

# Urban challenges and opportunities for FEMA during the Trump administration

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27 January 2017

The Federal Emergency Management Agency (FEMA) has responsibilities for urban risk management in cooperation with States and municipalities. This document suggests eight principles FEMA employs or at least attempts to employ for urban risk management in light of the possible policy changes during the tenure of the new administration. Some policy decisions have the potential to affect disaster risk in the United States and have direct and indirect impacts on FEMA's operations in urban spaces. For instance, reductions in public entitlement programs can increase vulnerability and reduce capacities to cope and to recover among the poorest and most marginalized urban residents. Relaxed environmental regulation can intensify hazards and cascading hazard impacts. Policies based on denial of climate science will likely accelerate the impact of climate-related hazards in some highly exposed urban areas within the administration's four-year term. Devolving risk management more fully to state level can make it more difficult to manage trans-boundary risks. Privatizing prevention, response, and recovery can make it more difficult for the poor to access the services they need. Blocking federal funding to Sanctuary Cities can reduce their ability to manage emergencies effectively. Xenophobic rhetoric and aggressive pursuit of an anti-immigrant policy will likely drive undocumented residents 'underground' and make them less accessible to care providers in cities and reduce illegals' participation in emergency preparedness programs.

FEMA needs to structure its approach to urban disaster risk management in a way that protects established good practices and addresses changing risks. This document presents a vision of FEMA's role in urban risk management under the new administration. It first outlines FEMA's responsibility for local risk management. It then describes eight principles for good urban risk management, explaining why those principles are important, how they can be employed, and giving positive and negative examples to illustrate.

Good urban risk management must be delivered in a way that is

1. Needs based;
2. Mitigation centered;
3. Addresses root causes;
4. Prevents disaster risk creation;
5. Ensures inclusiveness;
6. Works across levels and sectors in a decentralized, comprehensive and coordinated way;

7. Acknowledges capacity, knowledge and skill at all scales, especially the local; and
8. Technically proficient.

There are cases where FEMA is already delivering risk management in cooperation with municipal and state authorities and civil society organizations in these ways. These are highlighted. In others, it represents a new direction in which the organization should move, especially in response to possible high level policy changes under the new administration and the consequences of these policies, both intended and unintended.

Policymakers, practitioners, and others working on disaster mitigation and response can use these principles as a guide for focusing and structuring programs to better engage in urban risk management and to avoid roll-back of positive achievements and need-focused and inclusive working methods.

## FEMA's current responsibilities for urban disaster risk management

FEMA's vision of urban risk management can be understood through a review of a number of documents including Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-288)<sup>1</sup>, the federal law that provides FEMA's authority to intervene in emergencies; *Publication 1*<sup>2</sup>, FEMA's capstone doctrine; *A Whole Community Approach to Emergency Management*<sup>3</sup>, which outlines how FEMA should engage with individuals and communities; the *Draft Interagency Concept for Community Resilience Indicators and National-Level Measures*<sup>4</sup>, which provides an overview of how the organization currently conceptualizes resilience; and *Crisis Response and Disaster Resilience 2030*<sup>5</sup>, a document exploring trends in disaster risk management.

FEMA defines its overall mission as "to support our citizens and first responders to ensure that as a Nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards". To do this it works across the disaster cycle, and has specific Preparedness, Protection, Response, Recovery, and Mitigation mission areas with associated departments. While some of FEMA's activities are designed as part of state and national level risk management, FEMA also has commitments at local level, which is defined in the *Stafford Act* (p2) to include municipalities, cities, and towns. For example, FEMA supports Community Emergency Response Teams, citizen volunteer teams that function as first responders to major disasters<sup>6</sup>, provides certain property owners the ability to purchase insurance through the National Flood Insurance Program<sup>7</sup>, and through the Pre-Disaster Mitigation Grant Program<sup>8</sup> provides grants to communities to implement natural hazard mitigation activities. As seen in its *Whole Community Approach to Emergency Management* FEMA also understands that individuals and communities have different risk profiles based on their unique vulnerabilities, capacities, and exposure to hazards and acknowledges that it needs

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<sup>1</sup> [https://www.fema.gov/media-library-data/1383153669955-21f970b19e8eaa67087b7da9f4af706e/stafford\\_act\\_booklet\\_042213\\_508e.pdf](https://www.fema.gov/media-library-data/1383153669955-21f970b19e8eaa67087b7da9f4af706e/stafford_act_booklet_042213_508e.pdf)

<sup>2</sup> [https://www.fema.gov/media-library-data/1462196227387-c10c40e585223d22e2595001e50f1e5c/Pub1\\_04-07.pdf](https://www.fema.gov/media-library-data/1462196227387-c10c40e585223d22e2595001e50f1e5c/Pub1_04-07.pdf)

<sup>3</sup> [https://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole\\_community\\_dec2011\\_2\\_.pdf](https://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole_community_dec2011_2_.pdf)

<sup>4</sup> [https://www.fema.gov/media-library-data/1466085676217-a14e229a461adfa574a5d03041a6297c/FEMA-CRI-Draft-Concept-Paper-508\\_Jun\\_2016.pdf](https://www.fema.gov/media-library-data/1466085676217-a14e229a461adfa574a5d03041a6297c/FEMA-CRI-Draft-Concept-Paper-508_Jun_2016.pdf)

<sup>5</sup> [https://www.fema.gov/media-library-data/20130726-1816-25045-5167/sfi\\_report\\_13.jan.2012\\_final.docx.pdf](https://www.fema.gov/media-library-data/20130726-1816-25045-5167/sfi_report_13.jan.2012_final.docx.pdf)

<sup>6</sup> <https://www.fema.gov/about-community-emergency-response-team>

<sup>7</sup> [https://www.floodsmart.gov/floodsmart/pages/about/nfip\\_overview.jsp](https://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp)

<sup>8</sup> <https://www.fema.gov/pre-disaster-mitigation-grant-program>

to adapt its approach in light of these differences. Faith-based organizations must obviously be an integral part of such a *Whole Community Approach*; however, if the new administration fails to build trust among Muslims in the US and among Christians committed to supporting a Sanctuary Movement, FEMA's efforts could be weakened.

## The eight principles for good local risk management

A large amount of knowledge and experience of disaster risk management has accumulated over the past 40 years to the point where it is safe to say that today we have a good sense of how to effectively manage disaster risk<sup>9</sup>. Indeed, one can extract from this experience eight overarching good practices that FEMA attempts to various degrees to employ in its risk management activities in urban areas.

### 1. Needs based

Resources for disaster risk management must be allocated based on need—specifically the needs of those most at risk—not on other factors like political or economic expediency or media salience. As part of this it is important to focus on the hazards that represent the greatest risks, and deliver aid in ways that addresses those with the greatest needs. Special attention needs to continue to be focused how race, gender, age and disability intersect with socio-economic class in determining need.

FEMA must focus on the hazards with the greatest impacts. When FEMA was initially incorporated into the Department of Homeland Security, it had only minimal financial and organizational resources to address natural disaster risks. Instead, resources were focused on addressing terrorism. This lack of resources contributed to FEMA's poor response to Hurricane Katrina.<sup>10</sup> In response to this Congress passed the *Post-Katrina Emergency Management Reform Act* in 2006 to restructure FEMA. While FEMA's ability to manage risk has since improved — the organization was widely commended for its response to hurricane Sandy in 2012<sup>11</sup> — budgets are today still focused disproportionately on security.<sup>12</sup> Rather than further rebalancing the DHS budget so that FEMA is better able to work on reduction of risk from 'normal' natural hazards, it is possible that the new administration will skew funding yet further toward issues of undocumented immigration and security.

FEMA must also operate in ways that recognize that some people have more needs than others depending on their socio-economic position, access to resources and support – all important elements defining levels of vulnerability and resilience. At this writing, FEMA

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<sup>9</sup> See e.g. Mileti, D. (1999). *Disasters by design: A reassessment of natural hazards in the United States*. Joseph Henry Press.; Wisner, B., Blaikie, P., Cannon, T., Davis, I. (2004). *At risk: natural hazards, people's vulnerability and disasters*. 2<sup>nd</sup> ed., Routledge; Weick, K. and Sutcliffe, K. (2007). *Managing the Unexpected: Resilient Performance in an Age of Uncertainty*. 2<sup>nd</sup> ed. Jossey-Bass; Perrow, C. (2011). *The Next Catastrophe*, Part 2. Princeton; Tierney, K. (2014). *The social roots of risk: Producing disasters, promoting resilience*. Stanford University Press.; Wisner, B., Gaillard, JC, Kelman, I., eds (2012). *The Routledge Handbook of Hazards and Disaster Risk Reduction*. Routledge. Publishers.

<sup>10</sup> The Federal Response to Hurricane Katrina: Lessons Learned  
<https://www.uscg.mil/history/katrina/docs/KatrinaLessonsLearnedWHreport.pdf>

<sup>11</sup> [https://www.washingtonpost.com/politics/decision2012/officials-and-experts-praising-fema-for-its-response-to-hurricane-sandy/2012/11/01/7a6629d8-2447-11e2-ac85-e669876c6a24\\_story.html?utm\\_term=.4d0d946ebd6a](https://www.washingtonpost.com/politics/decision2012/officials-and-experts-praising-fema-for-its-response-to-hurricane-sandy/2012/11/01/7a6629d8-2447-11e2-ac85-e669876c6a24_story.html?utm_term=.4d0d946ebd6a)

<sup>12</sup> <https://www.dhs.gov/sites/default/files/publications/FY2017BIB.pdf>

requires a Benefit Cost Analysis (BCA) for its Hazard Mitigation Assistance grants<sup>13</sup>. BCA is an important tool for determining intervention cost effectiveness, but does not measure cost effectiveness from the perspective that the loss of the same assets would have a much larger impact on the poor than the rich, but instead treats impact the same across populations. Unless the BCA is adjusted for social need, it is not a needs-based approach. The government of the United Kingdom, on the other hand, assesses the cost effectiveness of its impacts according to the ‘relative prosperity’ of individuals, understanding that as income grows, satisfaction from an additional unit of consumption declines<sup>14</sup>. Another example is how a social vulnerability index was used in South Carolina (also in Louisiana, and West Virginia) during floods as an apolitical way to determine where recovery resources could best be used based on the most vulnerable with the most damage.<sup>15</sup>

Two possible moves by the new administration are likely to affect continued improvement of FEMA’s need-based approach. First, anti-entitlement, anti-welfare attitudes may stand in the way of adding social weighting to its BCA approach. Second, in the face of likely budget pressure produced by a huge reduction in corporate tax rates, the whole of the Hazard Mitigation Assistance grant program may be cut or shifted as an unfunded mandate to state governments.

The administration is also likely to increase privatization and outsourcing of FEMA services. Privatization often leaves those with fewer economic and political resources and the confidence and ability to demand entitlements at a distinct disadvantage.<sup>16</sup> Private companies seek to minimize their costs as part of maximizing their profits, so will develop programs in ways that do not cover those with the greatest needs. Efforts to increase privatization may result in correspondingly larger numbers of people excluded and rendered invisible, undercutting needs based assistance. FEMA and other government agencies have developed skill and commitment to monitoring the performance of private contractors with vigilance since Hurricane Katrina. There may be budgetary or political pressure on them to relax their scrutiny as part of the overall administrations anti-regulatory stance.

Much can be learned from FEMA’s past experience with response and recovery, for example, following Hurricane Katrina in 2005 and the repeated flooding (e.g. 1986 & 2017) of the Russian River in northern California. There are structural barriers for the poorest and most marginal people to access some kinds of FEMA assistance. To begin with many people do not have flood insurance.<sup>17</sup> People who do not have the means to obtain a professional damage assessment may not be able to apply for a FEMA buy out. Poorer and more marginalized families find it difficult to navigate FEMA’s complex bureaucracy to receive post-disaster assistance.<sup>18</sup>

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<sup>13</sup> [https://www.fema.gov/media-library-data/1396549910018-c9a089b8a8dfdcf760edcea2ff55ca56/bca\\_guide\\_supplement\\_508\\_final.pdf](https://www.fema.gov/media-library-data/1396549910018-c9a089b8a8dfdcf760edcea2ff55ca56/bca_guide_supplement_508_final.pdf)

<sup>14</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/220541/green\\_book\\_complete.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf)

<sup>15</sup> Emrich, C., Sanderson, J. and Cutter, S. (2016). The social vulnerability index (SoVI®) as a decision support tool in prioritizing disaster recovery efforts, in S. Flynn, *The South Carolina Deluge: Lessons from a Watershed Disaster A Center for Resilience Studies Assessment*, pp. 41-51, Boston, MA: Northeastern University Center for Resilience Studies, [http://www.northeastern.edu/resilience/wp-content/uploads/2016/09/S\\_Flynn\\_South\\_Carolina\\_Deluge-Resilience\\_Lessons-from\\_a\\_Watershed\\_Disaster\\_Northeastern\\_Univ\\_Aug16.pdf](http://www.northeastern.edu/resilience/wp-content/uploads/2016/09/S_Flynn_South_Carolina_Deluge-Resilience_Lessons-from_a_Watershed_Disaster_Northeastern_Univ_Aug16.pdf)

<sup>16</sup> Perrow, C. (2015). Cracks in the “Regulatory State”. *Social Currents*, 2,3: 203-212. Ivory, D., Protes, B., & Bennett, K. (2016). When You Dial 911 and Wall Street Answers. *The New York*

*Times*. [https://www.nytimes.com/2016/06/26/business/dealbook/when-you-dial-911-and-wall-street-answers.html?\\_r=0](https://www.nytimes.com/2016/06/26/business/dealbook/when-you-dial-911-and-wall-street-answers.html?_r=0)

<sup>17</sup> <https://weather.com/news/news/uninsured-flood-victims-financial-loss>.

<sup>18</sup> Browne, K. (2015) *Standing in the need: Culture, comfort, and coming home after Katrina*. University of Texas Press.

## 2. Mitigation centered

Benjamin Franklin famously wrote “an ounce of prevention is worth a pound of cure”. Indeed, mitigation — what FEMA defines as “sustained action taken to reduce or eliminate long-term risk to people and their property from hazards”<sup>19</sup> — costs substantially less than response <sup>20</sup>, and also saves lives and protects community structures and areas of cultural significance. For these reasons, it is important to mitigate risks rather than merely to respond. FEMA lists *enabling disaster risk reduction nationally* as one of its five strategic priorities of its 2014-2018 Strategic Plan<sup>21</sup>. Preparedness and risk reduction measures taken at neighborhood scale such as Citizen Emergency Response Training builds upon and can reinforce existing social networks. Its Federal Insurance and Mitigation Administration (FIMA) is a critical program designed to ensure against and mitigate the risks of flooding. By focusing on mitigation, FIMA is estimated to save the US approximately \$1.6 billion annually in flood losses.<sup>22</sup> FIMA also targets high-risk areas — areas that house a disproportionately greater number of poorer people — and seeks to maintain program affordability even while working toward solvency. Cutting back, privatization, or moving away from a needs-based approach of such a program could have substantial impact on flood risk.

FEMA currently spends a large amount of its budget on response compared to mitigation.<sup>23</sup> Recognizing the important role of mitigation FEMA should continue to work to allocate money toward mitigation.

## 3. Addresses root causes

A wide variety of employment, housing, health, environmental, and social processes impact people’s vulnerability to disaster risk and their capacity to resist stress and to recovery.<sup>24</sup> What they all have in common is the issue of access. Who has access to adequate housing, health care, opportunities to work and earn and access to social assistance when necessary? Access is governed to some extent by the market and falls into the domain of the private sector. Some access is provided publically. The balance between public and private could change with the new administration. What will become of current programs that provide public services like housing, health care, and job training if there is significant budget reduction through privatization? How will changes impact vulnerability of groups of residents to harm triggered by hazard events?

The Oakland, California warehouse fire disaster in December 2016 is a stark example of the link between housing and disaster. In many cities, young people are unable to find affordable housing and resort to living in unsafe shared accommodation. Macro-economic and social policies affect housing access, health care availability and employment. Other federal policies affect climate change. International scientific consensus is clear that climate

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<sup>19</sup> [https://www.fema.gov/media-library-data/1464356203875-13a7afa1f593a3f137f5855b784498fa/FIMA\\_Overview\\_Fact\\_Sheet\\_2016r.pdf](https://www.fema.gov/media-library-data/1464356203875-13a7afa1f593a3f137f5855b784498fa/FIMA_Overview_Fact_Sheet_2016r.pdf)

<sup>20</sup> <http://www.sciencedirect.com/science/article/pii/S2212420914000661>

<http://bechtel.colorado.edu/~porterka/Rose-et-al-2007-NHR-BCA.pdf>

<sup>21</sup> <https://www.fema.gov/media-library-data/1405716454795-3abe60aec989ecce518c4cdba67722b8/July18FEMAStratPlanDigital508HiResFINALh.pdf>

<sup>22</sup> 2014-2018 FEMA Strategic Plan p 27

<sup>23</sup> <https://www.dhs.gov/sites/default/files/publications/FY2017BIB.pdf>

<sup>24</sup> <http://onlinelibrary.wiley.com/doi/10.1111/1540-6237.8402002/full>  
<http://www.pnas.org/content/105/7/2301.short>

change is already intensifying some hazards.<sup>25</sup> FEMA also recognizes that climate change is increasing natural disaster risk, and is actively working to incorporate climate change adaptation into its programs.<sup>26</sup> Even under administration that denies the science supporting this international consensus, FEMA needs to continue to assist municipalities to maintain their focus on reducing the risk from climate-related risks. Decisions that affect urban risk occur both within and outside urban zones. Cities depend on a steady supply of food, water, and electricity; the resources needed to produce and to deliver these flows must be protected. Climate-related hazards—an array of sudden, high impact and slow onset, pervasive natural processes—are bound to be central to the security of the US food<sup>27</sup> and clean water supply<sup>28</sup>.

#### 4. Prevents disaster risk creation

Land use changes including private and public investments in the urban built environment should be subject to Hazard Impact Analysis just as they usually are vetted in terms of their environmental impacts and compliance to various municipal and state regulations. FEMA at the national scale has not yet been mandated to do this, but it could provide expertise to assist municipalities and states. Large-scale construction, landfill, and other changes in the cityscape are never risk-neutral. Such changes either reduce risk (while achieving other economic and social purposes) or create risk for some and opportunities for others ('winners and losers'). This does not just apply decisions about management of the built environment; all decisions affect risk, from policy decisions such as how to structure health services to political and economic decisions that favor certain groups of people over others. Certain communities in the US have bared the brunt of the destructive environmental and political practices of others; practices that have been allowed by relaxed regulations and structural inequalities.<sup>29</sup> This has given rise to the concept of 'environmental justice'; operationalized – not merely used rhetorically – by the Environmental Protection Agency in a manner that dovetails with FEMA's Whole Community Approach. Indeed, going even further, activists and academics have written about environmental racism, the purposeful location of hazardous land uses and activities in areas where residents are predominantly low-income minorities. The new administration clearly shows hostility to such interpretations; however, a rights and justice approach needs to be applied in urban disaster management work.

#### 5. Inclusive

In 2011, 1.5 million households in the U.S. with three million children lived on less than \$2.00 per day per capital cash income. They had fallen completely below any safety net or statistical poverty scale.<sup>30</sup> This sort of extreme poverty can be traced to the mid-1990s welfare reform changes at the federal scale. What new changes are likely to come under the

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<sup>25</sup> Intergovernmental Panel on Climate Change (2012) <http://www.ipcc-wg2.gov/SREX/>.

<sup>26</sup> [https://www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL\\_ResilienceClimateChange\\_JobAid\\_19FEB15\\_508\\_Complete\\_.pdf](https://www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL_ResilienceClimateChange_JobAid_19FEB15_508_Complete_.pdf)  
[https://www.fema.gov/media-library-data/20130726-1919-25045-3330/508\\_climate\\_change\\_policy\\_statement.pdf](https://www.fema.gov/media-library-data/20130726-1919-25045-3330/508_climate_change_policy_statement.pdf)

<sup>27</sup> <https://www.epa.gov/climate-impacts/climate-impacts-agriculture-and-food-supply>

<sup>28</sup> <https://www.epa.gov/climate-impacts/climate-impacts-water-resources>

<sup>29</sup> Hedges, C. and J. Sacco (2014). *Days of destruction, days of revolt*, Nation Books.; Lerner, S. (2010). *Sacrifice zones: the front lines of toxic chemical exposure in the United States*, MIT Press.

<sup>30</sup> Edin, K. and Schefer, E. (2015) *\$2.00 a Day: Living on almost nothing in America*. Boston: Mariner Books;

<https://www.washingtonpost.com/news/wonk/wp/2016/08/22/the-enduring-legacy-of-welfare-reform-20-years-later/>.

new administration? How will it affect the ability of families to protect themselves and their children from impacts of extreme natural events? FEMA's community based programs such as its Community Emergency Response Teams assume that people have the time and means to participate in forums, discussions and neighborhood planning and preparedness exercises. However, extreme poverty and marginalization put these assumptions in doubt. FEMA and its municipal partners need to redouble efforts to reach out to poor and marginalized groups of people.

In addition, if the new administration tries to implement policies that divide urban populations by race, national origin or religion, one can only expect that community-based participation in disaster preparedness planning will only become more difficult. Marginalized groups are often wary to seek assistance from government agencies: during the Northridge earthquake, undocumented immigrants—who contribute more to taxes than they take in public services<sup>31</sup>—did not seek support.<sup>32</sup> FEMA has worked hard to make its programs accessible to those with disabilities and those who are not native English speakers, and low-income migrant and seasonal farmworkers, among others.<sup>33</sup> In fact, after the 9-11 disaster, FEMA and New York city and state authorities allowed the relatives of illegal Guatemalan and Mexican low-wage workers who were victims in the Twin Towers to access services in a neutral space operated by a Catholic Church based cultural outreach program called Tepeyac.<sup>34</sup> FEMA needs to increase its effort to reach out to minority populations, immigrants, and refugees in our cities even with the potential of top-down pressure to ignore or, worse, to facilitate the identification and expulsion of members of such groups.

## 6. Works across levels and sectors in a decentralized yet comprehensive and coordinated way

Disasters risks are complex, transcending single governmental jurisdictions and sectors, meaning that good risk management is contingent upon working across various levels and in trust-based partnership with many kinds of stakeholders.<sup>35</sup> The public safety mission is undermined by a narrow bureaucratic focus that includes one hazard (say flooding) but excludes another (for example, water quality). Waterways can flow through multiple municipalities, requiring coordinated flood management between cities. FEMA, the Army Corps of Engineers, and other agencies are clear about this. However, pre-existing pollution of water supply can create or exacerbate health risks in a flood event, and the flooding can add to the municipal burden of protecting water supply and public health. Fracking has been found to contribute to contaminated drinking water<sup>36</sup>, and the Flint water crisis was brought on by lack of maintenance of water infrastructure. Clearly, there are complex linkages between natural hazards and anthropogenic hazards. The latter are subject to regulation and action by current government agencies. The Environmental Protection Agency (EPA) has Environmental Response Teams to help respond to release of hazardous

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<sup>31</sup> Lipman, F. J. (2006). "Taxing undocumented immigrants: Separate, unequal and without representation." *Tax Lawyer*, Spring: 06-20. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=881584](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=881584)

<sup>32</sup> Bolin, R., & Stanford, L. (2006). *The Northridge earthquake: Vulnerability and disaster*. Routledge.

<sup>33</sup> Stafford act p 49

<sup>34</sup> Wisner, B. (2003) Tepeyac: Case study of institutional and social learning under stress. *International Journal of Mass Emergencies and Disasters* 21, 3: 57-66, [www.ijmed.org/articles/232/download/](http://www.ijmed.org/articles/232/download/).

<sup>35</sup> Tierney, K. (2012). "Disaster governance: social, political, and economic dimensions." *Annual Review of Environment and Resources* 37: 341-363. <http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-020911-095618>

<sup>36</sup> <https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990>

substances.<sup>37</sup> Will the incoming administration downgrade or even attempt to eliminate many of EPA's functions? If so, in the face of reduced regulation, how will FEMA's mission be made more difficult?

FEMA works with many stakeholders to manage risk. It actively engages with the private sector and considers the sector a key player in disaster mitigation, response, and recovery. For instance, electric utilities played a crucial role in restoring power following hurricane Sandy in 2012; FEMA has since redoubled its efforts to work with this critical sector.<sup>38</sup> It also works with the nonprofit sector, and has outreach programs in place to engage with key civil society stakeholders like the Red Cross, Salvation Army and municipal coalitions of smaller organizations like local churches. At governmental level, it engages with federal agencies such as the Housing and Development on joint projects, as well as with state and local municipalities. It works to assist coordinating the governance of risks that transcend jurisdictions.<sup>39</sup>

FEMA's activities, although broad, can be enhanced by continued engagement with stakeholders on the elimination of disaster risk creation. Presently, FEMA does not work with other departments to ensure that their policy changes do not create risk. For instance, FEMA has not weighed in on how changes in wage structures might affect the economic resilience of communities or on how changing environmental regulations could impact natural hazards. FEMA needs to engage in these policy decisions to ensure that policy changes ideally reduce disaster risk, and at a minimum do not create new risk.

## 7. Acknowledges capacity, knowledge and skill at all scales, especially the local

People know the neighborhoods where they live. They are the local experts. FEMA's community approach is a good basis upon which to tap this local knowledge in order to develop hazard maps, lists of vulnerable people such as elderly shut-ins, and to catalog the local resources people have for self-protection for a period of time such as 72 hours following an earthquake. However, this sort of dialog between municipal preparedness planners and FEMA with local residents requires trust. If the new administration is not successful in convincing all urban dwellers that it is a "government for all Americans" what will happen to such trust? FEMA and other stakeholder need to explore contingencies to maintain trust locally at the municipal scale even in a national environment that is xenophobic.

## 8. Technically proficient

We have knowledge on how to manage disaster risk and build resilience. It is important that we use that knowledge effectively. FEMA is working to build a cadre of technically proficient disaster risk professionals at all levels. When Congress overhauled the organization in 2006 in response to the lessons learned from the failures of hurricane Katrina, it included a requirement that the agency's administrator be a professional emergency manager. FEMA

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<sup>37</sup> <https://www.epa.gov/emergency-response/epas-role-emergency-response-special-teams>

<sup>38</sup> [https://www.fema.gov/media-library-data/20130726-1923-25045-7442/sandy\\_fema\\_aar.pdf](https://www.fema.gov/media-library-data/20130726-1923-25045-7442/sandy_fema_aar.pdf)

<sup>39</sup> FEMA has written about this in a mitigation best practice case study on collaborative community resilience across multiple jurisdictions: [https://www.fema.gov/media-library-data/1439557134446-297af7636e8ea1a2e4b0ba7287eed55b/Collaborative\\_Comm\\_Resilience\\_Mitigation\\_Planning\\_web.pdf](https://www.fema.gov/media-library-data/1439557134446-297af7636e8ea1a2e4b0ba7287eed55b/Collaborative_Comm_Resilience_Mitigation_Planning_web.pdf)

also provides training to empower people to manage risk, offering courses through training institutions such as the Emergency Management Institute and the TEEEX Extension Service out of Texas A&M<sup>40</sup>. All of its Community Emergency Response Team volunteers also receive basic emergency management training, and act as emergency response ambassadors in their neighborhoods. Other organizations outside FEMA also play a valuable role in building emergency management knowledge. This includes four-year universities—the Natural Hazards Center at the University of Colorado<sup>41</sup>, for example, offers numerous courses on disaster management— and at teaching and community colleges— such as the emergency management certificate offered by Coastline Community College<sup>42</sup>. These public and private nonprofit educational institutions provide a valuable service and should be maintained. One outcome of a large budget deficit produced by cutting the corporate tax rate is that support for such educational institutions will be reduced. Worse still, if the parent university declares itself a sanctuary for undocumented students, the new administration may cut funding. These valuable education programs must be protected.

Technically proficient also means based on the best scientific evidence. We know that climate change is having widespread impacts on risks, including risks in urban areas<sup>43</sup>, and FEMA is working to address risks in a climate sensitive manner. We need to continue to base our approach to disaster risk management in a way that incorporates climate change, the best governance principles, and other areas of knowledge.

## Conclusion

The new administration could impose many policy changes over the next four years that could have a profound impact on urban risks and risk management. As the lead agency for preventing, preparing, and responding to disasters, these changes could have major impacts on FEMA's mission. The eight principles presented in this document represent the best practice for urban risk management. We offer this preliminary discussion of them as encouragement for a deep discussion among FEMA permanent staff and their counterparts in municipalities, cities and towns across the country. A good deal can be done to 'disaster proof' the progress made by FEMA and its urban partners over the past decade, to retain or even to revive its best practices, and to resist the dismissal of science.

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<sup>40</sup> <https://teex.org/Pages/Course-Catalog.aspx?catID=603&level=1&catName=DHS/FEMA-Funded>

<sup>41</sup> <https://hazards.colorado.edu/>

<sup>42</sup> <http://www.coastline.edu/academics/emergency-management/>

<sup>43</sup> Intergovernmental Panel on Climate Change (2012) <http://www.ipcc-wg2.gov/SREX/>.