has been great interest in capturing the relevant cases from this disaster in the form of academically rigorous case studies to inform education, training and decision making. Historically, researchers have been collecting data in disaster response and recovery environments for research and building research case studies, but much of this activity is separate from the actual disaster response and recovery operations and in most cases without mutual awareness. The coordination of these activities could potentially result in advances toward operational improvement. Further, additional case topics shared with researchers target case development in critically relevant areas for operational improvement.

The data collection and development of these cases may also be a desired opportunity for institutions of higher education in disaster affected areas. Leveraging these institutions could potentially boost economic recovery for the universities, faculty and students in these areas. This context begins to establish worth and significance of the process development and the program design and implementation will inform the merit and probity. As captured in this report, this case study development process is in an early stage. To date, one focus group of seventeen stakeholders representing academics, researchers, field operations, local institutions of higher education, emergency management practitioners and policy makers convened, and one webinar was held to share the findings of the focus group with a larger stakeholder audience of nearly 100 stakeholders.

³³ Stufflebeam, Daniel L., Shinkfield, Anthony J. Evaluation Theory, Models and Applications 1st Edition (2007) Jossey-Bass San Francisco, CA

³⁴ [CIPP Checklist](https://www.wmich.edu/sites/default/files/attachments/u350/2014/cippchecklist_mar07.pdf) (URL: https://www.wmich.edu/sites/default/files/attachments/u350/2014/cippchecklist_mar07.pdf)

Inputs

Within the input area of the CIPP evaluation design, the team used the theory for change logic model created by the focus group to better understand how they saw the systems inputs (See Figure 1). The team advocated for the use of the logic model's defined inputs, activities and outputs to begin to create input evaluation questions grounded in the focus group's defined "building blocks".

Critical Building Blocks: Are the critical elements of a case study development process that will need to be addressed to develop a sustainable program. There are six critical elements:

1. **Organization** – Which organization within FEMA will have responsibility for case studies? Will that be a coordinator, manager, or doer role? Which other organizations will need to participate (e.g., data collection, analysis, preparation, vetting, etc.) Will other external parties be involved? Which organization will initiate and coordinate outreach to local academic institutions? How will outreach with other off site academic institutions be managed? Who can best facilitate researcher access to disaster sites? Will there be a point of contact with authority to act on behalf of FEMA?
2. **Event and case selection** – How will events be selected to use for development of case studies? What criteria will be used to select case studies developed from a given event? How do curriculum needs inform event and case selection? How will the objectives for case studies be developed? Who will select case study candidates?
3. **Funding and resources** – Are there additional funding or resource requirements for the development of case studies? If yes, what are possible sources? What resources can be leveraged to support case study development? What capacity development is needed to support case study development?
4. **Standards** – What are the types of case studies that will be developed and produced? What are the criteria for these different types of cases studies? Are there standard formats for different types of cases? What common data sets can best contribute to the development of multi-use case studies? What will be considered a rigorous case study?
5. **Case preparation and approvals** – What organizational components will have responsibility for data collection, writing, and vetting? What ethical approvals are required? How will cases be tested or piloted? Who will review and authorize? Which functions should be delegated? What outside participants need to be engaged in the case development and piloting process (e.g., academia, community leaders, etc.)?
6. **Dissemination** – How will case studies be disseminated? Which case studies, if any, will be available publicly? Who decides?

Relevant FEMA offices who might contribute answers and insights for the above questions are reviewed in a later section.

Process

Understanding a program's theory of change provides a good foundation for evaluation design.³⁵ In mapping out the program theory in relationship to implementation theory, we more clearly see the program concept and inputs come to life as well as the relationship between processes and product outcomes. Figure 2 is an initial mapping of this case study development process. Assumptions for

³⁵ Weiss, Carol H. (1998, 1972). Chapter 3: Understanding the program. In Carol H. Weiss Evaluation: Methods for studying programs and policies.(2nd edition). (pp. 46-71), Upper Saddle River, NJ: Prentice-Hall.

this map include a trained case study coordinator (CSC) to facilitate the process and a minimum budget of \$100,000. The specialized training for the CSC may be provided by the FEMA Higher Education Program Case Study Special Interest Group (SIG). Questions to evaluate the process: How was the case study collection implemented? What was the response rate from participants? How were case studies grouped for use? How were the case studies applied to learning?

Figure 2: Implementation Theory & Program Theory-Case Study Development Process

Implementation Theory (program activities)		Program Theory (mechanisms of change)
Practitioners identify a case topic and publicize to academic research community via the FEMA case study coordinator (CSC)		Local Universities & other researchers hear about the topic and contact the CSC to support case development
CSC work with operational field staff to provide case orientation access, expectations and templates for case development.		Local universities and researchers participate in orientation and design a case study development research plan and budget to develop the case to submit to CSC
CSC reviews research plan and to assess if any current disaster workforce assets could support the plan. CSC conveys review findings to Field leadership and submitters		Local universities and researchers adjust their research plan if necessary to meet FEMA's needs and begin work on the building the case study
CSC maintains data on cases submitted, accepted and status of development.		Stakeholders have improved situational awareness of cases study development.
CSC reviews and accepts or works with researchers to address and support additional work needed to provide an acceptable case study.		Local universities and researchers now have a clear connection to FEMA field operations in disaster response & recovery to effectively contribute toward building case studies for workforce development and education.
CSC ensures the appropriate dissemination of completed case studies		FEMA, training providers and academic providers regularly use case studies in curricula and workforce are now better prepared to mitigate, respond and recover.
CSC grows stronger relationships with FEMA Higher Education and Continuous Improvement Programs and Universities to refine case study development process		Universities in high disaster risk areas begin to build up capabilities to support case identification and development prior to events occurring.

Product

As conveyed, the case studies collected by FEMA will be used in educational and training settings, for policy and program discussions, and to identify gaps in and potential changes to doctrine, plans, and programs. Case studies are valuable in many regards; particularly since case studies enable a researcher to employ multiple approaches when investigating a program or incident ensuring “the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed” (Baxter & Jack, p. 544)³⁶. Additionally, case studies allow researchers to “‘close in’ on real life situations and test views directly in relation to phenomena as they unfold in practice” (Flyvbjerg, p. 238)³⁷. For the students, case studies require a higher level of synthesis and application of new skills and knowledge. In addition, students are able to explore and take risks when working through responses to case studies.

However, it is not enough to simply gather a multitude of case studies and hope they are useful. Case studies require careful planning and consideration in order to ensure academic rigor and utility. The case studies must allow for students to react to “realistic situations such as dealing with incomplete information, time constraints, and conflicting goals (McFarlane, p. 2)³⁸. Furthermore, cases must be relevant and engaging for the students and “help to reinforce concepts and practice” (McFarlane, p. 4)³⁹. To evaluate the case studies, we intend to consider the following questions as established by the focus group.

Can the case study:

- Improve the emergency management practice and profession?
- Help build and sustain community resilience?
- Teach the application of systems thinking in emergency management?
- Emphasize collaboration between practitioners and researchers, and incorporate into practice the knowledge gained through research?
- Be readily applied and utilized by end users?
- Leverage the current workforce to support case development?
- Have multiple potential uses and users?

Findings of the CIPP Model evaluation may be useful to construct recommendations for process improvement of existing programs and practices and may also be used to initiate new offerings in response to newly discovered gaps in response and recovery. The next step for this formative evaluation design would be to take the program implementation and theory mapping to stakeholders, beginning with the FEMA leadership and Federal Coordinating Officer (FCO) cadre, to provide inputs and validate the map. This will reveal potential points of failure that can only be seen through the stakeholder’s perspective.

³⁶ Baxter, P. & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4) 544-559.

³⁷ Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry* 12(2), pp. 219-245). DOI: 10.1177/1077800405284363

³⁸ McFarlane, D. A. (2015). Guidelines for using case studies in the teaching-learning process. *College Quarterly*, 18(1) 6 pp. Retrieved from <https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ1070008>

³⁹ *ibid*

FEMA

The FEMA internal stakeholder group is broad, with significant expertise and experience to bring to the development of a formal program to develop case studies, and the needed research and relationships to support. What follows is a description of some of these key stakeholders.

Director's Office

FEMA's 2018-2022 Strategic Plan, published March 15, 2018, emphasizes Director Brock Long's plan to unify and further professionalize emergency management across the nation and invites the whole community to participate in embracing three main strategic goals. The strategic goals are focused on FEMA's vision – a prepared and resilient nation. These goals include:

1. Build a culture of preparedness
2. Ready the nation for catastrophic disasters
3. Reduce the complexity of FEMA

In addition, the strategic plan identifies twelve supporting strategic objectives. A FEMA case study development program would seem to directly support several of these objectives including:

- Better learn from past disasters, improve continuously, and innovate
- Organize the BEST (Build, Empower, Sustain, and Train) scalable and capable incident workforce
- Enhance intergovernmental coordination through FEMA Integration Teams
- Posture FEMA and the whole community to provide life-saving and life-sustaining commodities, equipment, and personnel from all available sources
- Improve continuity and resilient communication capacities
- Mature the Natural Disaster Recovery Framework

Well-developed case studies can provide learning opportunities that support key objectives to learn from past disasters that empower the workforce and support objectives that help achieve FEMA's vision. Key points identified within the Case Study Development Focus Group align with FEMA's recently adopted strategic plan and can create innovative opportunities that help achieve the three main strategic goals.

Higher Education Program

The primary goal of the FEMA Emergency Management Higher Education Program is to work with colleges and universities, emergency management professionals and stakeholder organizations to create a sustainable emergency management education system. This system collaborates to improve emergency management capability through formal education, experiential learning, research, practice and experience. Case study development assists in preparing the next-generation of emergency managers, developing training courses, improving teaching and student learning experiences, and documenting learning mechanisms towards sound practice in academia for future researchers.

Continuous Improvement Program

Ensuring continuous improvement involves a cycle of training, exercising, evaluating, and improving. FEMA identifies continuous improvement activities as conducting training of critical infrastructure security and resilience plans, policies, and procedures; conducting test exercises of plans, policies, and procedures; documenting lessons from tests and exercises; and, taking corrective action and adding or updating plans. Case studies offer learning opportunities from real cases that can continuously improve field operations for FEMA employees.

Workforce Management Division

FEMA's Workforce Management Division (WMD) supports operational readiness and execution of Field Operations achievable through the recruitment and development of personnel within each program area. Case studies allow evaluation of disasters cases to identify areas of improvement for workforce management and development of necessary training of personnel.

Workforce Development Division (WDD)

The mission of FEMA's Workforce Development Division is to develop, coordinate, resource, and execute training, education, experiential learning, and standard qualification processes to ensure the incident workforce is well prepared to support disaster survivors and first responders in all hazards events. The Division administers the FEMA qualification systems (FQS), coordinates course delivery and development requirements for the incident workforce in coordination with the cadres, and leads initiatives related to expeditionary workforce efforts. The FEMA Incident Workforce Academy, part of WDD, coordinates and executes the delivery of all individual, team, and collective incident workforce training. Considering the magnitude of disasters, and various roles of FEMA personnel, well-developed case studies offer opportunities for learning that can highlight incident management activities from a FEMA perspective that improves coursework and training.

Emergency Management Institute (EMI)

EMI analyzes the training needs of and designs curriculum for a wide variety of emergency management professionals and those who contribute to all aspects of disaster prevention, preparedness, mitigation, response and recovery. EMI develops and delivers emergency management training to enhance the capabilities of state, local, tribal and territorial government officials; volunteer organizations; other Federal agencies; and the public and private sectors to minimize the impact of disasters and emergencies on the American public. EMI curricula are structured to meet the needs of this diverse audience with an emphasis on separate organizations working together in all-hazards emergencies. While EMI builds case studies into many of its courses, the Institute could certainly contribute to and benefit from a more rigorous, standardized approach to the collection, design and development of case studies.

Center for Domestic Preparedness

The Center for Domestic Preparedness (CDP) identifies, develops, tests, and delivers training to state, local, and tribal emergency responders to ensure an emergency response community that is prepared for and capable of responding to all-hazard events. Relevant course work is offered for a wide variety of personnel including police, fire, healthcare, EMS, EM, public health, and so forth. A formal case-study development process could assist with improvements to course delivery and training to help improve capabilities of responders.

The Disaster Research Community

The disaster research community consists of a broad interdisciplinary network of researchers in the social, engineering, and policy sciences as well as a growing research interest in some areas of the humanities, such as history. This network is characterized by several research centers as well as interdisciplinary degree programs in disaster science, emergency management, public health, crisis management, business continuity planning, homeland security, and other fields. A few academic disciplines have substantial disaster subfields (e.g., geography, sociology, political science, public health, public administration, anthropology, psychology) and, indeed, disaster-related topics connect with all areas of human knowledge.

[Natural Hazards Center](#)⁴⁰ (University of Colorado Boulder)

The Natural Hazards Center at the University of Colorado Boulder was founded in 1976 and is the one academic center in the nation dedicated to linking researchers, practitioners, and policy makers to reduce the harm from disasters. A primary goal of the Hazards Center is to share and advance social science and interdisciplinary knowledge, with a special emphasis on the most vulnerable populations and places. The Hazards Center has many research products that can be utilized to help foster the development of a case study framework and research agenda including, but not limited to:

- [Disaster Research: News You Can Use!](https://hazards.colorado.edu/disaster-research/index) URL: <https://hazards.colorado.edu/disaster-research/index>
- [Research Counts](https://hazards.colorado.edu/news/research-counts) URL: <https://hazards.colorado.edu/news/research-counts>
- [New Reads](https://hazards.colorado.edu/library/new-reads) URL: <https://hazards.colorado.edu/library/new-reads>
- [Quick Response Grant Program](https://hazards.colorado.edu/research/quick-response) URL: <https://hazards.colorado.edu/research/quick-response>
- Social Science Extreme Events Reconnaissance (SSEER) and Interdisciplinary Science and Engineering Extreme Events Reconnaissance (ISEER) platforms⁴¹
- [Additional projects](https://hazards.colorado.edu/research-projects/index) can be found here URL: <https://hazards.colorado.edu/research-projects/index>

⁴⁰ <https://hazards.colorado.edu/>; <https://www.facebook.com/hazcenter>; <https://twitter.com/HazCenter>

⁴¹ SSEER and ISEER are in the process of being created to help identify and map researchers and research teams across disciplines to improve coordination of extreme events reconnaissance research.

[Disaster Research Center](#)⁴² (University of Delaware)

The Disaster Research Center (DRC), founded in 1963, was the first center in the world devoted to the social science and management aspects of disasters. It also has the E.L. Quarantelli Resource Collection of disaster-related books, periodicals, consultant reports, and other rare or hard-to-find items, now numbering about 120,000 titles. In the past half-century, DRC researchers have conducted some 700 quick-response field studies as well as numerous longer-term projects. Research reports, preliminary papers, project reports, and other publications are also available online through the University of Delaware Online Repository. DRC regularly attracts visitors from around the world who arrive to work with the faculty, use the library or work with its archive of disaster-related data. DRC's core and affiliated faculty are highly interdisciplinary, hailing from geography, sociology, civil engineering, environmental policy, political science, English, and history. Recent research projects have focused on such topics as post-disaster improvisation and crisis management; humanitarian logistics; warning and evacuation; nursing home emergency preparedness; and community resilience and recovery. DRC faculty frequently work with emergency officials at various levels of government.

Scholarship of Teaching and Learning (SoTL)

Boyer's⁴³ seminal text, *Scholarship Reconsidered: Priorities of the Professoriate*, both recognized and heralded the scholarship of teaching as one of four types of scholarly inquiry; the other three types are scholarship of discovery, integration, and application. Over time, the term scholarship of teaching was adapted to include the word learning. Further, disciplinary distinctions in SoTL practice have been recognized, with these practices often reflecting the forms of inquiry used in a discipline or field of study.⁴⁴ Journals dedicated to SoTL inquiry now exist in many established disciplines and this demonstrates the value placed on this form of scholarship within a given field of study. While much SoTL practice is based on inquiry into teaching and learning in one's own classroom, SoTL work has also started to explore the construct of signature pedagogies within both traditional disciplines as well as professionally oriented programs of study.⁴⁵ The recent establishment of a SoTL SIG by FEMA will help to bring together scholars who have an interest in advancing teaching practices in the emergency management field.

⁴² URL: <https://www.drc.udel.edu/>; <https://www.facebook.com/disasterresearchcenter>; <https://twitter.com/udeldrc>

⁴³ Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

⁴⁴ Huber, M. T., & Morreale, S. P. (Eds.). (2002). *Disciplinary styles in the scholarship of teaching and learning: Exploring common ground*. Merrifield, VA: Carnegie Foundation for the Advancement of Teaching & American Association for Higher Education.

⁴⁵ Chick, N. L., Haynie, A., & Gurung, R. A. R. (Eds.). (2012). *Exploring more signature pedagogies: Approaches to teaching disciplinary habits of mind*. Sterling, VA: Stylus.

Path Forward

The first step in a path forward for this initiative is to collaborate with academics in Puerto Rico in the development of a Center of Excellence. This will include establishing a process for generating case studies based on Hurricane Maria. The FEMA Higher Education Program network and the Case Teaching and Learning SIG offer considerable expertise and potential resources to support these efforts.

Case studies from Hurricanes Harvey and Irma should also be developed and collected for use in training, education, and policy making. Case studies can examine a variety of processes, such as missions by government agencies or the efforts of residents and local organizations to serve as community responders and in rebuilding their communities. While emphasis should be placed on learning from large events in which unique challenges are faced, case studies from smaller events in different contexts can also provide valuable learning opportunities.

Research to inform case studies can be conducted immediately after hazard impact or over the longer term to study recovery using both primary and secondary data sources. There is a long tradition of quick response research following disasters. One value of this early field research is that it provides the opportunity for gathering perishable data as the response and recovery is unfolding so researchers can observe and document early individual, institutional, and community-based processes for decision making, barriers to action, and problem-solving in real-time. If field teams arrive later, they may not be able to collect data on the initial impacts, damages, and population migration as debris will have begun to be removed, evacuation shelters change or close as community members find alternative living arrangements, and many of the critical decisions about response and recovery will already have been made. However, there is still much to learn long after the initial response period and case studies should be developed to document the long-term and sustained efforts that go in to helping a community recover from disaster. Data for case study development can be qualitative, quantitative, or use mixed methods and researchers should employ rigorous and sound case study methodology. Any researchers entering a post-disaster context to develop case studies should be well-versed in research ethics and cultural competency to protect participants and gain Institutional Review Board Approval from their institution prior to entering the field. Teaching case studies can also be developed using only secondary data (e.g., media reports, situation reports), which while plentiful, has inherent limitations and biases.

Additional attention is needed to determine how best to focus attention on the needed processes to build case studies for other disasters. Questions to support the development of a robust case study development process have been posed to guide discussions about the way forward. Each of the different stakeholder groups participating in the focus group have resources that can be leveraged as the case study development process is further refined. For example, the SIG can help with an overall pedagogical theoretical framework and design templates, and the disaster research community can help in the development of standards for rigorous case studies. Further discussions are needed with the Puerto Rico teams participating in the case study development process to help design the approach to the pilot and to identify the supports that are required.

Appendix A

List of Attendees

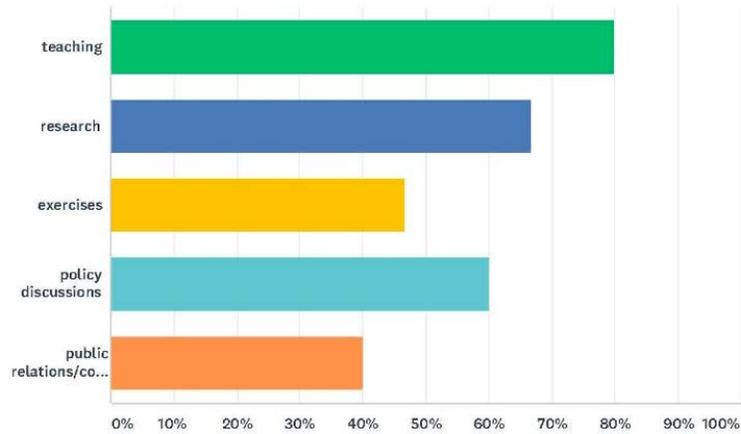
NAME	INSTITUTION
Dr. Jane Kushma (Chair)	Jacksonville State University
Antoine Richards	Jacksonville State University
Dr. Jean Slick	Royal Roads University
Dr. Jim Kendra	Disaster Research Center/ University of Delaware
Gary Glickman	National Academy of Public Administration
Libby Turner	FEMA- Federal Coordinating Officer
Jennifer Tobin	Natural Hazards Center/ University of Colorado
Wendy Walsh	FEMA- Higher Education Program
Lanita Lloyd	Salvation Army/ IAEM
Jonathan Gaddy	Calhoun County (AL) EMA
Richard Johnson	FEMA- Workforce Development Division
Dorian Chapman	FEMA- FEMA Incident Workforce Academy
Dr. Jenniffer Santos-Hernandez	University of Puerto Rico
Norma Pena Rivera	University of Puerto Rico
Gustavo Garcia	University of Puerto Rico
Dianne Walbrecker	FEMA- Emergency Management Institute
Tony Russell	FEMA- Center for Domestic Preparedness
Dr. Jean Slick	Royal Roads University
Rick Dickson	FEMA- Workforce Development Division

Appendix B

Survey Results

Q1 I have used cases or case studies in the following ways (select all that apply):

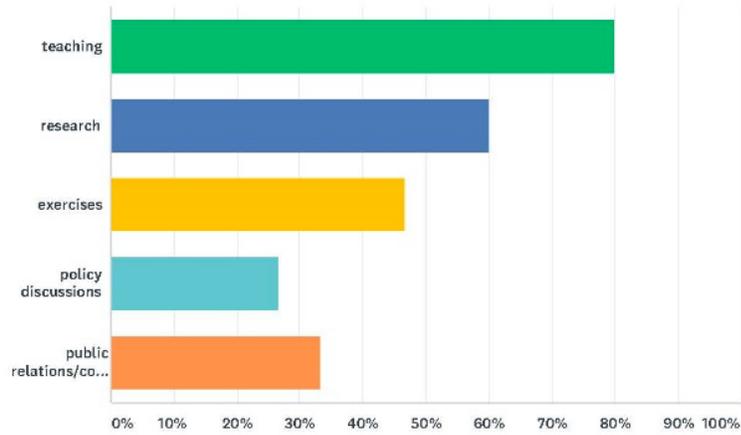
Answered: 15 Skipped: 0



ANSWER CHOICES	RESPONSES
teaching	80.00% 12
research	66.67% 10
exercises	46.67% 7
policy discussions	60.00% 9
public relations/communications	40.00% 6
Total Respondents: 15	

**Q2 I have developed cases or case studies for the following reasons
(select all that apply):**

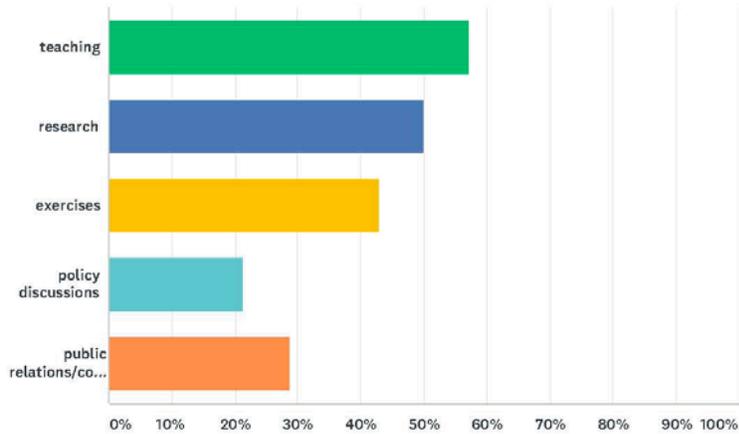
Answered: 15 Skipped: 0



ANSWER CHOICES	RESPONSES	
teaching	80.00%	12
research	60.00%	9
exercises	46.67%	7
policy discussions	26.67%	4
public relations/communications	33.33%	5
Total Respondents: 15		

Q3 I have been the subject of or subject matter expert for a case or case study for the following reasons (select all that apply):

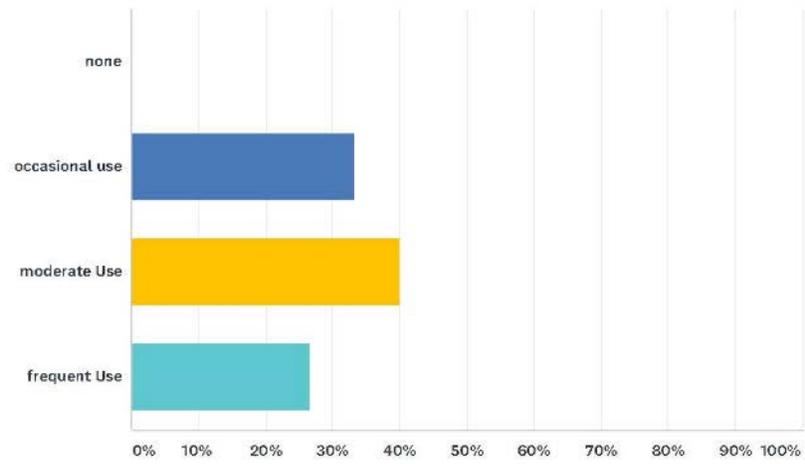
Answered: 14 Skipped: 1



ANSWER CHOICES	RESPONSES	
teaching	57.14%	8
research	50.00%	7
exercises	42.86%	6
policy discussions	21.43%	3
public relations/communications	28.57%	4
Total Respondents: 14		

Q4 I would describe my use of cases/case studies as follows:

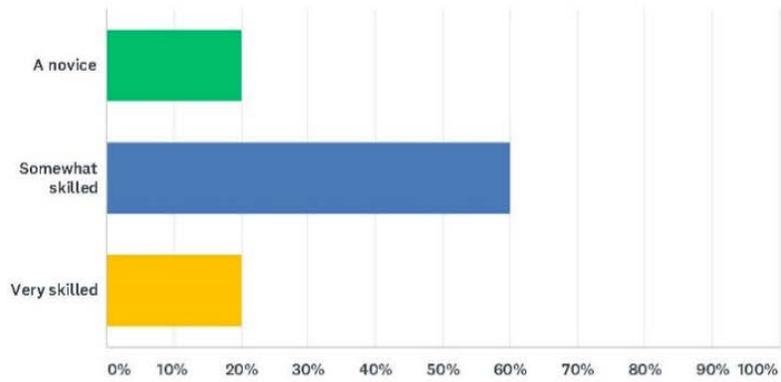
Answered: 15 Skipped: 0



ANSWER CHOICES	RESPONSES	
none	0.00%	0
occasional use	33.33%	5
moderate Use	40.00%	6
frequent Use	26.67%	4
TOTAL		15

Q5 With respect to the use of cases/case studies, I consider myself:

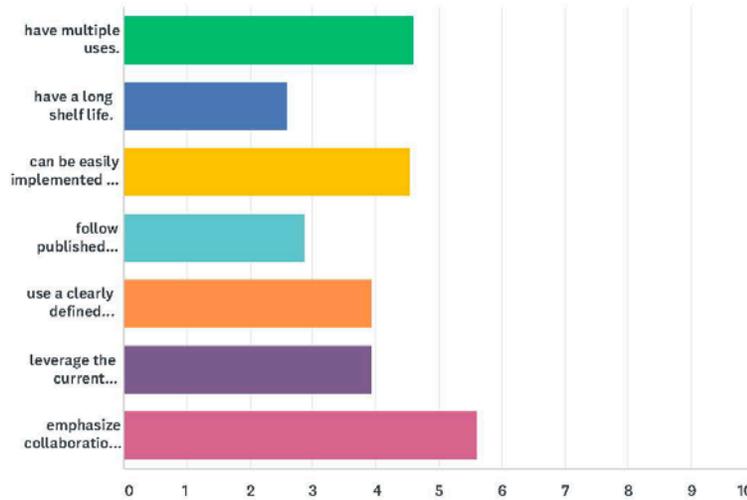
Answered: 15 Skipped: 0



ANSWER CHOICES	RESPONSES	
A novice	20.00%	3
Somewhat skilled	60.00%	9
Very skilled	20.00%	3
TOTAL		15

Q6 In my opinion, FEMA would have the greatest "return on investment" by developing cases that (please rank in order of importance

Answered: 15 Skipped: 0



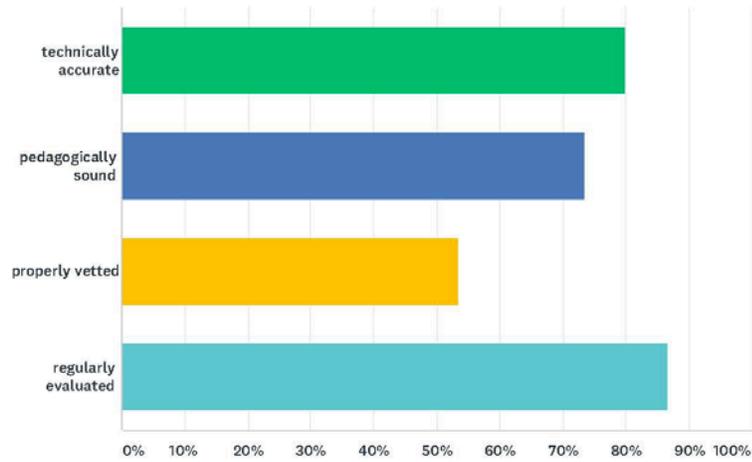
	1	2	3	4	5	6	7	N/A	TOTAL	SCORE
have multiple uses.	33.33% 5	20.00% 3	0.00% 0	6.67% 1	13.33% 2	13.33% 2	13.33% 2	0.00% 0	15	4.60
have a long shelf life.	0.00% 0	6.67% 1	0.00% 0	26.67% 4	13.33% 2	20.00% 3	33.33% 5	0.00% 0	15	2.60
can be easily implemented by end users.	13.33% 2	13.33% 2	26.67% 4	26.67% 4	0.00% 0	20.00% 3	0.00% 0	0.00% 0	15	4.53
follow published guidance and a standardized format.	0.00% 0	6.67% 1	13.33% 2	13.33% 2	20.00% 3	20.00% 3	26.67% 4	0.00% 0	15	2.87
use a clearly defined development process.	13.33% 2	13.33% 2	13.33% 2	6.67% 1	26.67% 4	20.00% 3	6.67% 1	0.00% 0	15	3.93
leverage the current workforce to support case development.	7.14% 1	14.29% 2	28.57% 4	14.29% 2	7.14% 1	7.14% 1	21.43% 3	0.00% 0	14	3.93
emphasize collaboration between practitioners and academics.	33.33% 5	26.67% 4	20.00% 3	6.67% 1	13.33% 2	0.00% 0	0.00% 0	0.00% 0	15	5.60

Graphic description

Q6-In my opinion, FEMA would have the greatest “return on investment” by developing cases that (please rank in order of importance): have multiple uses-4.60, have a long shelf life-2.60, can be easily implemented by end user-4.53, follow published guidance and standardized format-2.87, use a clearly defined development process-3.93, leverage the current workforce to support case development-3.93, emphasize collaboration between practitioners and academics-5.60.

Q7 It is important that cases are (select all that apply):

Answered: 15 Skipped: 0



ANSWER CHOICES	RESPONSES	
technically accurate	80.00%	12
pedagogically sound	73.33%	11
properly vetted	53.33%	8
regularly evaluated	86.67%	13
Total Respondents: 15		

Appendix C

Meeting Agenda

FEMA Case Study Development Process Focus Group Agenda

February 6-7, 2018 8:30 AM-5:00 PM (CST) 10:30 AM-7:00 PM (PR)

Center for Domestic Preparedness- 61 Responder Dr, Anniston, AL 36205

Participating: *Dr. Jane Kushma, Antoine Richards, Dr. Jean Slick, Libby Turner, Dr. Jim Kendra, Jennifer Tobin, Gary Glickman, Dorian Chapman, Tony Russell, Carmen Concepcion Rodriguez, Rick Johnson, Debra Schneck, Dianne Walbrecker, Lanita Lloyd, Jonathan Gaddy and Wendy Walsh*

Purpose: To bring together the emergency management academic and practitioner case study development and use experts to discern a case study development process that will be tested and implemented in disaster prevention, preparedness, mitigation, response and recovery activities. These cases will be used for training, workforce development, senior-leader training and education of the next generation emergency managers. They may also inform and influence the development and revision of policy and doctrine.

Case for the Case: Cases are stories that are used as a teaching tools. They provide a rich environment for critical thinking and problem solving. We can link case examples to specific concepts we want users to understand or to specific skills we want them to acquire. We can also use cases to highlight professionalism, ethical dilemmas, and cultural sensitivity. Cases can help users develop professional competency in analysis, strategy development, and decision making. Cases provide “contextualized” learning that actively engages users. One case teacher has called the use of cases an “intellectual acceleration chamber.” Case studies are also used in research, and have been particularly useful for studying innovation, evaluating programs and program elements, and informing policy.

Preparation & Materials Provided:

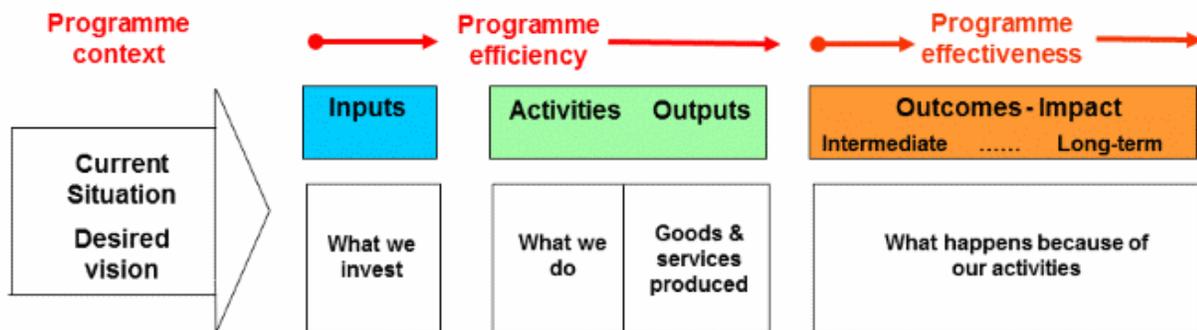
1. Complete a brief survey by February 1st: (survey link)
2. Review material provided to familiarize with the variety of case study types and uses. (material links)
3. Make a little time to reflect on the “questions to ponder” in the box to the right.
4. Send any other resources to share with the group to Barbara Johnson by February 1st for dissemination prior to our meeting.

Questions to Ponder

- What measurable ways do case studies help the EM workforce develop and improve practice?
- What are the current resources and efforts (FEMA Reservist, FEMA Corps, EM Students, EM Faculty, Researchers...) that could be leveraged for case study development?
- What will be the biggest process challenge?
- What is the most impactful thing we can do to guarantee our best chance of a success in creating and implementing a case study process during disaster operations?

Goals:

- Participants will review and provide a summary of the current case study types and uses to convey the value of case studies to support EM workforce development and performance in a variety of settings as well as the potential impact on policy and doctrine.
- Participants will explore and detail the case study types (description, evaluation, decision-focusing, research...) as applicable to disaster environments, discuss approaches and share case study design and development tools to serve emergency management.
- Participants will assist in the development a draft process for building case studies for training and education, leveraging existing FEMA, state, local, tribal, territorial, private-sector, academic and non-governmental organizations, during disaster response and recovery environments. This process will also include a deliberate process for disseminating cases to end users. A summary report of this process will be completed under the leadership of the Higher Education Program Case Study Special Interest group within 30 days.
- Participants will support the sharing of this work in a webinar to elicit additional feedback and to reveal additional program partners. This webinar is tentatively scheduled for April 10, 2018.
- Participants will continue collaborating as needed to develop and adopt the developed process and standards of practices. Documents outlining this will be posted to the FEMA Higher Education Program website and participants will assist in wide-community dissemination to ensure the process and resulting cases are conveyed to end-users



<http://learningforsustainability.net/theory-of-change/>

Agenda - Day 1

8:30 - Welcome, icebreaker, and sharing thoughts on questions to ponder.

9:30 - Purpose of the focus group, review and reaction to the survey questions.

10:30 - Break

10:45 - A model and theory to guide our process discovery-

- Galbraith's Star Model
- Systems thinking & Theory of Change

11:30 - Lunch

12:30 - Continue Theory discussion- dive deeper-

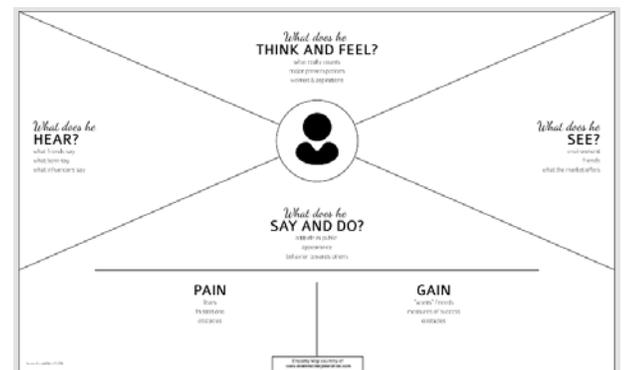
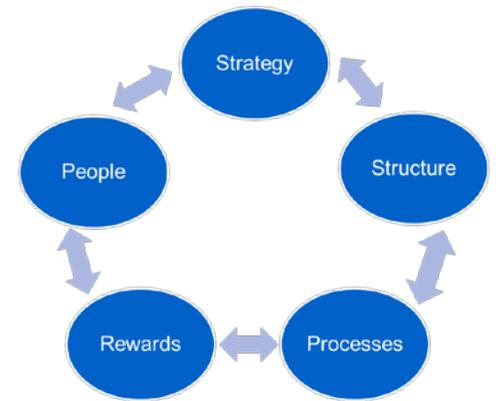
- Theory of Change-
- Logic model beginning with desired outcomes
- Context- stakeholder identification & empathy maps
- Surfacing underlying assumptions

2:30 - Break

3:00 - What ways can we further the development and sustainment of this process?

4:30 - Capture the day's thoughts and remaining items to discuss on day 2.

5:00 - Adjourn



Agenda - Day 2

8:30 - What percolated overnight? Any epiphanies or breakthroughs to share?

9:00 - What are the challenges to completing an implementable case study process

10:30 - Break

10:45 - Revisit our desired outcomes- Are we closer?

11:30 - Lunch

12:30 - What is next? What questions and inquiries have we left unanswered? Opportunities?

- Role for FEMA, for Higher Education Program, EM academic community, research community, EM practitioners...
- Role for ???

2:30 - Break

3:00 - Capture discussion create plan for deliverables and draft distribution plan for review, comments and edits. Commitments to complete process report, webinar, and dissemination.

- FEMA Proposed Case Study Process Focus Group Draft- 30-working days post FG- due March 21, 2018
- FEMA Proposed Case Study Process Focus Group Draft for comments due March 28, 2018
- Final FEMA Proposed Case Study Process Focus Group Document delivered April 4, 2018
- FEMA Higher Education to discuss webinar- scheduled for April 10, 2018

5:00 - Celebrate