

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q17

What is disaster resilience? How is it determined? Describe various elements of a resilience framework. Also mention the global targets of Sendai Framework for Disaster Risk Reduction (2015-2030).

UPSC Civil Services Mains 2024 · GS III · 15 marks · Disaster Management

Disaster and disaster management.

Core demand of the question

- Define disaster resilience and how it is determined
- Describe elements of a resilience framework
- State the global targets of the **Sendai Framework** (2015-2030)

Revision summary

Disaster resilience is the capacity to anticipate, absorb, adapt and recover without losing essential functions.

It is determined by hazard knowledge, exposure, vulnerability and institutional as well as household capacity.

A resilience framework includes assessment, risk reduction, preparedness, response, build-back-better recovery, finance and learning.

The **Sendai Framework** (2015-2030) has **seven global targets** on mortality, affected people, economic loss, infrastructure, national/local strategies, international cooperation and multi-hazard early warning.

Sendai's **four priorities** are understanding risk, governance, investment in resilience, and preparedness for recovery.

Introduction

A disaster is a **hazard plus a vulnerable society**. **Resilience** is the capacity of that society to **absorb, adapt and recover** without losing its basic functions - a school that reopens, a clinic that still has power, a household that is not permanently poor after the flood. It is determined by **what was built and practised before the siren**, not by the bravery of the week after.

Body

Meaning and determination

Disaster resilience is the ability of people, infrastructure and institutions to **anticipate, resist, absorb, accommodate, adapt to, transform and recover** from a hazard, in time and in a way that preserves essential identity and function. It is **determined** by a mix of **risk knowledge** (hazard maps, climate data), **exposure** (who lives on the floodplain),

vulnerability (poverty, caste, disability, housing quality), **coping capacity** (savings, social networks), and **institutional capacity** (codes, drills, insurance, a working NDMA-SDMA-DDMA chain). Engineers measure some of it in **building codes and redundancy**. Economists measure **how fast GDP and livelihoods return**. Communities measure **whether the poorest still eat**. A high-rise with no fire stair is not resilient because it is new. A mangrove belt can be more resilient than a concrete wall that fails once.

- **Peg:** Resilience is capacity before impact, not only relief after impact.
- **Peg:** Determination is multi-layer: hazard × exposure × vulnerability ÷ capacity.

Elements of a resilience framework

A usable framework has **risk assessment** (what can happen, to whom). It has **risk reduction**: land-use, building norms, ecosystem buffers, retrofits. It has **preparedness**: early warning, drills, stockpiles, last-mile communication in local languages. It has **response**: incident command, search and rescue, medical surge. It has **recovery and "build back better"**: not reconstructing the same death-trap. It has **governance**: who decides, how finance flows, how the disabled and women are not an afterthought. It has **finance**: contingency funds, insurance, social protection that **scales on a shock**. It has **learning**: post-disaster reviews that change the next map. India's official architecture (NDMA guidelines, SDMA, the **Disaster Management Act, 2005**) is one national version of that framework.

- **Peg:** Anticipate, absorb, adapt, transform: four verbs that should appear as budget lines, not posters.
- **Peg:** Early warning without a last-mile volunteer is an element missing its pair.

Sendai global targets (2015-2030)

The **Sendai Framework for Disaster Risk Reduction**, adopted at Sendai, Japan, in 2015, sets **seven global targets for 2030**: (a) **substantially reduce global disaster mortality** by 2030, relative to 2005-2015; (b) **substantially reduce the number of affected people**; (c) **reduce direct economic loss** as a proportion of global GDP; (d) **substantially reduce disaster damage to critical infrastructure and disruption of basic services**, including health and educational facilities; (e) **substantially increase the number of countries with national and local disaster risk reduction strategies** by 2020 (a date now passed, used as a process target); (f) **substantially enhance international cooperation** to developing countries; (g) **substantially increase the availability of and access to multi-hazard early warning systems** and disaster risk information. Those seven sit on **four priorities**: understanding risk, strengthening governance, investing in resilience, and enhancing preparedness for better recovery.

- **Peg:** Sendai shifted the global script from disaster response toward risk reduction, with countable 2030 targets.
- **Peg:** India is a Sendai party; NDMA planning is meant to map onto those targets, not only onto relief norms.

Flow diagram

Hazard -> Resilience
Vulnerability -> Resilience
Risk knowledge -> Framework
Framework -> Warning and codes
Framework -> Governance and finance
Sendai 7 targets -> Framework

Conclusion

Resilience is the pre-built capacity to take a hit and continue. It is read off maps, poverty, codes and institutions. A framework joins assessment, reduction, warning, response, recovery and finance. Sendai's seven 2030 targets count deaths, affected people, losses, infrastructure, strategies, cooperation and early warning.

Facts & figures

Sendai Framework

UN disaster risk-reduction framework adopted in 2015 at Sendai, Japan, succeeding the Hyogo Framework.

Seven global targets

Mortality, affected people, economic loss relative to GDP, infrastructure and services, DRR strategies, international cooperation, multi-hazard early warning.

Four priorities

Understand risk; strengthen risk governance; invest in resilience; enhance preparedness for response and to "build back better".

DM Act, 2005

India's statute creating NDMA, SDMAs and DDMA as the institutional spine of disaster management.

Build back better

Sendai language: recovery should reduce future risk, not rebuild the same vulnerability.

WRAP Exams · Write. Read. Analyse. Practice. · <https://wrapexams.com/upsc/mains-answers/gs-3/2024/what-is-disaster-resilience-how-is-it-determined-describe-various-elements-of-a-resilience-framework-also-mention-the-global-targets-of-sendai-framework-for-disaster-risk-reduction-2015-2030/> · ask@wrapexams.com · wrapexams.com