IMPROVING DISASTER RESILIENCE IN THE COMMUNITY.

1 .The public and private sectors in a community should work

Cooperatively to encourage commitment to and investment in a risk

Management strategy that includes complementary structural and

Nonstructural risk-reduction and risk-spreading measures or tools.

Understanding and managing disaster risk are critical to increasing resilience. Yet many communities and individuals do not fully appreciate the risks that they face, and often do not know how to

Manage their risk. Risk represents the potential for disasters to affect people in harmful ways. Risk

Management is a process that identifies the hazards facing a community, assesses the risks from

These hazards, develops and implements strategies to counter those risks, and adjusts those strategies based on experience and further study.

Disaster risks cannot be completely eliminated, even with the best risk management strategies. But such

Strategies can help communities become more resilient. For example, disaster-related fatalities in America and other developed countries have, on average, been steady or declining in recent years,

Attesting to the success of measures to decrease vulnerability to disasters, thereby increasing resilience.

A broad portfolio of risk management tools already exists, but they are often poorly understood and

Unevenly applied across the nation. Tools to manage disaster risk include both structural and nonstructural measures and approaches, which are complementary and can be used together. Examples

Of structural measures are levees and floodways, disaster-resistant construction, retrofitting of existing

Buildings, and securing of building components. Well-enforced building codes also can result in more

Resilient physical structures. Nonstructural measures and approaches include a wide range of options,

Such as wetlands that act as natural defenses, timely forecasts and warning systems, changes in zoning

And land use, improved risk communication, economic and tax incentives, and insurance.

A diverse portfolio of measures to manage disaster risks provides choices for decision makers and

Communities before, during, and after disasters. Such a portfolio can promote more efficient use of

Resources and more effective risk management.

In examining measures that could be helpful to communities, the committee devoted particular

Attention to insurance and to building codes and standards. The public and private sectors are

Encouraged to invest in risk-based pricing of insurance, which imposes higher premiums on those

In areas of higher risk to one or more hazards. Risk-based pricing can help communicate to those in

Hazard-prone areas the level of risk that they face. It can also reduce the need for public subsidies of

Disaster insurance and can encourage residences and businesses to relocate to safer areas.

Building codes and standards have been shown repeatedly to be effective in reducing property damage, preserving human life, and increasing resilience. However, codes and standards vary among

Communities and are unevenly enforced and publicized. Federal agencies, together with local and

Regional partners, researchers, professional groups, and the private sector, should develop an essential

Framework of codes, standards, and guidelines. Implementing such a framework will increase the resilience of the structural elements of homes, businesses, utilities, and communication and transportation

Systems. This framework should include national standards for infrastructure resilience and guidelines

For land use and structural mitigation, especially in known hazard areas such as floodplains. Importantly, many of these risk management tools require no up-front capital costs, but they do need to be

Adopted and enforced through the normal decision-making process within communities.

2. The Department of Homeland Security — in conjunction with other

Federal agencies, state and local partners, and professional groups —

Should develop a National Resilience Scorecard.

How can community leaders know how resilient their community is? And how can they know if

Their decisions and investments to improve resilience are making a significant difference? Today,

The nation does not have a consistent basis for measuring resilience. Without a good measure of

Resilience, it is difficult or impossible to identify

Priorities for improvement, determine whether resilience has improved or worsened, or compare the

Benefits of resilience with the associated costs.

Many organizations within the United States and

Internationally have tackled the problem of measuring resilience. All of these previous efforts have

Important lessons for the development of a National Resilience Scorecard, but none satisfies the

Current need.

Any approach to measuring resilience has to address multiple hazards and be adaptable to the

Needs and goals of specific communities that differ

In size, structure, and organization. Many dimensions of resilience, from the physical resilience of

The built environment to the existence of strong

Social networks and good governance, are important to include.

Because of the complexity of resilience, the best

Strategy may be to combine various factors, using appropriate weights, into a composite index

Or a set of indicators. The effects of particular actions and policy changes then could be monitored over time.

A National Resilience Scorecard that encompasses the many physical and social factors that

Determine resilience would provide an objective baseline specific to each community and would

Provide a tool to track improvements. Communities could use this national scorecard to develop

Their own tailored scorecards that allow them to ask the right questions, create a resilience building strategy, and measure its effectiveness. The very act of defining a metric can help a

Community clarify and formalize what it means by the concept of resilience.

3. To justify investments in

Enhanced disaster resilience

In communities, the potential

Short- and long-term benefits

Of those investments need to

Balance or exceed the costs.

This kind of cost-benefit analysis

Requires that communities have information about the costs of both past disasters and potential

Future disasters and the value of the assets in their communities. Without this kind of information,

Commitment to enhanced resilience is difficult to maintain.

The nation currently lacks a national repository for information about disasters that occur and the

Losses they cause. In addition, existing data are often incomplete, incompatible with each other,

And inadequate to reveal in detail the geographic impact of losses. This lack of consistent information leaves communities unable to make informed decisions about where and how to prioritize

Their investments in resilience.

A national data inventory would reconcile and integrate the fragmented data sets on disasters.

It would serve as a national archive for data on historical disasters and the losses they caused. It

Would assist in the development of definitions and more consistent loss measurements, as well as

Measures against which communities could begin to assess their resilience. And it would provide

An evidence base for evaluating the effectiveness of interventions and investments to build resilience. Collaboration among federal agencies, private actors, and the research community would

Improve the collection of loss data after disasters.

4. Federal, state, and local governments should support the creation and

Maintenance of broad-based community resilience coalitions at local

And regional levels.

National resilience emerges, in large part, from local-level decisions and efforts. Communities

Across the United States vary greatly in their history, geography, demography, culture, and infrastructure, as well as in the hazards they face. Plans to enhance resilience in one locale may not be

A good fit for the assets and needs of another.

Nevertheless, some basic premises for resilience apply to all communities:

• Essential services, such as health, education, and public and private infrastructure need to be

Robust.

• Individuals and groups need to know about risks and how to reduce them.

• Communities, neighborhoods, and families need to be organized to prepare for disasters.

• Land-use planning needs to be sound.

• Building codes and standards need to be adopted and enforced.

Achieving this level of resilience is a shared responsibility, requiring the engagement of the entire

Community, not just part of it. Government, the private sector, and nongovernmental and faith based organizations all have important roles to play in building resilience. Effective preparedness

And response are essential when a disaster strikes, but improving resilience in anticipation of

Disasters also requires that representatives from all community sectors work in concert and have a

Common vision of resilience.

Broad-based public-private coalitions provide a way to unify all parts of a community around the

Goals of resilience. Such coalitions can assess a community’s vulnerability, educate and communicate about risk, and evaluate and expand a community’s capacity to handle risk.

Coalitions are also key to improving the resilience of a community’s critical infrastructure and

Systems — such as power and water systems, health care services, and transportation systems

* That are often dispersed across the public and private sectors. Resilience requires that public

And private leaders come together to assess the vulnerabilities of these systems and plan ways to

Help them withstand a disaster. For example, coalitions of private and public health services can

Develop ways to provide coordinated and coherent medical responses during a disaster.

Coalitions can also help to foster public communication and education. These are essential to

Increasing resilience because they result in a populace that knows what hazards it faces, has the

Social cohesion to help it endure, understands how to protect its safety and well-being, and sees

Itself as capable and self-sufficient.

A robust coalition needs strong leadership and governance, with a person or persons who have

The time, skills, and dedication to develop and maintain relationships among all partners. It also

Requires participation from people representing the full spectrum of a community’s members, including minorities, the disenfranchised, people with disabilities, children, senior citizens, and other

Subgroups that are potentially vulnerable to the impact of disasters.

5. Federal government agencies should incorporate national resilience

As a guiding principle to inform the mission and actions of the federal

Government and the programs it supports at all levels

Although many critical processes to improve resilience occur at the state and local levels, the

Federal government plays a central role in providing guidance and assistance to local communities.

Currently, however, the nation lacks an overall vision and coordinating strategy for resilience; policies, practices, and decisions affecting resilience are not effectively communicated or coordinated

Among and within the branches of the

Federal government.

In the short term — the next one to two

Years — the federal government should

Take steps to incorporate national

Resilience as a guiding principle. For

Example, federal agency leaders should

Work with state, local, and private-sector

Stakeholders to develop a vision of

National resilience. A process should be

Developed to help agencies effectively

Coordinate their work on resilience and

Collaborate with one another. And federal agencies should collectively conduct

An analysis of federal, state, and local

Funding for disaster preparedness and

Response and develop a cost-effective

Strategy for investing in resilience.

Additional measures are needed over

The long term — three to ten years from

Now. For example, federal agencies should collectively establish a process for dialogue, planning,

And coordination among local, state, and national government leaders and agency heads that can

Be used to develop a long-term national strategy for improving resilience. Federal agencies should

Also develop short-term incentives and guideposts for achieving long-term goals. And they should

Develop a consistent and coordinated communication and outreach strategy to the general public

Around the national vision for resilience.

Because communities vary so much in their risks, cultures, and development patterns, policy makers and government leaders need to build flexibility into their mechanisms to enhance communities’ resilience. Government policies that attempt to mandate resilience would imply that perfect

Resilience can be defined and achieved, which is not possible. Similarly, resilience is too broad and

Complex to incorporate into a single comprehensive law. Instead, the principles of resilience need

To be infused into the routine functions of government at all levels to improve the resilience of

Each community over time.

Federal government agencies should incorporate national resilience

As a guiding principle to inform the mission and actions of the federal

Government and the programs it supports at all levels.

6. All federal agencies should ensure they are promoting and coordinating

National resilience in their programs and policies. A resilience policy

Review and self-assessment within agencies and strong communication

Among agencies are keys to achieving this kind of coordination.

Federal programs and activities that make the nation more resilient are important in every aspect of

American life, and not just during times of stress or trauma. A key role of federal agency programs

Designed to improve national resilience is to take the long-term view of community resilience and

Avoid short-term expediencies that can diminish resilience. Although different agencies will take

The lead for various aspects of resilience at the national level, all federal agencies are responsible for

Increasing disaster resilience through their programs and policies.

Many federal programs are not explicitly related to resilience but may nevertheless affect resilience

In positive or negative ways. Because of the potential for some agency policies and practices to

Inadvertently undermine community resilience, it is important for government agencies to evaluate

Their programs and activities to determine their long-term impact on resilience.

Furthermore, policy makers in both the legislative and executive branches can improve the resilience of communities and the nation by viewing resilience holistically and by recognizing the

Complex interactions of federal policies with one another.

A resilience self-assessment by each agency will help the agency examine how its mission contributes to the nation’s resilience and how its programs provide guidance to state and local officials on

Advancing resilience. Agencies should also examine how their resilience programs influence and

Affect resilience programs operating at the state and local levels.

7. Disaster resilience is everyone’s business and is a shared responsibility among citizens,

The private sector, and government. Community leaders and government officials

Face decisions every day that may pit short-term interests against longer-term goals.

Increasing resilience to disasters will require decisions and actions that are informed

And forward-looking.

Although disasters will continue to occur, actions that move the nation from a reactive to a proactive approach will reduce many of the societal and economic burdens

And impacts that disasters cause. Building the nation’s resilience is a long-term process, one that will be socially and politically challenging, but the reward for our efforts

Will be a safer, healthier, more secure, and more prosperous nation.