



WA Implementation Plan 2020

For the National Disaster
Risk Reduction Framework



SEMC
STATE EMERGENCY
MANAGEMENT COMMITTEE

Background

As the largest state in Australia and stretching from the north to south of the continent, Western Australia is susceptible to many different types of natural disaster year-round. It is almost impossible to mitigate the risk of a natural disaster occurring, and those actions, where possible, are generally far-reaching and beyond the scope of this document. Instead, the Western Australia Implementation Plan (WAIP; this document) focuses on mitigating the **impacts** of natural disasters through understanding, planning, and preparation.

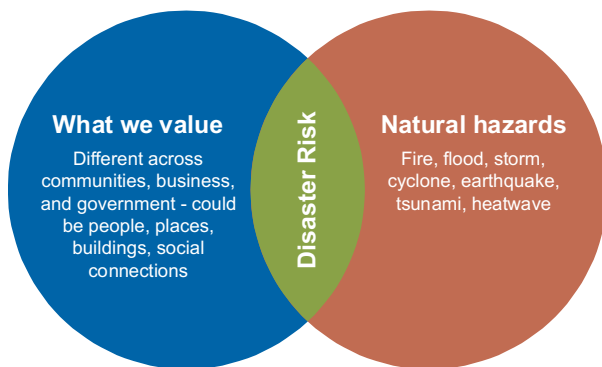


Figure 1: Where what we value as society interacts with a natural hazard, we get disaster risk.

To effectively mitigate disaster risk, a definition of risk needs to be identified and agreed. For the purposes of this document,

and the consultation conducted to build it, disaster risk refers to the potential for a natural hazard (or related secondary consequences) to impact the factors within WA that we as individuals, communities, industry, and government value¹.

Through the research and broad consultation conducted during the development of the WAIP it was identified that the actions that need to be taken to reduce disaster risk are not generally specific to particular natural hazards. Instead, the focus should be on understanding a personal (or business) risk profile and tailoring more general actions to the situation at hand. For example, it was identified that many individuals within communities do not understand the risk of natural disasters to them personally and the services they depend on. Regardless of whether the risk is bushfire, flood, or storm, enabling understanding and incentivising preparation can universally reduce the impact of disaster.

The WAIP is primarily tailored to supporting these universal, non-hazard-specific actions as the best strategies for reducing risk of impact from a natural disaster. However, the WAIP is also intended to promote and support innovation in the risk reduction space in relation to specific hazards, where innovation can deliver value for money initiatives even if they do not fall into the category of universal actions or specific action areas within the plan.

¹ Australian Government, Department of Home Affairs. 2018. Profiling Australia's Vulnerability: the interconnected causes and cascading effects of systemic disaster risk.



Plan development

Through workshops and interviews conducted with stakeholders across all levels of government, industry, and community groups, key areas for action have been identified. These action areas form the basis of the plan and align to the outcomes identified in the National Disaster Risk Reduction Framework, a document designed to outline the strategies and outcomes that should be delivered in order to meet the national disaster risk reduction goal. By taking effective action in each of these areas, it is expected that the outcomes from the NDRRF will be met. Each action area has suggested initiatives that can be completed; these initiatives are examples only and have not yet been formally costed or scoped. The purpose of this plan is to provide a mechanism to link specific initiatives at all levels to the outcomes of the NDRRF so that initiatives can be assessed for suitability in achieving the NDRRF outcomes.

The WAIP was originally designed as a “program logic”, utilising the goals and outcomes of the NDRRF as the long-term goals for disaster risk reduction. This approach was taken to ensure that the plan was built on delivering the outcomes as

specified in the NDRRF, through shorter term objectives that reflected the WA context. The plan has been reformatted to focus on the action areas; this enables delivery by stakeholders who may be unfamiliar with the program logic structure, but ensures the relevant information from a program logic such as the related outcomes and objectives is still captured and can be tracked.

The primary funding mechanism for the WAIP is the National Partnership Agreement (NPA), an agreement between the states and commonwealth to fund disaster risk reduction activities that are specifically intended to deliver the outcomes of the NDRRF. The WAIP is not specific to the NPA; it is designed to meet the outcomes of the NDRRF and has been developed with the intent that it can be expanded beyond the funding provided through the NPA if additional resources become available. The plan will also contribute to the delivery of the State Emergency Management Committee (SEMC) Strategy (currently in draft) where it aligns to the NDRRF; these outcomes are linked in the relevant action areas.

The WAIP will be assessed against achievements at the end of each year and adjusted as necessary.

Assessment mechanisms will be determined once the National Monitoring, Evaluation, and Learning (MEL) framework has been

developed. Similar to the NDRRF, it is expected the MEL Framework will provide the basis for evaluating the effectiveness of the WAIP once adjusted for any WA-specific requirements. Given the general difficulty in appropriately identifying impact of any long-

term measures suggested in wide-reaching initiatives such as the NDRRF, WA will be relying on approved indicators for each action area to approximate the effectiveness of the program.

Action Areas

The WAIP has been divided into 11 areas for action. These action areas are designed to be a high level summary of the areas of concern identified through consultation with stakeholders across government, industry, and community groups. Each initiative approved through the WAIP will fall into one of these action areas, with delivery on the intent of each action area contributing to the delivery of the five-year outcomes from the NDRRF.

1	Community-focused resilience
2	Knowledge and Risk information sharing
3	Vulnerable/at-risk persons and communities
4	Fostering individual responsibility
5	Business continuity and resilience
6	Security of Supply Chains and Infrastructure
7	Essential services: alternatives & supply security
8	Building codes, legislation, and enforcement
9	Preservation of heritage and natural environment
10	Funding models and allocation
11	Innovation, research & design

All actions currently listed in the action areas are indicative only; they are subject to the proposed grants allocation process and will be scoped and approved as part of implementation.

Each Action Area identifies the priorities/outcomes from the NDRRF that it addresses. For reference, the below table summarises the Four Priorities and their related five-year outcomes from the NDRRF.

Table 2: Summary of the five-year outcomes from the NDRRF

Priorities	1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
Five-year outcomes	1.1 Legal liability of decision-makers relating to disaster risk information is further understood and acted upon	2.1 Public, private and community sector decision-makers are working towards addressing disaster risk along with other risks	3.1 Existing and future disaster risk reduction investments target high priority locally and nationally significant disaster risks	4.1 All sectors and communities understand the extent to which they have a responsibility to reduce disaster risk
	1.2 Australia is supported with enduring and cohesive national capabilities that enable the creation, capture and sharing of useful disaster risk information	2.2 Decision-making processes and models, including cost benefit analyses, adequately address current and future disaster risks	3.2 Where possible, investment in disaster risk reduction is designed to maximise broader outcomes including increased productivity, improved connectivity, and social inclusion	4.2 Mechanisms are in place nationally to identify and reduce disaster risk arising from cross-sector interdependencies
		2.3 Priority disaster risks are identified and actively mitigated		4.3 Transferred ownership of disaster risk through commercial exchanges is transparent and acknowledged
1.3 Meaningful disaster risk information is freely disclosed, shared and integrated into risk planning across sectors	2.4 Integrated and robust frameworks are used to assess and reduce disaster risk in all environments, but particularly infrastructure, land use and development planning	3.3 Investments in disaster risk reduction and resilience limit future disaster recovery costs	4.4 All sectors and communities are engaged in a national mechanism to connect and guide efforts to reduce disaster risk	

The eleven Action Areas are outlined in the following pages:

- Describe the key issue/s and what benefit will be gained from taking action;
- Identify the NDRRF outcomes that will be met;
- Provide examples of actions that could be taken to meet the outcomes; and
- List the proposed objectives that the suggested actions would deliver. These objectives, if met, can also be considered as indicators that the actions taken are contributing to the delivery of the specified NDRRF outcomes.

1. Community-focused resilience

Scope

How do we maintain communities in the face of natural disasters? Communities are not just created through the location they live in, but through social ties, perspectives, shared interests, and common goals. Natural disasters can significantly diminish communities, even if much of the physical infrastructure remains intact. One of the key impacts of a natural disaster can be social isolation, whether through disconnection of critical communication services or roads, the mental stress of dealing with a disaster, or community fatigue. Community focused resilience to natural disaster involves understanding and reinforcing the elements of a community that are not physical to ensure that the community as a whole can continue.

By building community-focused resilience alongside more traditional natural disaster risk mitigation strategies, communities are more likely to support each other, reduce the impact on physical and mental health of community members, and reduce the external support required for the community.

NDRRF Five-year outcomes addressed			
1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.2	2.1, 2.4	3.2, 3.3	4.1, 4.4

Actions

- Identify opportunities to include emotional resilience in community disaster preparation planning
- Review state, district, and local EM structures to include perspectives from a wider range of community voices / stakeholders
- Develop resources to engage communities in identifying and planning for disaster risk reduction
- Develop strategies and plans to maximise use of social technology in disaster risk reduction.
- Identify and plan for opportunities to build betterment into physical recovery of communities
- Understand the values of, and what is valuable to, communities
- Develop local strategies to engage the community across the PPRR2 spectrum e.g. buy local, social gatherings, community gardens

² Prevention, Preparedness, Response, & Recovery

Indicators / Objectives

- Community priorities regarding disaster risk reduction are understood by stakeholders and incorporated in disaster risk reduction activities
- Plans are developed to improve community resilience
- Communities are engaged in developing risk reduction plans and actions

2. Knowledge and Risk information sharing

Scope

Underpinning most action areas in the WAIP is developing understanding and knowledge. By increasing the level of knowledge about natural disaster risk and improving the mechanisms for sharing this information on both state and national levels, actions taken to reduce risk will be more effective, ultimately resulting in a reduction in the impact of natural disasters on lives, property, and communities.

This can be information about the natural disaster risks faced, their potential impacts, and what can be done to mitigate those impacts. It also includes learning from experience through lessons management, knowledge sharing and exercising. In many cases, lessons and research is applicable across multiple action areas, stakeholders, and initiatives; as such, a key focus within this action area is developing mechanisms and relationships to ensure knowledge is available and shared. Work completed in this action will enable better understanding of natural disaster risk, collection of related knowledge, and provide mechanisms to ensure the data is accessible to stakeholders.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.2, 1.3	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3	4.1, 4.2, 4.3, 4.4

Actions

- Develop mechanisms for sharing risk information across all sectors within the state and nationally
- Embed ADIR lessons management processes, systems and information sharing state-wide and nationally
- Identify international or national research that may be relevant to WA and analyse/contextualise
- Conduct research on specific natural hazards that informs disaster risk actions
- Develop and make available to decision makers hazard modelling scenarios and data
- Build upon systems and processes for lessons management and information sharing across WA organisations and nationally

Indicators/Objectives

- Continuous improvement in WA Emergency Management is driven by lessons, risk information and research
- Information about hazards, risks and consequences is widely accessed, trusted and applied
- Quality and relevant research or analysis that is conducted is shared and available locally and nationally
- Relationships are built upon between government, industry, and community to facilitate better sharing of key risk data and information
- Systems and processes support rather than constrict the sharing of information and data

3. Vulnerable/at-risk persons and communities

Scope

Certain sections of the community are less able to plan and prepare for disaster, or evacuate on their own when a natural disaster requires. Actions are needed to support at-risk persons and communities to minimise their risk from natural disaster in an empathetic and supportive manner, including better understanding of options, increasing the role of community & volunteers in planning and preparation, and providing strong lines of communications.

By enabling and supporting at-risk persons and communities to prepare for natural disaster, the impact will be reduced and community built.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.2, 1.3	2.1, 2.4	3.2, 3.3	4.1

Actions

- Collaborate across stakeholder groups to identify at-risk groups, or develop strategies to allow vulnerable persons to self-identify
- Identify and understand systemic impact of services disruption on vulnerable and at-risk persons, and incorporate this understanding into disaster risk reduction activities
- Develop information for those at risk (e.g. elderly, CALD, people with disabilities) to plan and prepare on an individual level
- Develop and leverage community and social networks to assist at-risk persons to reduce disaster risk
- Ensure disaster risk information is provided in a number of formats (e.g. audio, other languages, tactile, large print)

Indicators / Objectives

- Capability to identify vulnerable/at-risk persons with regards to disaster risk is developed
- Community plans are in place to assist in reducing disaster risk for vulnerable/at-risk persons and communities
- Systemic impact of natural disasters on vulnerable/at-risk persons is understood

4. Fostering individual responsibility

Scope

Individuals tend to underestimate the likelihood of a natural disaster impacting them personally, and as a result tend not to understand the risks inherent in a natural disaster, how a natural disaster may impact them, and what they can do on an individual level to mitigate personal risk. This extends to secondary impacts, such as a cyclone or major bushfire that may not impact them directly through loss of property or injury, but cuts supply lines and restricts access to goods and services. This leaves many individuals unprepared when a natural disaster does occur, increasing the strain on community resources. As individuals are not generally experts on understanding disaster risk, information needs to be readily available for and understandable by the community.

By increasing the level of understanding of personal disaster risk, and simple actions and planning individuals can do to reduce the impact of a natural disaster, it is expected that individual resilience will increase and therefore avoid or mitigate key impacts of natural disasters, including over-reliance on critical services during an emergency.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.3	-	3.2	4.1

Actions

- Implement education campaigns on vulnerabilities in the built environment (e.g. utilities, transport) to natural disaster, and personal strategies for mitigation if they are impacted
- Develop risk information sharing processes that enable individuals to make risk-based decisions
- Develop “independent households” – how to be more self-sufficient – information packages and support for both individuals and communities
- Improve individual understanding of commercial risk mitigation options (e.g. insurance)

Indicators / Objectives

- Information on natural disaster risk for individuals and communities is available and able to be personalised
- Individual natural disaster risk reduction plans are being developed
- Availability and clarity of information regarding commercial risk mitigation is increased
- Increased individual resilience to cope with and adapt to consequences of disasters

5. Business continuity and resilience

Scope

Similar to the issue identified in Action Area 4: Fostering Individual Responsibility, businesses – particularly small to medium enterprises – tend to underestimate their risk of impact from a natural disaster. Business continuity plans are often lacking, and if they exist they tend to ignore secondary impacts such as disruption to their own supply chains, or their place in an upstream supply. Understanding natural disaster risks particular to their location, suppliers, and customers and planning to mitigate impacts of disruption will build resilience in businesses and improve relationships with the community.

By improving business continuity planning through understanding, planning, and preparation, the cost of natural disaster impact is expected to be reduced both directly to businesses and indirectly to the communities that support and interact with them.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.3	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3	4.1, 4.2, 4.3

Actions

- Develop (or expand on existing) tools and programs to support small and medium business with business continuity planning
- Research, publish, and promote localised disaster risk information aimed at industry
- Identify diversification strategies/examples for disaster risk reduction
- Develop a value for money risk reduction guide for small to medium businesses

Indicators / Objectives

- Information on localised disaster risk for businesses is available
- The number of small to medium businesses with business continuity plans that include natural disaster increases
- Tools are readily available to support development of business continuity plans
- Industry and public services understand risk and have plans to maintain service delivery to the community

6. Security of Supply Chains and Infrastructure

Scope

Supply chains within WA for essential goods and services are complex and not broadly understood. Many supply chains rely on specific transport routes or types, with minimal or no contingency options in place. Communities and individuals are also generally unaware of potential risks to supply chains and how it may impact them personally in the event of a natural disaster.

Appropriate planning and research is required to better understand the limitations of supply chains and related infrastructure across the state. Collaborative action and cooperation between government, industry, and communities can implement alternatives for key supply chains.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.3	2.1	3.2, 3.3	4.1, 4.2, 4.3

Actions

- Develop fuel, food, and medical supply plans for communities, businesses, and at a state level.
- Identify points of failure in supply chain at the community, local government, and state levels.
- Collaborate to utilise existing assets as redundancy in the event of a natural disaster. Create the agreements prior to disaster occurring.
- Plan for supply chain continuity, including interstate and international links, secondary impacts, and upline/downline impacts.
- Minimise reliance on supply chain through redundancy

Indicators / Objectives

- Supply chain planning is completed at the local, and state levels.
- Plans involve collaboration and agreement between industry and government
- Essential supply redundancy is built at the individual, community, and state levels
- Strengthened engagement around critical infrastructure

7. Essential services: alternatives & supply security

Scope

Essential services such as power, water, and telecommunications need to be protected and maintained in the event of a natural disaster. Industry and service suppliers have action plans in place, but these do not generally extend to communities. Particularly in regional areas of WA, supply of essential services can be limited, and the service supply plans and alternatives available in metropolitan areas are generally not transferable to regional and remote communities. To reduce risk and improve resilience of access to essential supplies, collaboration between providers, communities, and government should be increased, and communities and individuals should be provided with tools and information to understand the risk to essential services particular to their situation in the event of a natural disaster. Innovative supply solutions (backup or primary) should be understood in the context of natural disaster risk – for example, solar power versus poles and wires in areas at risk of bushfire or cyclone.

By ensuring natural disaster risks to essential services are understood and planned for collaboratively across communities, industry, and government, the impact of natural disasters should be mitigated. Understanding creative solutions to essential service supply will enable communities, industry, and government to provide cost effective solutions to the mitigation of disaster risk to essential services.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.3	2.1, 2.4	3.1, 3.3	4.1

Actions

- Investigate clearance zones around essential assets
- Identify and mitigate single points of failure in essential service delivery
- Map and understand interdependency of essential services (e.g. power, banking, telecommunications)
- Renewables and resilience strategy – identify resilience of renewable/innovative power sources to different disasters and locations
- Develop plans for utilisation of redundancies in essential services (maximise value of risk reduction preparation)

Indicators / Objectives

- Single points of failure in essential services networks are identified, and contingency plans in place at the community, industry, and government levels where appropriate
- Interdependency between essential services is mapped and understood
- Resilience of renewable and alternative power supply is understood

8. Building codes, legislation, and enforcement

Scope

As the environment in which we build changes, whether through a changing climate, increasing population densities or advances in construction and building materials, our built environment must adapt. This is particularly challenging with existing assets, as retrofitting current buildings is often significantly more expensive than applying higher / more disaster resilient building standards at the point of construction. The different levels of governance over the built environment increase the complexity of efficiently mitigating disaster risk.

By simplifying existing guidelines and aligning them across all levels of governance, the cost of reducing disaster risk in buildings will decrease. By improving enforcement processes and increasing collaboration across government, adherence to the guidelines is anticipated to increase. Research and analysis of the most cost effective mitigations to existing assets that can be shared across industry, government, and communities will improve the resilience of assets to natural disasters.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.3	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3	4.1, 4.2, 4.3

Actions

- Develop climate change adaption standards
- Advocate for a national approach to building in disaster risk areas
- Develop strategies to incorporate building and infrastructure audits for contingency planning
- Review land use planning and safe site selection standards and processes against disaster risk information
- Coordinate approach to enforcing legislation e.g. legislated by state, enforced by local authority

Indicators / Objectives

- Cost effective mitigation adaptations are identified and implemented for existing assets
- Natural disaster risk by location is understood and incorporated into building approval mechanisms
- Audits and inspection of new and existing assets are conducted, and breaches of risk mitigation requirements are enforced.
- Codes and legislation are reviewed and updated where necessary to incorporate natural disaster risk considerations

9. Preservation of heritage and natural environment

Scope

Cataloguing of important sites across WA is done inconsistently, with key stakeholders from community, industry, and government not always aware of where important sites are located, what risks there are to sites from natural disasters, and what planning and preparation can be done to mitigate the impact should a natural disaster occur. Plans may exist at individual group levels, but the information is not shared and accessible for all stakeholders in emergency management and response. Many heritage and natural sites have different requirements for preservation than more common traditional built environments which are not often captured through standard emergency/contingency planning. Opportunities have also been identified to build on collaboration with traditional owners and the roles that they can undertake in identifying, monitoring, and protecting culturally significant sites.

During the response phase of a natural disaster, damage can be done to significant sites by emergency responders unaware the site exists.

By enabling understanding of and planning for the risks these culturally important sites face from natural disasters, the impact can be mitigated, reducing damage to irreplaceable sites and minimising costs to repair.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.3	2.1, 2.4	3.2, 3.3	4.2, 4.4

Actions

- Identify and promote economic benefits of preserving the environment to incentivise community disaster risk reduction activities
- Create opportunities to incorporate local knowledge in disaster preparation and response through community, local and state government forums
- Develop strategies to align environmental considerations to disaster risk reduction e.g. shared use of fire breaks for baiting feral animals
- Maximise local heritage and environment groups assisting with risk reduction
- Develop incentive structures for active land management
- Include natural disaster risk in species management plans
- Collaborate with tourism industry to solidify link between visual amenity (environment) with business impact

Indicators / Objectives

- Community and industry planning includes preservation of heritage and natural environment
- Collaboration between government, community groups, and industry regarding heritage and natural environments is increased
- Disaster risk reduction is included in environmental planning

10. Funding models and allocation

Scope

Funding for natural disaster risk reduction is currently provided by a variety of sources, under different rules, for different amounts. The variability between funding requirements makes it harder for potentially eligible recipients to access funding. In many cases, people are unaware of what disaster risk reduction funding is available, as there is no list maintained that can be readily accessed and no one organisation responsible for coordinating a list of this sort. The confusion over funding means risk reduction initiatives are not equally assessed for suitability, and some beneficial actions may not be completed. The WAIP (this document) is a key action for simplifying funding as it is designed for risk reduction across the state.

By simplifying funding allocation processes for risk reduction activities, duplication (and associated costs) is expected to decrease, access by key stakeholders is expected to increase, and a coordinated approach should assist in targeting the most suitable initiatives.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3	4.1, 4.3, 4.4

Actions

- Review funding models to provide ongoing funding, rather than one-off (where appropriate).
- Develop of community or state guidelines that can be used as a template for grants / funding models
- Develop project risk management planning guidelines to address disaster risks (building and infrastructure projects) for funding models

Indicators / Objectives

- Funding available for disaster risk reduction activities is mapped and understood
- The number of community groups and other stakeholders aware of and applying for risk reduction funding is increased

11. Innovation, research & design

Scope

As communities and the environments they operate in change, risk reduction activities need to adapt. Innovative thinking and creative design are more generally strategies for implementing the other action areas, but have been called out here to promote innovative thinking and design in the risk reduction space. Innovative ideas that do not strongly align to other action areas can be assessed for consideration under this item; by separating these ideas out we can ensure the outcomes of the NDRRF are addressed through the specified action areas, while including a mechanism to assess ideas currently not in scope. It is expected that any initiatives funded under this action area would form the basis for review of the action areas during the annual review of the WAIP.

By providing a specific action area for innovative thinking, WA can ensure that risk reduction activities are adaptable and that the plan stays relevant to the needs of the state. It also ensures that funding can be appropriately allocated between action areas so that the outcomes from the NDRRF are met.

NDRRF Five-year outcomes addressed

1. Understand Disaster Risk	2. Accountable Decisions	3. Enhanced investment	4. Governance, ownership, and responsibility
1.1, 1.2, 1.3	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3	4.1, 4.2, 4.3, 4.4

Actions

- Encourage the development or trial of a strategy, plan, policy, or action to reduce natural disaster risk that does not fall into any of the other action areas

Indicators / Objectives

- N/A