

# United States of America

## National progress report on the implementation of the Hyogo Framework for Action

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# Strategic goals 1

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## Area 1

*The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.*

### **Strategic Goal Statement:**

The United States National Science and Technology Council's interagency Subcommittee on Disaster Reduction (SDR) has identified a set of Grand Challenges for Disaster Reduction that if met will bolster the capacity of the U.S. to prevent and recover from disasters, thus fulfilling the Nation's commitment to reducing the impacts of hazards and enhancing the safety and economic well-being of every individual and community.

## Area 2

*The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.*

### **Strategic Goal Statement:**

The United States recognizes that the disaster resilience of its communities depends on actions at State and local levels of government, on actions of non-governmental organizations and the private sector, and on actions of families and individuals. The Federal government remains committed to programs that support and encourage such actions.

## Area 3

*The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.*

### **Strategic Goal Statement:**

As a follow-on to the development of the Grand Challenges for Disaster Reduction, this spring the SDR released a series of 14 hazard-specific implementation plans identifying priority actions for science and technology to meet these challenges. Each implementation plan identifies the following characteristics of disaster-resilient communities: A nation where relevant hazards are recognized and understood, where communities at risk know when a hazard event is imminent, where individuals can live safely in the context of our planet's extreme events, and where disaster-resilient communities experience minimum disruption to life and economy after a hazard event has passed.

## Priority for action 1

*Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*

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## Core indicator 1

*National policy and legal framework for disaster risk reduction exists with decentralised responsibilities and capacities at all levels.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has in place a national policy and legal framework for disaster risk reduction. Responsibilities and capabilities are shared across all levels of government. Challenges remain in achieving a fully disaster-resilient society. The SDR's recently released Grand Challenges for Disaster Reduction Implementation Plans were published in February 2008 to prioritize Federal science and technology actions to help increase the Nation's disaster resilience by guiding future investments. See <http://www.sdr.gov> for hazard-specific implementation plans.

**Context & Constraints:**

See above.

Related links:

National Science & Technology Council Subcommittee on Disaster Reduction homepage  
<http://www.sdr.gov>

**Core indicator 2**

*Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has made significant investments in disaster risk reduction from warning systems to pre-disaster mitigation grants for communities to disaster-resilient design of critical infrastructure. The experience of Hurricane Katrina, however, underscores that significant challenges remain to building a fully disaster-resilient society.

**Context & Constraints:**

See above.

**Core indicator 3**

*Community Participation and decentralisation is ensured through the delegation of authority and resources to local levels*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

A significant degree of the responsibility for disaster risk reduction in the United States rests at the state and local level. For example, a key component of disaster risk reduction is building codes, which are adopted and implemented at the state and local level. These building codes, which address a number of different hazards, are based on model building codes that are developed through a consensus process

by non-governmental organizations such as the American Society of Civil Engineers and International Code Council. These model building codes incorporate current scientific and engineering understanding across multiple hazards, including seismic shaking intensity, wind loads, and fire characteristics, among others.

**Context & Constraints:**

See above.

**Core indicator 4**

*A national multi sectoral platform for disaster risk reduction is functioning.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The U.S. National Science and Technology Council's Subcommittee on Disaster Reduction serves as the national platform for the International Strategy for Disaster Reduction. The subcommittee represents the expertise of more than twenty Federal agencies with disaster reduction missions and facilitates the Nation's strategies for effective use of science and technology to reduce disasters. The SDR provides coordination for science and technology activities in support of disaster risk reduction and provides advice to the White House Office of Science and Technology Policy. The SDR coordinates with non-governmental entities such as the National Research Council's Disasters Roundtable and interacts with many other organizations at national, State and local levels.

**Context & Constraints:**

See above.

**Priority for action 2**

*Identify, assess and monitor disaster risks and enhance early warning*

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**Core indicator 1**

*National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has invested in the development of loss-estimation capabilities such as the Hazards US - Multi-Hazard (HAZUS-MH) software package developed by the Federal Emergency Management Agency. This software incorporates the current understanding of hazard with inventories of structures and other data to estimate losses. The Federal government has made substantial investments in assessments for multiple hazards. In order to make hazards more real to decisionmakers and the public, scenarios for specific high-impact natural hazard events have been developed for a number of cities. Considerable investment is required to fully implement risk assessment capabilities on a national basis.

**Context & Constraints:**

See above.

Related links:

Federal Emergency Management Agency HAZUS loss estimation program  
<http://www.fema.gov/plan/prevent/hazus/>

## Core indicator 2

*Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities*

### Level of Progress achieved:

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### Description:

Under the Stafford Act and other legislative mandates, responsibility for monitoring and issuing alerts for individual hazards is delegated to specific federal agencies. Significant capabilities exist for monitoring networks, data archiving and rapid dissemination to provide situational awareness for emergency responders and the public at large. Additional investments have been identified in the Grand Challenges for Disaster Reduction implementation plans developed by the National Science and Technology Council's interagency Subcommittee on Disaster Reduction. These plans are available at <http://www.sdr.gov>.

### Context & Constraints:

See above.

Related links:

NSTC Subcommittee on Disaster Reduction <http://www.sdr.gov>

## Core indicator 3

*Early warning systems are in place for all major hazards, with outreach to communities.*

### Level of Progress achieved:

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### Description:

The United States has deployed early warning systems for a number of hazards, including extreme weather events, floods, and tsunamis. A prototype debris-flow warning system has been deployed for wildfire impacted areas of southern California. Early-warning capabilities exist for some well-monitored volcanoes, and plans have been made to implement a National Volcano Early Warning System. The US does not currently have an early warning system for earthquakes; such a capability has been identified as aThe United States has had trans-boundary interactions on hazard and risk assessment for specific hazards and cases. On a related front, there are extensive efforts to share data with neighboring countries and global partners. The United States maintains a number of global space-based and in situ observation capabilities that generate data that are fully accessible to all Nations. In turn, the United States relies on data generated by the observation capabilities of other Nations as part of the Global Earth Observation System of Systems.n outcome of full implementation of the partially deployed Advanced National Seismic System.

**Context & Constraints:**

See above.

**Core indicator 4**

*National and local risk assessments take account of regional / trans boundary risks, with a view to regional cooperation on risk reduction.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has had trans-boundary interactions on hazard and risk assessment for specific hazards and cases. On a related front, there are extensive efforts to share data with neighboring countries and global partners. The United States maintains a number of global space-based and in situ observation capabilities that generate data that are fully accessible to all Nations. In turn, the United States relies on data generated by the observation capabilities of other Nations as part of the Global Earth Observation System of Systems.

**Context & Constraints:**

See above.

**Priority for action 3**

*Use knowledge, innovation and education to build a culture of safety and resilience at all levels*

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**Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has made significant investments in improving public awareness of relevant hazards before disaster strikes as well as providing information on disasters where and when it is needed. Efforts exist at all levels of government. Two of the Grand Challenges for Disaster Reduction identified by the National Science and Technology Council's Subcommittee on Disaster Reduction specifically address the need for making relevant information available and accessible at all levels, one being to provide hazard and disaster information where and when it is needed, and the other being to promote risk-wise behavior.

**Context & Constraints:**

See above.

**Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

**Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Description:**

Materials have been developed for use in school curricula, but the devolved nature of public education in the United States, which is implemented at the local government level, makes it difficult to measure progress on this core indicator.

**Context & Constraints:**

See above.

**Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

Through the National Science Foundation, the United States supports research and development in a number of social science fields to improve understanding and assessment of disaster risk reduction. Other federal agencies support cost-benefit analyses for individual hazards. For example, the Federal Emergency Management Agency sponsored a study of the costs and benefits of mitigation grants, finding that the benefits outweighed the costs even without accounting for avoided loss of life.

**Context & Constraints:**

See above.

**Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

**Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Description:**

The United States has made substantial investments in national public awareness campaigns to stimulate a culture of disaster resilience, with outreach to both urban and rural communities. Much work remains to be done, however, in this core indicator. Development of public preparedness exercises and commemorations of major disasters with significant outreach activities as done for the centennial of the 1906 San Francisco earthquake are one tool being effectively used. Efforts primarily focus at the local level.

**Context & Constraints:**

See above.

**Priority for action 4**

*Reduce the underlying risk factors*

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## Core indicator 1

*Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.*

### Level of Progress achieved:

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### Description:

The NSTC Subcommittee on Disaster Reduction is working with the interagency Climate Change Science Program to ensure that the disaster reduction perspective is incorporated into strategies being developed to address climate change with the recognition that a number of aspects of mitigating disaster risks can also be effective for climate change adaptation.

### Context & Constraints:

See above.

## Core indicator 2

*Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.*

### Level of Progress achieved:

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### Description:

The United States seeks to support the efforts of States and local governments to improve the disaster preparedness of vulnerable populations. For example, public preparedness materials have been produced in multiple languages that are widely spoken in specific areas as well as in Braille, then using the media that serves those populations to achieve effective distribution. The National Science Foundation supports social science research to improve understanding of how to effectively communicate with vulnerable populations to achieve effective results.

### Context & Constraints:

See above.

## Core indicator 3

*Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities*

### Level of Progress achieved:

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

### Description:

The United States recognizes that business interruption is a major cause of losses in the wake of disaster events and that many small businesses that close their doors after a disaster will not reopen. A number of programs are in place to address the needs of the private sector and help build resilience to disasters. The National Response Framework developed by the Department of Homeland Security includes long-term recovery with representation from a broad spectrum of federal agencies that can provide assistance.

**Context & Constraints:**

See above.

**Core indicator 4**

*Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

Building codes represent a key component of disaster risk reduction in the United States. Such codes are adopted and implemented at the state and local level based on model building codes that are developed through a consensus process by non-governmental organizations such as the American Society of Civil Engineers and International Code Council. These model building codes incorporate current scientific and engineering understanding across multiple hazards, including seismic shaking intensity, wind loads, and fire characteristics, among others.

**Context & Constraints:**

See above.

**Core indicator 5**

*Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes*

**Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Description:**

The United States has a number of programs in place to incorporate hazard mitigation into post-disaster recovery and rehabilitation processes in order to avoid repetitive losses and build more resilient communities. These programs include post-disaster mitigation grants, rebuilding requirements under the National Flood Insurance Program, and many others.

**Context & Constraints:**

See above.

**Core indicator 6**

*Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.*

**Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Description:**

One of the Grand Challenges for Disaster Reduction identified by the National Science and Technology Council's Subcommittee on Disaster Reduction is the need to protect critical infrastructure, which can represent an important disruption and obstacle to community recovery. The United States recognizes that protecting critical infrastructure systems or "lifelines" is essential to developing disaster resilient communities. To be successful, communities must identify and address complex responses and the

interdependencies of these lifelines at a systems level (e.g., communications, electricity, financial, gas, sewage, transportation, and water). The U.S. is investing in the development of integrated models of interdependent systems in order to identify and address additional vulnerabilities. Protecting critical infrastructure provides a solid foundation from which communities can respond to hazards rapidly and effectively.

**Context & Constraints:**

See above.

## Priority for action 5

*Strengthen disaster preparedness for effective response at all levels*

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### Core indicator 1

*Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.*

**Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

**Description:**

The United States has a well-developed emergency management system that operates at all levels of government. Work continues to fully integrate disaster risk reduction into institutions at the local, State and Federal level as well as in the private sector.

**Context & Constraints:**

See above.

### Core indicator 2

*Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

Working with State and local emergency managers and other government officials, the Department of Homeland Security is making substantial investments in disaster response exercises that test plans that have been developed. In addition, individual communities are undertaking public preparedness exercises such as the November 2008 Great Southern California Shakeout, which is expected to involve several million people, many of them schoolchildren, in activities to prepare for a major earthquake on the Southern San Andreas Fault.

**Context & Constraints:**

See above.

### Core indicator 3

*Financial reserves and contingency mechanisms are in place to support effective response and recovery*

*when required.*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States has made significant investments in the wake of natural disasters. In addition to government policies, the private sector has made substantial investments through insurance, re-insurance, catastrophe bonds, and other market mechanisms.

**Context & Constraints:**

See above.

**Core indicator 4**

*Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews*

**Level of Progress achieved:**

4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

**Description:**

The United States recognizes the need to learn from disasters and has made substantial investments in post-event reviews and information gathering both for events at home and abroad. One of the Grand Challenges for Disaster Reduction identified by the National Science and Technology Council's Subcommittee for Disaster Reduction (SDR) is to assess disaster resilience. Federal agencies must work with universities, local governments, and the private sector to identify effective standards and metrics for assessing disaster resilience. With consistent factors and regularly-updated metrics, it will be possible to maintain community "report cards" that accurately assess the community's level of disaster resilience. This in turn will support comparability between communities and provide a context for action to further reduce vulnerability. Validated models, standards and metrics are needed for estimating cumulative losses, projecting the impact of changes in technology and policies, and monitoring the overall estimated economic loss avoidance of planned actions.

**Context & Constraints:**

See above.

## **Drivers of Progress**

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### **a) Multi-hazard integrated approach to disaster risk reduction and development**

**Levels of Reliance:**

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

**Do studies/ reports/ atlases on multi-hazard analyses exist in the country/ for the sub region?:**

Yes

**If yes, are these being applied to development planning/ informing policy?:**

Yes

**Description (Please provide evidence of where, how and who):**

The implementation plans for meeting the Grand Challenges for Disaster Reduction developed by the National Science and Technology Council's Subcommittee on Disaster Reduction are an all-hazard investment framework focused on the application of science and technology to enhance community resilience to disasters. Individual communities and regions have developed scenarios that address the impacts of multiple hazards in order to improve preparedness and reduce vulnerability. Cities like Seattle are using hazard assessments to prioritize the retrofitting of vulnerable structures.

**b) Gender perspectives on risk reduction and recovery adopted and institutionalized**

**Levels of Reliance:**

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

**Description (Please provide evidence of where, how and who):**

The United States has made investments in social science research through the National Science Foundation in order to better understand issues associated with gender in disaster mitigation, response and recovery.

**c) Capacities for risk reduction and recovery identified and strengthened**

**Levels of Reliance:**

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

**Description (Please provide evidence of where, how and who):**

The United States has made significant investments in building capacity at all levels of government and in the private sector for disaster risk reduction. Additional investments are needed to further improve the Nation's resilience to all hazards.

**d) Human security and social equity approaches integrated into disaster risk reduction and recovery activities**

**Levels of Reliance:**

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

**Description (Please provide evidence of where, how and who):**

The United States is committed to an all-hazards approach that seeks to improve the overall resilience of the Nation. The U.S. recognizes the special challenges facing vulnerable population and supports programs to address the needs of those populations.

**e) Engagement and partnerships with non-governmental actors; civil society, private sector, amongst others, have been fostered at all levels**

**Levels of Reliance:**

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

**Description (Please provide evidence of where, how and who):**

The National Science and Technology Council's Subcommittee on Disaster Reduction (SDR) is

committed to working with all sectors to improve the Nation's resilience. The SDR sponsored a series of public-private workshops to foster partnerships between the public and private sectors. The SDR maintains a close relationship with the National Research Council's Disasters Roundtable and with a number of non-governmental entities that share the commitment to disaster risk reduction.

## **f) Contextual Drivers of Progress**

### **Levels of Reliance:**

No/ little reliance: no acknowledgement of the issue in policy or practice; or, there is some acknowledgement but nothing/ little done to address it

### **Description (Please provide evidence of where, how and who):**

See above.

## **Future outlook**

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### **Area 1**

*The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.*

### **Overall Challenges:**

The United States recognizes that disaster resilience is an important aspect of the overall economic health of the Nation and sustainability of its communities.

### **Future Outlook Statement:**

Community resilience indicators are being explored to help drive more effective integration of disaster risk considerations into sustainable development policies, planning and programming.

### **Area 2**

*The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.*

### **Overall Challenges:**

The National Science and Technology Council's interagency Subcommittee on Disaster Reduction (SDR) has identified a set of Grand Challenges for Disaster Reduction that if met will bolster the capacity of the U.S. to prevent and recover from disasters, thus fulfilling the Nation's commitment to reducing the impacts of hazards and enhancing the safety and economic well-being of every individual and community.

### **Future Outlook Statement:**

As a follow-on to the development of the Grand Challenges for Disaster Reduction, the SDR released a series of 14 hazard-specific implementation plans in February 2008 identifying priority actions for science and technology to meet these challenges. Each implementation plan identifies the following characteristics of disaster-resilient communities: A nation where relevant hazards are recognized and understood, where communities at risk know when a hazard event is imminent, where individuals can live safely in the context of our planet's extreme events, and where disaster-resilient communities experience minimum disruption to life and economy after a hazard event has passed.

### Area 3

*The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.*

#### **Overall Challenges:**

The National Science and Technology Council's interagency Subcommittee on Disaster Reduction (SDR) has identified a set of Grand Challenges for Disaster Reduction that if met will bolster the capacity of the U.S. to prevent and recover from disasters, thus fulfilling the Nation's commitment to reducing the impacts of hazards and enhancing the safety and economic well-being of every individual and community.

#### **Future Outlook Statement:**

As a follow-on to the development of the Grand Challenges for Disaster Reduction, the SDR released a series of 14 hazard-specific implementation plans in February 2008 identifying priority actions for science and technology to meet these challenges. Each implementation plan identifies the following characteristics of disaster-resilient communities: A nation where relevant hazards are recognized and understood, where communities at risk know when a hazard event is imminent, where individuals can live safely in the context of our planet's extreme events, and where disaster-resilient communities experience minimum disruption to life and economy after a hazard event has passed.