How Science Makes Us Safer and More Resilient: Lessons from the Homeland

JULIETTE KAYYEM
“In 2015, diseases caused by air, water and soil pollution were responsible for 9 million premature deaths, that is 16% of all global death. Exposures to contaminated air, water and soil kill more people than smoking, hunger, natural disasters, war, AIDS, or malaria.”

Report: Lancet Commission on Pollution and Health, 2017
“Science without policy has no application, and policy without science has no foundation.”

Science Informed Leadership
University of California, Davis
In addition to political violence/terrorism, Environmental Security includes threats to the US economy from large-scale environmental accidents (such as the BP Deepwater Horizon Gulf oil spill); geological events (i.e., tsunamis, earthquakes) and climatic or weather extremes (such as Hurricane Katrina, and even the 2011-12 US Western states’ drought, aptly illustrated); strategic resource shortages (food, water, energy, etc.); and/or deficits to critical infrastructure (CI) – the mechanisms by which societies operate.

Ramsay & O’Sullivan, *Environmental Security*
HOMELAND SECURITY AFFAIRS, VOLUME 9, ARTICLE 6 (MAY 2013)
How do we nurture resiliency?
KEEP CALM
AND CARRY ON

KEEP CALM
and be fabulous

KEEP CALM
AND EAT CHOCOLATE

KEEP CALM
AND DON'T LET IDIOTS RUIN YOUR DAY
The 5 key elements of building a more resilient system

- Redundancies
- Flexibility
- Fail Safe
- Lessons Learned
- Rebound
FLEXIBILITY
FAIL SAFE
RAPIDLY REBOUND
LESSONS LEARNED
How Science Makes Us Safer and More Resilient: Lessons from the Homeland

JULIETTE KAYYEM