

Comparing Major Incidents in England and Japan: Infrastructure and Community Preparedness

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Analysing disaster readiness and response strategies internationally



Purpose and Scope of Comparison

Comparative Risk Profiles

England faces flooding, storms, and terrorism risks, while Japan contends with earthquakes, tsunamis, and typhoons frequently.

Infrastructure and Preparedness

Examining infrastructure standards and community engagement reveals differences in resilience frameworks between England and Japan.

Historical Incident Impact

Major past incidents shaped policies: Japan's 2011 earthquake advanced seismic engineering, England's 2007 floods improved emergency coordination. Inquiries and Reviews post event

Future Preparedness Challenges

Climate change and urbanisation complicate resilience planning requiring adaptive and integrated strategies in both nations.



National Risk Assessment Methodology Matrix

Terrorism

Geographic and diplomatic

Accidents and System Failures

Natural and Environmental Hazards

Human, Animal, and Plant Disease

Societal

Conflict and instability

Number 54 is Pandemic

Impact	Likelihood				
	1 <0.2%	2 0.2-1%	3 1-5%	4 5-25%	5 >25%
Catastrophic 5	28, 29		7, 26a	54	
Significant 4	21	24, 38, 56a	10, 27, 49, 51a, 51b, 51c, 61	47, 50, 55, 63	
Moderate 3	17, 32, 33, 34, 35, 36, 56c	23, 52	12, 25, 26b, 31a, 45, 53, 56b, 56d	4, 9, 11, 40, 43, 48, 60	3, 31b, 46, 62
Limited 2	18, 19, 30, 37	5, 16, 41, 42	14, 20, 58, 59	8, 13, 57b	2, 6
Minor 1	44	39		15	1, 57a

Incident Types in England

Terrorism and Security

Terrorist attacks like the 2005 London bombings, Manchester Arena, Westminster Bridge, London Bridge and Borough Market, shaped national security and the CONTEST strategy. These events reinforce protective security measures, public awareness campaigns and multi agency response.

Flooding and Severe Storms

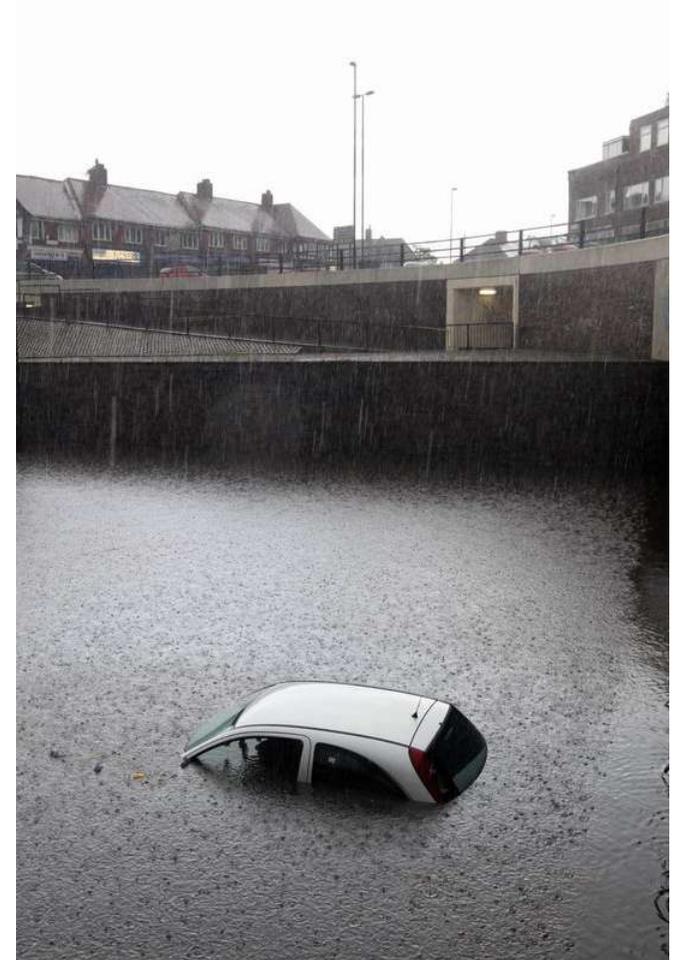
Flooding events in 2007 and 2015 and Storm Arwen 2021 and Eunice in 2022 caused widespread disruption and exposed infrastructure vulnerabilities. These events highlighted vulnerabilities in planning, flood defences and climate adaptation strategies.

Infrastructure Failures

Power outages and transport disruptions often cascade into broader societal impacts affecting daily life. Disruption to essential services, supply chains emphasise the importance of business continuity arrangements and resilient investment to ensure community wellbeing

Public Health Emergencies

The COVID-19 pandemic tested healthcare capacity and emergency planning across England. The response highlighted the need for flexible planning and effective risk communication to ultimately strengthen local coordination to protect communities during prolonged public health crises.



Incident Types in Japan

Seismic and Tsunami Hazards

Japan's location on the Pacific Ring of Fire exposes it to frequent earthquakes and tsunamis, demanding robust disaster policies and infrastructure.

Typhoons and Flooding

Severe typhoons cause flooding and wind damage, challenging Japan's drainage systems and emergency shelter capacities.

Volcanic Activity Risks

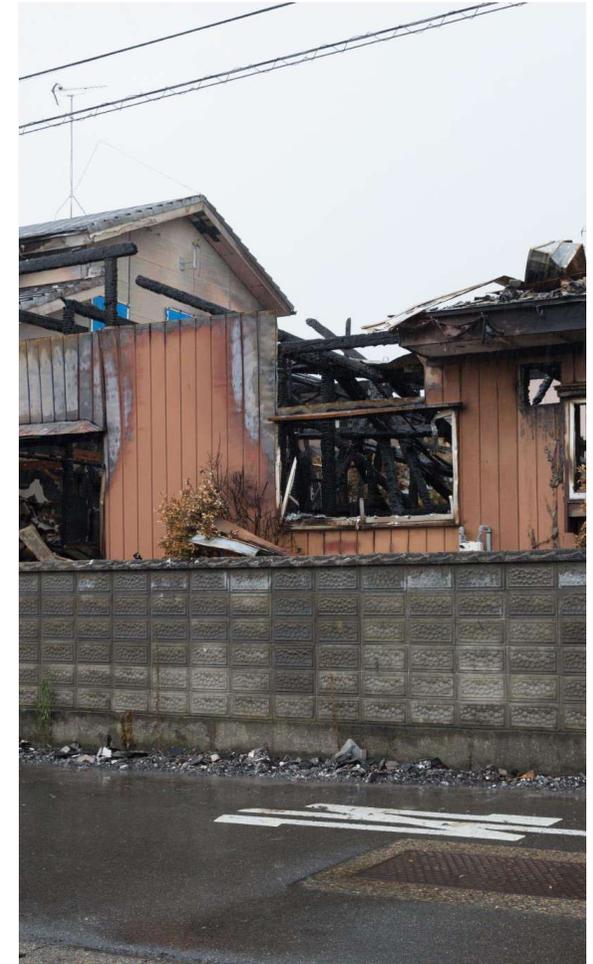
Volcanic eruptions present localized threats requiring specialized monitoring and evacuation plans to protect communities.

Technological Disasters and Preparedness

Events like the Fukushima nuclear crisis show the link between natural disasters and technological risks, highlighting the need for prevention and rapid response.

Terrorism and Security Threats

Although Japan experiences comparatively low levels of terrorism, isolated incidents such as the Tokyo subway sarin attack have reinforced counter terrorism measures.





England's Infrastructure and Resilience Framework

Civil Contingencies Act 2004

The act mandates risk assessments, emergency planning, and coordination via Local Resilience Forums for resilience.

Flood Risk Management

Significant investments are made in coastal defenses, river barriers, and sustainable drainage to mitigate flood risks.

Infrastructure Challenges

Aging infrastructure and interdependencies create vulnerabilities, with disruptions cascading through power and transport sectors.

Improving Resilience Initiatives

Regulatory oversight and climate adaptation strategies aim to enhance resilience despite gaps in public engagement.

Japan's Infrastructure and Disaster Management Systems

Earthquake-Resistant Infrastructure

Japan uses advanced engineering like base isolation and dampers to minimize earthquake structural damage.

Tsunami Defense Systems

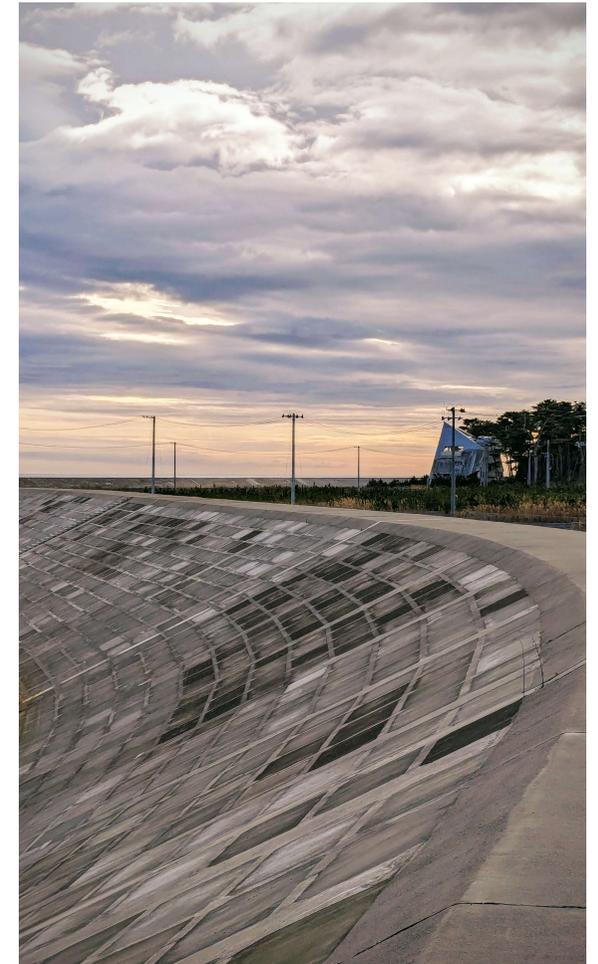
Sea walls, elevated evacuation routes, and reinforced coasts protect communities from tsunamis effectively.

Seismic Safety in Transport

Shinkansen trains feature automatic shutdowns triggered by seismic sensors to ensure passenger safety.

Disaster Preparedness Culture

Annual drills and strong legal frameworks engage millions in emergency readiness and response.



Public Awareness and Engagement in England

Public Awareness Campaigns

Campaigns like flood warnings and terrorism guidance inform citizens about risks and safety actions.

Preparedness Participation

Routine participation in drills is rare among the public; exercises focus mainly on emergency responders.

Community Resilience Initiatives

Local hubs and voluntary sectors support resilience but lack nationwide standardisation.

Shared Responsibility Culture

Promoting preparedness education and drills fosters a culture of shared responsibility for emergencies.



National Initiatives



IN THE RA
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RUN - to a p
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If there's no

HIDE - Rem
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Barricade yo

TELL - the p
is safe to do

[www.npcc](http://www.npcc.gov.uk)

Preparedness Culture in Japan

Early Public Education

Japanese children participate in frequent earthquake and evacuation drills to build preparedness from a young age.

Community Involvement

Voluntary fire corps and neighborhood groups actively engage in disaster preparedness and response efforts locally.

Nationwide Drills and Awareness

Annual drills and media campaigns involve millions, reinforcing shared responsibility for disaster safety.

Resilience Through Preparedness

Japan's culture of self-help and mutual aid strengthens community resilience especially during the first 72 critical hours.



Key Difference and Similarities



ASPECT	ENGLAND	JAPAN
Primary Risks	Flooding, terrorism, storms	Earthquakes, tsunamis
Infrastructure Resilience	Moderate, flood-focused	Advanced seismic and engineering
Public Preparedness	Low to moderate	High, culturally ingrained
Drills	Responder-focused	Nationwide, annual
Community Role	Growing but uneven	Deeply embedded

Actionable Lessons for England

Public Drills and Education

Institutionalizing public drills and adding disaster education in schools builds a culture of readiness.

Infrastructure Upgrades

Upgrading transport and energy systems is vital to resist cascading failures during extreme events.

Community Disaster Groups

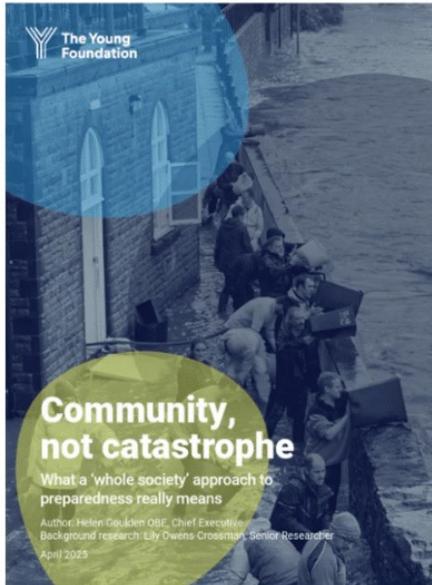
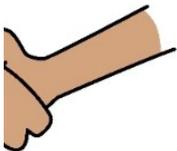
Formalising local disaster groups and supporting community hubs strengthens grassroots disaster capacity.

Household Preparedness

Encouraging household readiness with guidance and incentives reduces reliance on state interventions.

Technology for Early Warning

Using early warning systems and real-time communication improves situational awareness.



'Community, not catastrophe'



Summary and Future Outlook

Contrasting Disaster Approaches

England and Japan use different but complementary disaster preparedness methods improving resilience and recovery.

Learning and Adaptation

England can strengthen resilience by adopting Japan's cultural and technical disaster strategies.

Future Risk Challenges

Both nations must address climate change, urbanization, and technology risks for future disaster resilience.

Global Collaboration Importance

International cooperation is essential to develop next-generation strategies protecting lives and economies.

Thank You

Questions?

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