



## COVERSHEET

<b>Minister</b>	Hon Michael Wood	<b>Portfolio</b>	Workplace Relations and Safety
<b>Title of briefing</b>	Adventure Activities Regulatory Regime: Proposed Changes	<b>Date to be published</b>	8 November 2022

### List of documents that have been proactively released

<b>Date</b>	<b>Title</b>	<b>Author</b>
21 September 2022	Adventure Activities Regulatory Regime: Proposed Changes	Office of the Minister of Workplace Relations and Safety
21 September 2022	Cabinet Economic Development Committee Minute of Decision: DEV-22-MIN-0222	Cabinet Office
14 June 2022	Regulatory Impact Statement: Strengthening the adventure activities regulatory regime	Ministry of Business, Innovation & Employment

### Information redacted

**YES**

Any information redacted in this document is redacted in accordance with MBIE's policy on Proactive Release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

- Confidentiality

# Regulatory Impact Statement: Strengthening the adventure activities regulatory regime

## Coversheet

Purpose of Document	
Decision sought:	<i>Policy decisions on changes to strengthen the adventure activities regulatory regime</i>
Advising agencies:	<i>Ministry of Business, Innovation and Employment (MBIE)</i>
Proposing Ministers:	<i>Minister for Workplace Relations and Safety</i>
Date finalised:	<i>14 June 2022</i>
Problem Definition	
<p>The objective of the adventure activities regulatory regime is to minimise the preventable harm that occurs in the sector and provide assurance to activity participants, the government and others that safety in adventure activities is being managed effectively.</p> <p>In December 2019 Whakaari erupted with 47 people on the island as part of guided tours. Twenty-two people were killed and 25 were seriously injured. This incident called into question whether the adventure activities regime was achieving its objectives of reducing harm and providing assurance, and whether the regime could more effectively prevent catastrophic events.</p> <p>Reviews of the regulatory regime following the Whakaari tragedy have identified areas the regime should be strengthened to effectively achieve these objectives. Specific issues are:</p> <ul style="list-style-type: none"><li>• <i>Increasing the focus on natural hazards:</i> Natural hazards (such as floods, avalanches and eruptions) are associated with the majority of harm in the sector but understanding and management of risks from these hazards across the sector is inconsistent.</li><li>• <i>Improving risk communication:</i> Participants do not consistently feel they have been given enough information about risks to give informed consent to take part in activities. There appears to be an unclear view across the sector of what good practice risk communication is.</li><li>• <i>Strengthening WorkSafe's regulatory leadership:</i> The regulator's limited engagement with the sector has exacerbated other issues in the regime. The regime can better support the regulator to take a stronger and more active role in monitoring and administering the regime, providing guidance and enforcing requirements.</li></ul> <p>MBIE's view is that both regulatory and non-regulatory changes are required to address these areas of weakness and support the regime to achieve its core objectives more effectively.</p>	

Executive Summary
<p>Safety in the adventure activities sector is primarily regulated under the Health and Safety at Work (Adventure Activities) Regulations 2016. The core requirement of these regulations is that all adventure activity operators must undergo an audit of their safety management systems at least once every three years and register their operations with WorkSafe New Zealand (WorkSafe).</p> <p>Overall, the regulatory regime appears to have improved safety standards in the adventure activities sector, though recent harm statistics remain high due to the Whakaari tragedy. However, the Whakaari tragedy demonstrates that there continues to be a risk of catastrophic events (single incidents causing multiple fatalities and serious injuries) occurring in the sector.</p>

Further improvements can be made in how the regime minimises harm and provides assurance safety is being managed well. As noted above, opportunities for improvement include increasing focus on the management of natural hazard risks, strengthening risk communication and strengthening the regulator's role.

*The regime can be strengthened by a package of changes targeted to these issues*

Much of the harm in adventure activities is associated with natural hazards (including both isolated fatalities that occur semi-regularly and catastrophic events). However, the regime does not currently provide requirements or standards for assessing the specific risks associated with natural hazards. Introducing specific requirements into the regime will assist in standardising and spreading good practices, and ensure these risks are given appropriate attention by operators and auditors.

Adventure activities, by definition, expose participants to serious risk. An important part of maintaining social licence for these activities is ensuring participants receive sufficient information about these risks to give informed consent to taking part. Current requirements for risk communication are non-specific, leaving individual operators to interpret what is required. Setting more detailed requirements in the regime will provide an opportunity to define and spread good practice, lifting the quality of risk communication across the sector.

Regulator oversight and engagement with the adventure activities sector has traditionally been limited. Prior to the Whakaari eruption, the sector was considered a low priority for WorkSafe resourcing due to the relatively low harm rate compared to other sectors. This led to a number of weaknesses in administration, oversight and enforcement of the regime. WorkSafe currently has a programme of operational improvements underway that will strengthen their oversight of the regime, but the current regulatory framework also has several gaps that make oversight and enforcement by the regulator unnecessarily difficult.

The objective of this review is to introduce quickly implementable changes in each of these issue areas to strengthen how the adventure activities regime achieves its core objectives: to minimise preventable harm in the sector and to provide assurance.

#### *Options considered*

- a) We have considered a number of regulatory and non-regulatory options to achieve this objective. To identify a preferred option for change, we assessed each option against the following criteria:  
Reducing harm – would the option reduce the potential for serious harm and fatalities arising from participating in adventure activities
- b) Assurance – would the option support greater assurance for all that the adventure activities sector appropriately manages safety risks
- c) Costs – the costs of the option are not unduly burdensome
- d) Access to activities – the option would not result in public access to activities being significantly restricted
- e) Changes are implementable quickly – that changes can be implemented within one-two years and the outcome of changes are observable within two-four years,

Our preferred option is for a package of regulatory and non-regulatory changes that includes:

- Introducing specific requirements for operators to have processes to identify, assess and manage risks from natural hazards into the safety audit standard.
- Creating a specific regulatory duty for operators (the businesses/organisations providing activities to participants) to have processes in place to communicate risks to participants and expanding the safety audit standard to include details of what these risk communications must include.
- Expanding the information operators are required to provide to WorkSafe to register and to notify WorkSafe when certain near-miss incidents involving natural hazards occur.
- Adjusting the registration process, so that operators directly register their operations with WorkSafe rather than auditors providing information on their behalf.

- Providing WorkSafe more flexibility in when it can decline, suspend, cancel or add conditions to an operator's registration to provide adventure activities and to allow suspensions/cancellations in more circumstances where serious safety concerns arise.
- Updating and providing new guidance to operators about good practice risk management for adventure activities.

These changes will be supported by changes to supporting instruments, such as education about changes for the sector and guidance to auditors.

#### *Other options considered*

In reaching this preferred package, we have considered a range of alternative changes. These included creating additional regulatory duties for landowners to manage and provide information on natural hazard risks and introducing a mandatory risk classification system to assess and communicate risks. These options are not preferred due to the implementation costs and potential for negative impacts on access to activities that would result.

We have also considered whether solely non-regulatory changes, such as changes to guidance materials and the audit standard, would sufficiently address the problems identified. While non-regulatory changes are a significant component of our recommended option, we consider moderate regulatory changes are also needed to support a stronger role for the regulator and to provide additional assurance that safety standards in the sector are consistently high.

#### *Stakeholder views*

**Operators and industry associations** consider that adventure activities are generally safe and well regulated, therefore significant regulatory change is not required. A repeated sentiment is that the Whakaari tragedy resulted from a unique confluence of events and should not be taken as an indication of safety failings in the wider sector.

The sector is highly sensitive to any price increases, noting businesses operate on tight margins (which have been exacerbated by the COVID-19 pandemic) and any significant increases in compliance costs would result in businesses closures.

Operators and associations expressed moderate support for changes that will formalise and embed current good practice for natural hazard risk management and risk communication, and support WorkSafe to have a stronger role (provided these do not increase compliance costs). They oppose any more significant regulatory changes, particularly the introduction of any duties for landowners.

**Adventure activity participants** also consider that safety is generally being managed well in the sector. Participant views on current risk communication practices are mixed (likely reflecting personal experiences), with many considering participants are adequately informed of risks, but a significant minority considering more information would be of value.<sup>1</sup>

**WorkSafe** considers that it needs to take a strengthened regulatory role towards the sector. WorkSafe agrees that regulatory changes will help support it in this stronger role.

**Audit providers** consider additional clarity in some areas such as natural hazard risk management may be of value, but more significant regulatory changes such as landowner duties or a risk classification framework are unlikely to be effective or viable. Audit providers generally indicate they consider non-regulatory improvements, such as guidance materials and audit focus, the changes most likely to lead to improved practices.

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<sup>1</sup> Approximately 40% of "participant" and "member of the public" respondents in the 2021 consultation indicated a preference for additional information beyond what is current standard practice to provide.

## Summary of impacts

### *Who are the main expected beneficiaries?*

The main expected beneficiaries of the package of proposals are participants and workers in adventure activities, who experience reduced risk of harm and receive clearer information about risks.

Secondary beneficiaries include registered adventure activity operators and the New Zealand public. Expected benefits to these parties include: clearer requirements for operators making compliance easier, more consistent application of good practice by operators across the sector, and reduced harm minimising negative reputational impacts on the tourism industry and draws on the New Zealand health and ACC systems from the sector.

### *Marginal costs*

Minor cost increases are expected to result for operators as changes embed. Costs will include: administrative costs to review processes and documentation to ensure they meet new standards, costs for some operators to acquire more information about relevant natural hazard risks, minor increases in audit costs as audits examine compliance with new requirements, minor new administrative costs as operators are required to directly provide information to WorkSafe for registration.

We expect these minor cost increases will reduce over time as operators understand and have at hand the required information to meet new requirements.

Changes will also result in some cost increases to the regulator to develop new guidance materials, make updates to the safety audit standard to align with new requirements, and develop new registration processes. Funding was provided to WorkSafe in Budget 21 to fund operational policy, the development of new guidance and resources, and education and engagement activities. WorkSafe has indicated the costs of the recommended option can be met from within this existing funding.

### *Risks and unintended impacts*

There is a low risk that this package of changes are not considered significant enough to address safety issues in the sector, particularly given the association of this review with the Whakaari tragedy. However, as feedback in consultation indicated only minor adjustments to the regime were needed, this risk does not appear significant. The package of changes recommended includes the elements key stakeholders have indicated will have the most practical impact on safety.

There is a low risk that the changes are not well received by the sector, resulting in complaints and reluctance from operators to comply with new requirements. The effectiveness of changes will be limited if operators take a view of taking the minimum action required to comply due to disagreeing with new requirements. However, this risk is limited as the recommended package of changes does not include proposals the sector indicated would not be viable or would create costs grossly disproportionate to any safety gains (such as additional regulatory duties for landowners). To further manage this risk, MBIE will continue working closely with key industry stakeholders to draft regulatory changes and communicate the rationale of changes to the sector.

There is also a low risk that this package of changes leads to unintended outcomes, such as operators restructuring their businesses to fall outside the coverage of the Regulations to avoid compliance burdens. This could lead to negative safety outcomes, if for instance, operators shifted to providing unguided activities.<sup>2</sup> However, given the recommended package is expected to only result in minor cost increases for operators, this risk is considered minimal.

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<sup>2</sup> While in this situation operators continue to have duties under the Health and Safety at Work Act 2015 to minimise risks from their work, in practice the removal of guides will reduce the extent to which operators can influence how risks are managed. In such a situation operators would also not be subject to the additional checks of mandatory safety audits and registration imposed by the Adventure Activities Regulations.

## Limitations and Constraints on Analysis

### *Project scope*

This project is a targeted review of the adventure activities regime. It focuses on whether there are quickly implementable changes to strengthen the regime, with a particular focus on improving the management of natural hazard risks. This limited scope has precluded the consideration of some issues and options, such as:

- Changes to the definition of “adventure activities” subject to the regime
- Major structural and operational changes to the regime, such as removing sector-specific regulations and relying on general work health and safety requirements, or changing the role of third-party auditors
- Changes to the HSW Act or other health and safety at work regulations that will significantly impact businesses beyond the adventure activities sector
- Altering the regime’s interactions with transport regulatory systems.

A full review of the adventure activities regime is planned to commence in 2026 that will include assessment of these broader issues and potential changes.

### *Evidence certainty*

We have moderate to high confidence in the evidence base describing the problems being addressed in these proposals. Quantitative data about harm in the sector is subject to a number of gaps (such as lack of information about non-fatal harm, causal factors of harm and lack of information from certain historical timeframes). Reliance has therefore been placed on collecting extensive qualitative data from interviews with key stakeholders, public consultation and involving an expert reference group in option development. Sections 1.4 to 1.6 provides a summary of the consultation undertaken.

We have moderate confidence in evidence outlining the marginal costs and benefits associated with the proposals. Given the indirect relationship between regulatory settings and harm impacts, we are not able to quantify the impacts of changes. Our assumption is that established work health and safety intervention logic (refer Figure 1 on page 10) will apply. Limited data has been able to be obtained on the precise costs to the sector of changes, however the options recommended are likely to result in only minor costs. Where consultation with stakeholders on proposals indicated costs would be significant and disproportionate to safety gains, these proposals have not been recommended.

## Responsible Manager(s) (completed by relevant manager)



Lisa Collins, Policy Manager  
Health and Safety Policy  
Workplace Relations and Safety Policy  
MBIE  
25 July 2022

## Quality Assurance (completed by QA panel)

Reviewing Agency:	Ministry of Business, Innovation & Employment
Panel Assessment & Comment:	MBIE’s Regulatory Impact Analysis Review Panel has reviewed the attached Impact Statement prepared by MBIE. The panel considers that the information and analysis summarised in the Impact Statement <b>meets</b> the criteria necessary for Ministers to make informed decisions on the proposals in this paper.



## Section 1: Diagnosing the policy problem

### 1. What is the context behind the policy problem and how is the status quo expected to develop?

1. On 9 December 2019 Whakaari White Island erupted. Forty-seven people were present on the island at the time of eruption as part of guided tours. This eruption resulted in 22 deaths and left 25 people with serious injuries.
2. Guided tours on Whakaari fall within the scope of activities regulated under the health and safety adventure activities regulatory system. Since the eruption, reviews have been undertaken of instruments and actors within this regulatory system to identify areas that can be improved to reduce the risk of future harm in the sector.<sup>3</sup>
3. In 2020, The Minister for Workplace Relations and Safety directed MBIE to undertake a targeted review of the adventure activities system. This targeted review aimed to identify whether there were weaknesses in how the regulatory regime applied requirements towards risks from natural hazards faced by adventure activities, and to suggest where immediate improvements could be made to support safety in the sector.<sup>4</sup>
4. This Regulatory Impact Statement examines options for regulatory change to address the key areas for immediate improvement identified by MBIE's targeted review.

#### 1.1 The adventure activities sector

##### *What is an adventure activity?*

5. Regulation 4 of the *Health and Safety at Work (Adventure Activities) Regulations 2016* provides a definition of "adventure activity". The key elements of an adventure activity are:
  - It is a recreational or educational activity that involves the participant being guided, taught how, or assisted to take part in the activity
  - It is provided to a participant in return for payment
  - It is designed to deliberately expose the participant to a serious risk to their health and safety that must be managed by the activity provider (such as exposing participants to dangerous terrain or waters).<sup>5</sup>
6. This definition is subject to a range of exceptions. For example, activities that are subject to other regulatory regimes, like adventure aviation activities (such as hang gliding or ballooning), the use of amusement devices (such as bungee jumping) and some maritime activities (such as jetboating) are excluded from the definition of "adventure activity". Activities provided by schools to students or sports clubs to members are also not considered adventure activities.

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<sup>3</sup> In addition to the MBIE review discussed below, WorkSafe has conducted an internal health check of its implementation of the adventure activities regime and is reviewing both the Certification Scheme and Safety Audit Standard. An independent review has also been conducted of WorkSafe's performance of its regulatory functions regarding activities on Whakaari.

<sup>4</sup> The report of this targeted review is available: [mbie.govt.nz/assets/targeted-review-of-the-adventure-activities-regulatory-regime-report.pdf](https://mbie.govt.nz/assets/targeted-review-of-the-adventure-activities-regulatory-regime-report.pdf)

<sup>5</sup> Note this is a summarised definition. For the full legislative definition, see [reg 4 of the Health and Safety at Work \(Adventure Activities\) Regulations 2016](#).

7. Common examples of adventure activities in New Zealand include guided mountaineering, rock climbing, kayaking, canyoning and high wire courses.

#### *Size and distribution of the sector*

8. The adventure activities sector consists of 300 to 330 operators, who provide more than 60 different types of adventure activities.<sup>6</sup>
9. Operators are distributed across New Zealand, with concentrations in popular tourist destinations like Rotorua, the Central Plateau and Queenstown Lakes District.
10. The sector is split roughly equally between commercial tourism operators that traditionally offer adventure activities to the international tourist market, and recreation operators that offer activities to education providers and other domestic recreational groups (such as operations run by the Salvation Army, YMCA and Hillary Outdoors Education Centres).
11. Operators range in size from single person operations to large enterprises. Consultation with stakeholders suggests business acumen across the sector is mixed and profit margins are tight, with operators expressing high price sensitivity to increases in operating costs. Border closures associated with the COVID-19 pandemic have increased these price sensitivities, through reducing operators' customer base and increasing difficulties in obtaining and retaining skilled staff.
12. Prior to the COVID-19 pandemic, the sector was a considerable contributor to New Zealand's tourism earnings. In the year to December 2019, 20 per cent (or 649,000) of international tourists took part in at least one adventure activity while in New Zealand.<sup>7</sup> The total spending of international tourists who took part in at least one adventure activity on their New Zealand holiday in that year is estimated to be \$3.1 billion.
13. The contribution of recreation operators is more difficult to quantify. However, access to environmental amenities and participation in leisure activities are recognised as important components of the individual and collective wellbeing under the Living Standards Framework.<sup>8</sup> Recreation adventure activity providers facilitate access to the outdoors, supporting New Zealanders to explore the natural environment and stay healthy, fit and connected.
14. Data on the number of people participating in adventure activities is limited. Consultation with adventure activity operators suggests the number of clients for operations vary widely, with annual client figures from 2019 ranging from 25 to 55,000 per operator. A broad estimate might assume the number of adventure activity participants per year (prior to the COVID-19 pandemic) ranged from 700,000 to 900,000.<sup>9</sup>

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<sup>6</sup> These figures are drawn from the WorkSafe register of adventure activities operators. The exact number of operators varies over time as operations are created or disestablished.

<sup>7</sup> Based on the 2019 International Visitor Survey.

<sup>8</sup> The Treasury, *Living Standards Framework 2021*, available [The Living Standards Framework \(LSF\) 2021 \(treasury.govt.nz\)](https://www.treasury.govt.nz/living-standards-framework)

<sup>9</sup> This estimate assumes an equal split between tourism and recreation operators, but with the assumption that recreation operators have smaller operations, and takes into account the number of enrolled students who are more likely to take part in activities through school camps or other school facilitated activities.



## 1.2 How is the sector currently regulated?

### *The regulatory framework*

15. Safety in adventure activities is primarily regulated under the work health and safety framework.
16. The Health and Safety at Work Act 2015 (the HSW Act) provides general health and safety obligations for all persons conducting a business or undertaking in New Zealand, including adventure activity operators. The primary duty under the HSW Act is for all businesses to ensure, so far as is reasonably practicable, that their work does not put the safety of their workers or other persons at risk. This includes, for example, duties to ensure equipment provided is safe and that workers have the necessary training to manage the risks of their operation.
17. The Health and Safety at Work (Adventure Activities) Regulations 2016 (the Adventure Activities Regulations) provides sector-specific requirements for safety in adventure activities. The core requirement of these regulations is that all adventure activity operators must pass an audit of their safety management systems at least once every three years and must register their operations with WorkSafe. The Adventure Activities Regulations make it an offence for operators to provide or offer to provide an adventure activity unless registered.
18. The core objectives of Adventure Activities Regulations are to minimise the preventable harm that occurs in the sector and provide assurance to activity participants, the government and others that safety in adventure activities is being managed effectively.<sup>10</sup>
19. Safety audits of adventure activity operators required by the regulations are conducted by independent auditing bodies. Audits are conducted against the Safety Audit Standard for Adventure Activities developed by WorkSafe. The Safety Audit Standard sets out the requirements for how operators should deliver adventure activities and what needs to be included in their safety management policies and processes. Auditors both conduct full, on-site audits of operators at least once every three years and monitor the performance of operators between audits to ensure they continue to meet safety standards.
20. For an auditing body to conduct adventure activity safety audits they must be recognised by WorkSafe. WorkSafe uses whether an audit organisation has JAS-ANZ<sup>11</sup> accreditation as the main way to decide whether an auditing body has the appropriate expertise and systems to be recognised as an adventure activity safety auditor. JAS-ANZ assesses and accredits auditing bodies against the New Zealand Adventure Activity Certification Scheme, which sets requirements for how auditing bodies perform auditing, certification, and monitoring functions.
21. Regulations requiring all adventure activities operators to be audited and registered were first introduced in 2011.<sup>12</sup> However, an extended implementation phase meant the mandatory audit and registration regime has only been in effect since November 2014. The accreditation scheme for auditing bodies was introduced in late 2015.

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<sup>10</sup> See EGI (10) 183 and EGI Min (10) 30/12, referencing the Department of Labour's *Review of risk management and safety in the adventure and outdoor commercial sectors in New Zealand 2009/10*. These statements related a previous version of regulations (the *Health and Safety in Employment (Adventure Activities) Regulations 2011*) but can be inferred to also apply to the 2016 Adventure Activities Regulations, which remain substantively the same.

<sup>11</sup> The Joint Accreditation System of Australia and New Zealand

<sup>12</sup> The *Health and Safety in Employment (Adventure Activities) Regulations 2011*, which were later transferred under the HSW Act (with minor changes) through the creation of the *Health and Safety at Work (Adventure Activities) Regulations 2016*.

22. In addition to these work health and safety requirements, transport legislation establishes safety requirements for the land, air and marine transport aspects of operations. Certain activities, such as adventure aviation and jet boating, are regulated under transport rules rather than the Adventure Activities Regulations.

#### *International comparisons*

23. New Zealand is relatively unique amongst comparable countries in having specific health and safety regulations for adventure activities.
24. The United Kingdom has a licencing system for adventure activities, but requirements generally only apply to operators providing activities to young (ie school age) people. The UK licencing system is also currently under review and may be removed.
25. Australia has a voluntary standards system for adventure activities operators, with operators also liable under general contract, negligence and health and safety laws. Some Australian states also have laws about specific activities – for instance Queensland has legislation that provides specific duties for safety in recreational water activities, such as diving and snorkelling.

#### *Regulations work with the broader components of the regulatory system to reduce harm*

26. Health and safety regulations do not address poor harm outcomes alone. Operator systems and activities on the ground ultimately determine how participants and workers are exposed to risk and the mitigations in place - the direct drivers of the rate of harm.
27. However, regulations can be used to set clear standards for the systems operators are required to have in place, set the systems through which compliance with these standards is checked and support the regulator to have an effective role. Effective regulatory settings, combined with good implementation and operational support by the regulator (such as effective education, engagement and enforcement activities), will drive changes in operator behaviour.
28. Figure 1 below illustrates how the various components of the regulatory regime work together to reduce harm.

Figure 1: Guiding intervention logic



### 1.3 Trends in harm rates

29. While fatality rates in the adventure activities sector remain high, overall it appears that the introduction of the adventure activities regulatory regime is supporting strengthened safety standards in the sector.

#### *Comment on data*

30. Our below analysis of harm in the adventure activities sector relies on fatality data. This is due to injury data for the sector being unavailable. Our assumption is that injuries in the sector will follow the same broad trends as fatalities. Historic data is also subject to some gaps, such as a lack of comprehensive fatalities data from the 2010-2014 period. We assume that trends in this period do not materially diverge from the surrounding time periods. Annex One provides further discussion regarding the data used.

31. We are also excluding data from the 2020-2021 period from our analysis, as a significant portion of the sector operating at reduced capacity during this time due to the impacts of the COVID-19 pandemic and associated border closures.

#### *Rates of harm*

32. In the five-year period 2004-2009 (prior to regulations being introduced), 29 fatalities occurred in activities that would now be considered “adventure activities”.<sup>13</sup> Between November 2014 (when the adventure activities regime came fully into effect) and December

<sup>13</sup> See *Review of risk management and safety in the adventure and outdoor commercial sectors (2010)*. 29 of the 39 fatalities identified in this report occurred in activities that would be considered adventure activities under current definitions.

2019, there were 31 deaths in adventure activities operations. Twenty-two of these 31 fatalities occurred in the single catastrophic incident of the 2019 Whakaari eruption.

33. Several submitters in consultation raised concerns that fatalities and injuries associated with the Whakaari eruption distorted recent harm data, resulting in a false view of the level of harm occurring in the sector. Such submitters considered that the Whakaari eruption was the result of a unique confluence of events that was not representative of issues arising in the wider sector.
34. Based on this, we agree that recent trends in harm for the sector have been distorted by the Whakaari tragedy. Excluding fatalities from the Whakaari eruption, nine fatalities occurred in the sector in the 2014-2019 period, a significant reduction from the period before regulations were introduced. This suggests that general safety in the sector, in terms of regularly occurring harm, may have improved since the introduction of the regulatory regime, though there is insufficient data to conclude if the regime has impacted the frequency or severity of catastrophic events.
35. This view is supported by the frequency of incidents in the sector having declined since the introduction of the regulatory regime. In the period 2014-2019, there were eight incidents causing fatalities in the sector. In comparison, more than 15 incidents causing fatalities occurred in the 2004-2009 period.<sup>14</sup>

#### 1.4 2020 Targeted review of the adventure activities regulatory regime

36. The 2020 Targeted Review conducted by MBIE assessed whether there were weaknesses in the adventure activities regulatory regime where activities experienced risks from natural hazards. This included examination of regulatory settings and the roles and responsibilities of organisations implementing the regime.<sup>15</sup>
37. Key findings of this review were:
  - **Overall, the regime is working to improve safety in the sector:** excluding fatalities associated with the Whakaari tragedy, rates of harm in the sector had notably improved since the introduction of the regime and the consistent view of key stakeholders was that safety standards were improving.
  - **There is a continued risk of catastrophic harm:** the risks and group-make up of many activities means the sector is susceptible to catastrophic events. There is insufficient data to assess if the regulatory regime is affecting the frequency or severity of catastrophic events.
  - **Natural hazard risks are pervasive throughout the sector:** almost all operators are required to manage some risks from natural hazards. Natural hazard risks are a major source of potential catastrophic events.
  - **The regulatory leadership role of WorkSafe could be strengthened:** WorkSafe had traditionally considered the regime a low priority for resources, and limited engagement and enforcement activity had been occurring. This has led to gaps in guidance and the

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<sup>14</sup> Precise numbers of incidents for this period are unavailable, but Coroners' reports and Judges' verdicts from this period identify 15 incidents relating to 22 fatalities. We estimate the full number of incidents from this period is likely to be between 20 and 22.

<sup>15</sup> A fuller outline of the scope and methodology of the Targeted Review can be found in the review report, available [mbie.govt.nz/assets/targeted-review-of-the-adventure-activities-regulatory-regime-report.pdf](https://mbie.govt.nz/assets/targeted-review-of-the-adventure-activities-regulatory-regime-report.pdf)

administration of the regime, and limits assurance that the sector is consistently managing safety well.

- ***There should be an increased focus on natural hazard risks:*** there is a gap in the regime regarding managing natural hazard risks. Specific requirements and guidance would better support operators and improve practice.

38. The review also made several further findings relating to system-level issues in the regime and changes to WorkSafe's certification scheme (ie audit process requirements). These issues are out of scope of the current review.<sup>16</sup>

### 1.5 2021 Expert Reference Group and Sector Survey

39. To support the development of a case for change and proposals, in 2021 MBIE commissioned an expert reference group. This group consisted of representatives from major industry associations, agencies with natural hazard and risk management expertise, JAS-ANZ, academics with risk management expertise and WorkSafe. The group provided commentary on MBIE's identification of issues and options for changes to the regime to support the development of a public consultation document.

40. In April 2021 industry associations, Tourism Industry Aotearoa and Recreation Aotearoa, conducted an Adventure Activities Sector Survey. MBIE were provided a summary of the survey findings to support policy development. Approximately 50 respondents (including adventure activity operators, guides, technical experts and auditors) provided feedback about the management of natural hazards, role of WorkSafe, costs of compliance and other system improvements. This feedback was used to support the development of the case for change and identification of preferred options.

### 1.6 2021 Consultation on change proposals

41. In September 2021 MBIE released a consultation document on potential changes to the adventure activities regime for public submissions. MBIE received 328 written submissions, primarily from operators (108), adventure activity participants (69), workers (37) and industry groups (28). This is considered a significant response rate given the sector currently has approximately 315 registered adventure activities operators.

42. The feedback provided in this consultation has been used to refine our problem definition and identify preferred options for change.

### 1.7 Expected outcomes without intervention

43. Key elements of the status quo that we expect will continue without regulatory change are:

- ***Fatalities will continue (even though harm rates will be lower than prior to the regime):*** A broad estimate suggests in the absence of change, five to ten fatalities will occur in the sector in the 2022-2026 period (provided no catastrophic events occur in the sector). Some improvement in harm rates can be expected from WorkSafe's current programme of operational improvements, but these changes alone are only likely to result in moderate improvements to harm rates in the absence of further regulatory and non-regulatory changes.

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<sup>16</sup> However, WorkSafe is currently undertaking a separate review of the certification scheme that will consider some issues raised by the Targeted Review.

- ***There will continue to be an underlying risk of catastrophic events:*** Between 2000 and 2019, five catastrophic or near catastrophic events occurred in the sector. While the impact of the Adventure Activity Regulations on the frequency of such events is unclear, the Whakaari tragedy demonstrates that a level of risk persists.
- ***Several key gaps will remain in the regime:*** The current regime does not currently provide specific requirements for natural hazard risk management or detailed requirements regarding risk communication. These gaps will result in variable practices among operators.
- ***Regulator engagement with the sector will be limited by regulatory constraints:*** WorkSafe are implementing a programme of operational changes in response to the findings of several reviews relating to the implementation of the adventure activities regime.<sup>17</sup> We therefore expect a higher level of education, engagement and enforcement by the regulator will occur. However, without intervention these activities will be limited by inefficiencies in current regulatory settings.

## 1.8 Connected work across government

44. Items of work occurring across government with relevance to the issues and options examined in this project are:

- WorkSafe have a current programme of work to strengthen the operationalisation of the adventure activities regulatory regime. This includes improvements to operational processes and capability related to the adventure activities sector, a current review of the *New Zealand Adventure Activities Certification Scheme*, and a planned review of the *Safety Audit Standard for Adventure Activities*. This programme of work offers an opportunity to support the implementation of changes discussed in this review.
- WorkSafe is prosecuting 13 parties for breaches of the HSW Act associated with activities on Whakaari. The outcomes of these prosecutions will inform the extent of responsibilities of parties such as tour operators and landowners under the current regulatory framework.
- A Coronial investigation is occurring into the Whakaari tragedy (currently on hold until WorkSafe's prosecutions are resolved). This investigation could produce recommendations relevant to the regulatory regime.
- The Department of Conservation is developing a framework for managing risks to visitors from natural hazards in the conservation estate. This framework may inform good practice for managing certain hazards.
- MBIE is developing regulations to establish new health and safety requirements for the use of plant and structures in work. These regulations will set new requirements for how adventure activity operators (along with all New Zealand businesses and undertakings) manage risks associated with their equipment. These changes may also result in minor alterations to what is considered an "amusement device",<sup>18</sup> the use of which is excluded from the requirements of the Adventure Activities Regulations.

<sup>17</sup> Relevant reviews include MBIE's 2020 Targeted Review, the internal WorkSafe 2020 health check of the implementation of the adventure activities regime, and the 2021 Independent Review of WorkSafe regarding activities on Whakaari.

<sup>18</sup> The use of Amusement Devices is currently regulated under the Amusement Device Regulations 1978. Those regulations define "amusement devices" are mechanically powered units used for rider entertainment, including for instance fairground machinery, bungee jumping platforms with a winch, and bumper cars. The proposed new



## 2. What is the policy problem or opportunity?

45. The objectives of the Adventure Activities regime are to minimise the preventable harm that occurs in the sector and to provide assurance to participants, the government and the public that safety in the sector is being managed effectively.
46. As part of these objectives, a particular focus of the regime is minimising the occurrence of catastrophic events. Catastrophic events, such as the 2019 Whakaari or 2008 Mangatepopo Gorge tragedies, form a significant amount of the harm that has historically occurred in the sector and have a substantial impact on confidence that the sector is managing safety well due to their high profile.
47. The 2020 targeted review and MBIE's subsequent evaluation of the adventure activities system have confirmed that further improvements are needed to the regulatory regime to fully achieve these objectives. Based on our analysis, we consider there are three areas that require improvement:
  - **Increasing the focus on natural hazards:** Almost all adventure activities experience some risk from natural hazards. Natural hazards are associated with the majority of harm and majority of catastrophic events that occur in the sector. Operator's understanding and management of natural hazard risks appears inconsistent across the sector.
  - **Strengthening risk communication to participants:** Ensuring participants in adventure activities have sufficient information about risks to give informed consent to their participation is a key part of the social licence for activities. Participants indicate they do not always feel fully informed of risks, and there appears to be mixed understanding of what good practice risk communication looks like across the sector.
  - **Strengthening WorkSafe's regulatory leadership:** The adventure activities sector has traditionally been considered a low priority for WorkSafe resourcing, due to not being seen as high risk compared to other sectors. The resulting limited engagement with the sector that has resulted has exacerbated other issues in the regime, such as the inconsistent approaches to natural hazard risk management.

### *Comment on evidence base*

48. As noted in our description of harm trends, quantitative data describing the sector is limited and subject to a number of gaps (such as lack of information about non-fatal harm, causal factors of harm and lack of information from certain historical timeframes). Our identification of problems therefore has high reliance on qualitative data, which has been obtained from a number of sources such as interviews with key stakeholders, public consultation and an expert reference group used to support option development.
49. Overall, we have moderate to high confidence in the evidence used to support our description of the problems below.
50. We consider that improved data about adventure activities and the harm associated with activities is desirable to support future reviews and evaluations of the regime. Work is currently underway to investigate if a more robust dataset of harm in the sector, including injury data, can be developed.

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regulations will include some gravity powered devices, such as zip lines, bridge swings, and bungee, but which of these types of rides will remain under the Adventure Activity Regulations is still under consideration.

## 2.1 Increasing the focus on natural hazards

### *Nature of the problem*

51. “Natural hazards” are physical, quick-onset natural events, with a degree of localised impact and that have the potential to cause fatalities.<sup>19</sup> These include risks of extreme weather, water surges and flooding, rockfalls, landslides and avalanches, and eruptions. A significant portion of the harm occurring in the adventure activities sector is associated with natural hazards.
52. Almost all adventure activities experience some risks from natural hazards. The 2020 Targeted Review found that, of the 312 adventure activity operators registered as of November 2020, 311 were required to manage natural hazards in some way.
53. While the causal factors of incidents in the adventure activities sector are complex (often involving a combination of failings such as guide and participant decisions, equipment, and the natural environment), it is notable that a significant amount of the harm in the sector appears associated with natural hazards in some way:
  - Twenty five of the 31 fatalities occurring between November 2014 and December 2019 were associated with natural hazards such as water surges, avalanches and eruptions.
  - All five catastrophic or near-catastrophic events identified in the sector between 2000 and 2019 were associated with natural hazards such as floods, water surges, avalanches, or eruptions.
54. Natural hazards present a distinct type of risk, that may not be susceptible to the same types of management as other risks encountered in adventure activity operations (such as personnel or equipment risks). In many cases, natural hazard risks must be managed primarily by limiting worker and participant’s exposure to the risk.
55. Natural hazard risks are also often complex, requiring a high level of environmental understanding to accurately assess, and changeable, requiring ongoing dynamic assessments of conditions.
56. The 2020 Targeted Review found that operators’ understanding and management of natural hazard risks across the sector is inconsistent. While many operators manage risks well, there are variable risk management practices and variations in how well operators are able to access and apply scientific information about risks to their activities.

### *Current regulatory settings*

57. The current regulatory system does not provide specific requirements for the assessment or management of risks associated with natural hazards. The audit standard requires operators to have systematic processes to identify hazards that could create risks to their activities and manage these risks.<sup>20</sup> Natural hazard risks are one type of risk that should be managed under these requirements. However, how this sub-category of risks should be identified and what management should occur is left to operator interpretation.

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<sup>19</sup> Definition drawn from MBIE’s 2020 *Targeted Review of the adventure activities regulatory regime*.

<sup>20</sup> The HSW Act is also a primary source of legal duties for operators, but similarly relies on general duties to manage risks rather than providing any requirements specific to natural hazards.

58. Some guidance materials supplement these requirements by providing information about good practice identification and management of risks associated with natural hazards.<sup>21</sup> However, such guidance materials are activity-specific, and so do not provide consistent coverage of hazards and how they relate to different activities.

#### *Stakeholder views of problem*

59. Stakeholders present differing views on whether there is an existing issue in the management of natural hazards and the extent of any problems.
60. Feedback in the 2021 consultation on changes to the adventure activities regime suggests that the sector considers itself to be managing risks from natural hazards well. Ninety percent of operators and workers in adventure activities indicated they considered natural hazard risks to be managed well or very well in the sector.<sup>22</sup> Key industry associations, Tourism Industry Aotearoa (TIA) and Recreation Aotearoa, similarly consider that natural hazard risks are generally well managed by operators and extensive regulatory change is not required.
61. In contrast, feedback from auditing providers, WorkSafe and JAS-ANZ as part of the 2020 Targeted Review noted natural hazards were frequently very difficult to assess, and more guidance may be needed to ensure operators were focusing on the right types of hazards.
62. The In confidence similarly noted in the 2021 consultation that it believes that there is a varied approach to the management of natural hazard risks across the sector and that there is the potential for extreme consequences if risks are not well managed.
63. As part of the 2021 Expert Reference Group, representatives from the Department of Conservation and GNS noted that there were real risks in the sector from natural hazards that need to be managed, and that operators may not always be aware of the full range of natural hazard risks their activities intersect with.

## **2.2 Strengthening risk communication to participants**

### *Nature of the problem*

64. Adventure activities, by definition, expose participants to some degree of risk. An important part of ensuring social licence for exposing participants to such risks is that they have given informed consent. For informed consent to be obtained, participants must have been given an accurate view of the risks involved in an activity and an opportunity to assess whether it matches their risk appetite.
65. Risk communication also contributes to the effective management of risks, as an overview of the risks and challenges involved in an activity allows participants to understand if it matches their abilities and skill level.
66. When undertaking an adventure activity, the guided and/or commercial nature of the activity can lead to a presumption among participants the activity must be safe, or the operator would not be permitted to operate. This may be particularly the case among international tourists who come from jurisdictions with strong business liability for personal injuries. Effective and comprehensive risk communication is necessary to counteract these presumptions and ensure informed consent to take part in activities is obtained.

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<sup>21</sup> For example, the heli-skiing activity safety guide provides detailed information for assessing alpine environments and managing avalanche risks. See [supportadventure.co.nz/assets/Heli-Ski-ASG-v1.2.pdf](https://supportadventure.co.nz/assets/Heli-Ski-ASG-v1.2.pdf)

<sup>22</sup> 106 of 117 responses in the 2021 consultation.

67. Statements made by participants following incidents commonly suggest that they did not fully understand the risks involved in activities.<sup>23</sup> Consultation suggests there is a significant group of participants who consider more information than that currently provided would be of value.<sup>24</sup>
68. A linked issue is the use by some operators of risk waivers to meet communication requirements. Disclaimers are framed in legal language and purport to limit or waive operator's liability in the event of certain specified incidents. Such disclaimers are of no effect under the HSW Act.<sup>25</sup> Because of their framing in pseudo-legal language risk disclaimers are often not an effective way to make participants understand risks, and their usage suggests some operators may not understand the purpose of risk communication requirements.
69. How broadly risk disclaimers continue to be used by adventure activity operators is unclear, but feedback from key stakeholders suggests they continue to be in semi-regular use (though usage is declining).

#### *Current regulatory settings*

70. The safety audit requires operators to have procedures for communicating relevant safety information to participants. However, no detail is provided about how communication should occur and what information should be conveyed to guide operators to adopt good practices. There is also no specific regulatory duty that requires operators to have effective risk communication systems in place.

#### *Stakeholder views of problem*

71. Feedback received in the 2021 consultation suggested there is not a unified view among operators of what good practice risk disclosure looks like. Questions regarding best practice provided a range of responses on how risk disclosures should be made and what should be included.<sup>26</sup>
72. Several operators noted in consultation that communicating risks to participants was often difficult due to lack of participant understanding about risks or participants having little interest in safety information, suggesting more standardised requirements for operators may only have limited practical impact.
73. Participant views on current risk communication practices are mixed (likely reflecting personal experiences). Many participants reported they felt current risk communication practices were appropriate. However, a significant minority either noted risk considered additional information beyond current practices would be of value.<sup>27</sup>

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<sup>23</sup> For instance, lack of information about risks is a point of claim in current lawsuits undertaken regarding the Whakaari tragedy (refer, for example, [www.rnz.co.nz/news/national/459261/new-details-revealed-in-law-suit-over-whakaari-eruption](http://www.rnz.co.nz/news/national/459261/new-details-revealed-in-law-suit-over-whakaari-eruption)). Anecdotal evidence from key stakeholders also suggests participants frequently comment after serious incidents that they did not appreciate the risks involved in an activity.

<sup>24</sup> In the 2021 consultation, of the 44 submitters identifying as activity participants or members of the public commenting on risk communication, 19 indicated they considered information beyond that commonly provided would be of value.

<sup>25</sup> Refer s 28 of the HSW Act.

<sup>26</sup> For example, while submitters generally agreed that disclosures should include general information about the activity, hazards, and risk mitigations in place, there was disagreement about whether additional information like what could go wrong and emergency responses should be provided.

<sup>27</sup> See n 25 above.

## 2.3 Strengthening WorkSafe's regulatory leadership

### *Nature of the problem*

74. For the adventure activities regulatory regime to function effectively, it needs to be supported by a strong regulator. WorkSafe needs to monitor and administer the regime, educate and support operators to develop good safety practices, and intervene to enforce compliance where requirements are not being met.
75. Prior to the Whakaari eruption, WorkSafe took a limited approach towards regulating adventure activities in comparison to some other sectors. WorkSafe provided general guidance about the rules and good practices through its website, and investigated serious incidents in the sector, but undertook limited proactive activity to identify problems before accidents occurred. Reliance was primarily placed upon auditors to proactively identify and escalate issues where required.
76. Guidance materials and instruments such as the safety audit standard were also not frequently updated. While industry groups such as Recreation Aotearoa and Tourism Industry Aotearoa had previously been funded and supported to produce guidance like Activity Safety Guidelines, this funding was not continued beyond 2016.<sup>28</sup>
77. WorkSafe's 2020 internal health check of their implementation of the adventure activities regime following the Whakaari/White Island tragedy similarly concluded that WorkSafe needed to recommit to its regulatory leadership role and strengthen how it administers the regime.<sup>29</sup> WorkSafe has instigated a program of work to improve its regulatory leadership role.
78. This lack of a strong regulator presence amplifies other weaknesses in the regime such as limited understanding and inconsistent practices regarding natural hazards.
79. A primary driver for this limited engagement approach has been WorkSafe's internal operational prioritisations and decision-making. The adventure activities sector has traditionally been considered a low priority for WorkSafe resourcing, due to not being seen as high risk as other sectors. Safety audits of operators also provide an extra check that risks are being managed well, which is not present in most other industries.
80. WorkSafe's current programme of operational improvements aims to refocus on the sector and strengthen its administration of the regime. Such changes will significantly address regulator engagement issues in the sector.
81. However, the regulator's limited approach can also in part be attributed to the current regulatory settings, which include key gaps in the information operators are required to provide WorkSafe and make some enforcement tools difficult to apply. For example:
  - Operators are not required to provide information about the size of their operation (such as annual customer numbers) or the number of participants included in activity groups. This can make it difficult to fully understand the level of risk involved in activities and place in context reports of harm associated with the operation.

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<sup>28</sup> With the exception of funding to support the development of a good practice guide for rafting activities in 2019/20, following rafting moving from being an activity regulated under maritime rules to being regulated under the Adventure Activities Regulations.

<sup>29</sup> This health check can be accessed at [worksafe.govt.nz/topic-and-industry/adventure-activities/documents-and-resources/](https://worksafe.govt.nz/topic-and-industry/adventure-activities/documents-and-resources/)

- While operators are required to report deaths, serious injuries and some near miss events (such as fires) to WorkSafe, they are generally not required to report near misses from natural hazard events (such as eruptions or landslides in areas where activities take place, or where participants become stranded by rising waters). This means the regulator does not have comprehensive oversight of some of the major risks of harm in the sector.
- The registrar's powers to cancel or suspend registrations, or decline to register an operator, are only applicable in limited situations with a high evidential burden. There is also currently not a power to temporarily suspend an operator's registration while that operator is under investigation. This means the regulator cannot intervene to stop operations going ahead in some situations where intervention may be appropriate.

### *Stakeholder views of problem*

82. Industry associations, auditing bodies and the accreditation body consulted as part of the 2020 Targeted Review noted that WorkSafe had little direct oversight of how operators were performing, relying on auditors to identify issues, and that WorkSafe should take a more active role to be an authoritative source of guidance.
83. The 2021 Expert Reference Group noted that there appeared to be gaps in current assessment of the regime's performance and a lack of appropriate feedback loops to the regulator about the regime's performance. The Group also noted generally that current safety standards in the regime are light touch, leaving many decisions to operators, and key instruments such as the safety audit standard are not being frequently updated.
84. WorkSafe's 2020 Internal Health Check found that it needed to adjust previous practices to better understand and recommit to its regulatory leadership role, including improving system monitoring and intervening in the regime where required.
85. In consultation on regulatory issues, WorkSafe indicated its ability to effectively oversee and intervene in the regime would be supported by having access to more information (such as operation size and notifications of near-miss incidents) and broader powers for the registrar to intervene and support enforcement action where required.

### **3. What objectives are sought in relation to the policy problem?**

86. The first primary objective of this review is to strengthen how the regime achieves its core objectives, namely:
  - To minimise the preventable harm that occur in the adventure activities sector
  - To provide assurance to participants, the government and others that risks in adventure activities are being managed to a high standard.
87. As outlined in our problem definition, we consider that the current regulatory system can be strengthened in several key areas to better achieve these outcomes.
88. The second primary objective is to enact changes that can be implemented quickly and that can be expected to produce outcomes in a relatively short timeframe. This objective is consistent with the scope of this review, and will allow the effectiveness of these changes to be evaluated as part of the full regime review scheduled to commence in 2026.
89. These primary objectives are balanced by the need to keep the regulatory framework balanced and proportionate, so that public and tourist access to adventure activities is not unduly restricted.



## Section 2: Deciding upon an option to address the policy problem

### 1 What criteria will be used to compare options to the status quo?

90. Our criteria used to compare options are:
- a) **Reducing harm** – the option will reduce the potential for serious harm and fatalities, including from catastrophic events, arising from participating in adventure activities.
  - b) **Assurance** – the option will support greater assurance for participants, the government and others that the New Zealand adventure activities sector appropriately manages safety risks.
  - c) **Costs** – the cost of the option is not unduly burdensome on the sector, government or participants.
  - d) **Access to activities** – the option does not significantly restrict public access to adventure activities.
  - e) **Changes are implementable quickly** – the changes will be able to be implemented by operators, auditors and/or the regulator within a short-timeframe (1-2 years) and the outcomes of changes are expected to be observable within 2-4 years.
91. Criteria a), b) and d) directly relate to whether options will achieve the objectives outlined above.
92. Criterion e) assesses whether options are consistent with the scope of the project to implement changes that are likely to produce observable impacts before the full review of the regulatory regime commencing in 2026.
93. Criterion c) provides a test of the proportionality of options, consistent with the purpose of the overall health and safety at work regulatory framework of providing a balanced framework to provide for the health and safety of workers and others.
94. We have not specifically weighted these criteria, though in our evaluation of options most priority has been given to proposals that will be effective in reducing harm and are quickly implementable.

### 2 What scope will options be considered within?

95. This project is a targeted review of the adventure activities regime. It focuses on whether there are quickly implementable changes to strengthen the regime, with a particular focus on improving the management of natural hazard risks.
96. This limited scope has precluded the consideration of some issues and options, such as:
- Changes to the definition of “adventure activities” subject to the regime
  - Major structural and operational changes to the regime, such as removing sector-specific regulations and relying on general work health and safety requirements, or changing the role of third-party auditors
  - Changes to the HSW Act or other health and safety at work regulations that will significantly impact businesses beyond the adventure activities sector
  - Altering the regime’s interactions with transport regulatory systems.

97. A full review of the adventure activities regime is planned to commence in 2026 that will include assessment of these broader issues and potential changes.

### 3 How have options been identified

98. The options for change analysed in this Impact Statement are the key proposals for change presented in MBIE's 2021 public consultation document *Adventure Activities – Keeping it Safe*.<sup>30</sup>

99. These options were developed through an iterative process. The 2021 Expert Reference Group were used to refine potential options prior to public consultation through testing whether options would be viable in the adventure activities sector and whether they were likely to be effective in achieving objectives.

100. Options were also developed in close consultation with WorkSafe to ensure proposals put forward were implementable for the regulator and considered likely to be effective.

101. Other potential options that were considered and disregarded prior to the 2021 consultation through this development process included:

- **Duties for third party ticket providers:** this would involve establishing regulatory duties for third parties that facilitate bookings of adventure activities to customers. This option was disregarded due to early consultation suggesting it would be of limited effectiveness in improving safety outcomes and would likely be beyond the scope of this review, due to introducing a significant new class of duty holders into the adventure activities regulations.
- **Prescribing audit standard content:** this would involve setting in regulation the specific topics that must be covered in the audit standard published by WorkSafe. This option was disregarded as it would not directly improve safety or assurance outcomes, and under regulatory design principles it is considered appropriate that the regulator uses its expertise to determine the content of the standard.

### 4 What options are being considered?

102. We have identified four main options to address the issues identified. These options are:

- *Option One: Non-regulatory changes only:* including updates to guidance materials and the safety audit standard.
- *Option Two: Non-regulatory and moderate regulatory changes:* this option would include both non-regulatory changes included in option one, and moderate changes to regulations regarding risk communication and the role of the regulator.
- *Option Three: Regulatory changes including landowner duties to manage natural hazard risks:* in addition to the regulatory and non-regulatory changes of option two, this option would introduce regulatory duties for landowners to either provide information on or be involved in the management of natural hazard risks.
- *Option Four: Regulatory changes including introduction of a risk classification system:* in addition to the regulatory and non-regulatory changes of option two, this option would introduce a new mandatory framework to assess and communicate risks.

103. Each option represents a package of changes targeted to the three areas of improvements: increasing the focus on natural hazards, strengthening risk communication to participants

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<sup>30</sup> Documents are available at [mbie.govt.nz/have-your-say/adventure-activities/](https://mbie.govt.nz/have-your-say/adventure-activities/)

and strengthening WorkSafe’s regulatory leadership. The individual changes within each option aim to work together to achieve the system objectives of reducing harm and providing assurance.

104. Options are cumulative, rather than mutually exclusive. Non-regulatory duties are considered as part of all three options. The primary difference between options is what, if any, regulatory changes are additionally included in the package of changes.
105. Option Two includes three regulatory components which have considered separately against each of the five criteria.
106. Option Three includes two sub-options for how any duty on landowners and managers could be designed. For the purposes of this analysis, we have considered these choices as a single option given stakeholder views and potential impacts of each sub-option are substantially the same.
107. Note we have not considered an option for expanded non-regulatory activity, beyond Option One, in place of regulatory changes. No significant demand for additional non-regulatory changes, beyond those outlined in Option One, has been raised by stakeholders and we have not identified any non-regulatory changes in addition to Option One that will effectively support our objectives.

#### **4.1 Option One – Non-regulatory changes only**

108. This option would involve a package of additions and changes to non-regulatory instruments such as guidance materials and the safety audit standard.
109. Changes to guidance materials as part of this option include:
  - the development of guidance for operators on best practice management of natural hazard risk management
  - reviewing and updating the package of “activity safety guidelines”. Activity safety guidelines provide detailed, technical information about hazards and how safety should be managed in particular activities. Twelve activity safety guidelines currently exist. Guidelines are co-developed by WorkSafe and industry.
110. Changes to the safety audit standard under the option will include:
  - Introducing specific requirements for operators to identify, assess and manage natural hazard risks. Such requirements may include operators having systematic processes to identify and assess hazards and considering ways risks can be eliminated or minimised (such as alternative routes to minimise time in hazardous areas).
  - Establishing requirements for operators to have clear policies for when activities will be called off. This may include requiring consideration of factors such as environmental conditions and the availability and readiness of staff.
  - Introducing detailed requirements for what information about risks must be provided to participants and how communication should occur.
111. Changes to guidance materials provide the opportunity to educate the sector about good practices and provide models for operators to follow in developing their safety management systems. While not mandatory for operators to follow, guidance materials (particularly when developed in cooperation with industry) can be effective in influencing

operator behaviour and supporting them to self-identify areas where their practices can be improved.

112. The audit standard sets requirements for the policies and processes operators must have place to pass a safety audit. While requirements in the audit standard are not regulatory duties, they are de facto mandatory for operators due to the requirement that all operators must pass an audit to be registered and provide activities. Because of the focused nature of the instrument, changes to the audit standard can be used to set more detailed requirements than in regulations, for instance, detailing each of the steps expected to be in an operator's safety management systems.
113. Together, this package of changes offers a way to define what good practice risk management is in these issue areas, educate operators about good practice, and set clear, minimum standards for how operators are expected to perform natural hazard risk management and risk communication.
114. Changes to guidance and the safety audit standard would be made by WorkSafe. WorkSafe has indicated it is supportive of these changes and has developed plans to implement these options. Changes to guidance and the audit standard are considered implementable by late 2023.

### ***Discussion of Option One***

#### ***(a) Reducing harm***

115. Compared to the status quo, we expect Option One will result in improved safety outcomes. Feedback from the sector indicates that improvements to guidance materials are likely to prompt operators to update their safety management systems.
116. The provision of clear minimum standards in the audit standard is likely to have direct impacts on operator behaviour, through ensuring natural hazard risk management systems and risk communication practices are a focus of audits. Operators will be required to demonstrate compliance with new requirements to pass audits.

#### ***(b) Assurance***

117. In comparison to the status quo, Option One will provide some additional assurance that safety is consistently managed well in the sector through providing minimum standards in the audit standard that all operators must be assessed against. However, in the absence of regulatory changes, this option is not able to provide further assurance that WorkSafe has the information it needs to effectively oversee the sector and allow a suite of enforcement options for it to effectively intervene where required.
118. Solely non-regulatory options are also less likely to be perceived as a credible response by the public to issues identified in the adventure activities system following the Whakaari tragedy. This will restrict the level of public assurance created by these changes that the sector manages safety well.

#### ***(c) Costs***

119. Option One is likely to result in some cost increases to operators, but these costs will be minor and unlikely to persist. Costs will arise through increases in the duration of audits, as operators are assessed against new requirements, and in the administrative burdens of operators reviewing their current practices to ensure new requirements are met. However, as new requirements and guidance will reflect existing good practices, and most operators are

considered to be already following good practice, substantial changes in practices are unlikely to be needed for most operators.

120. Costs also appear likely to reduce over time as operators and auditors become familiar with how to demonstrate compliance with requirements.

*(d) Access to activities*

121. This option will not have any significant impact on access to activities.

*(e) Changes are implementable quickly*

122. These changes are expected to be implementable in a relatively short timeframe. WorkSafe has indicated changes to guidance materials and the safety audit standard will be implementable within 18 months. Operators would be required to demonstrate compliance with new safety audit requirements in their next audit following this date.

*Overall assessment of Option One*

123. We consider Option One would represent an effective and proportionate way to improve safety standards and would be implementable within a relatively short timeframe. However, additional benefits, particularly regarding assurance, can be gained by also making regulatory changes, as outlined in Option Two.

**Stakeholder views on Option One**

124. Stakeholders are supportive of non-regulatory changes to the adventure activities regime. A number of key stakeholders, including audit providers and industry bodies Confidential, indicated they considered updates to guidance materials, particularly the activity safety guidelines, as the single change most likely to result in improved safety outcomes.

125. Operators, industry associations and audit providers noted that these activity safety guidelines were a key reference used by both operators and auditors to determine what good practice safety management is for specific activities, and therefore improvements in this guidance were likely to improve outcomes on the ground.

126. Stakeholders broadly agreed that guidance could be improved, noting that activity safety guidelines only covered a limited number of activities,<sup>31</sup> that a number of guidelines had not been updated since their original publication in 2016, and that some guidelines were of varying quality.

127. Operators, industry associations and participants also indicated they were broadly supportive of requirements being introduced to specify and reinforce good practices about natural hazard risk management.<sup>32</sup> Feedback on standards for risk communication was mixed, but a significant minority of participants suggested being provided more information than is current practice would be of value. Amendments to the audit standard offers an opportunity to provide clear, minimum standards in accordance with these preferences.

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<sup>31</sup> Current activity safety guidelines are only provided for 12 activities. More than 60 different activities are offered by registered adventure activity providers (though many are highly specialised and only provided by a small number of operators).

<sup>32</sup> For example, 46% of respondents in the 2021 consultation supported more explicit requirements to manage natural hazards (to 37% opposed), and 54% supported specific requirements for policies on when activities would be called off (to 37% opposed). These proportions were broadly replicated across operators, industry associations, workers in the sector, and activity participants. Comments suggest this is based on considering such changes will standardise existing good practice and are unlikely to result in significant compliance costs.

128. WorkSafe have indicated they are supportive of this package of non-regulatory changes and consider these changes should be progressed.

#### 4.2 Option Two – Non-regulatory and moderate regulatory changes

129. In addition to the non-regulatory changes outlined under Option One, this option involves a package of amendments to the Adventure Activities Regulations.

130. Regulatory changes included in this option are:

- (i) Introducing a **regulatory risk communication duty** requiring operators to have systems in place to communicate risks involved in activities to participants
- (ii) **Adjustments to the registration process and registrar powers** to require operators to register with WorkSafe directly (rather than through auditors) and provide more information when registering, expand the circumstances where WorkSafe can decline, cancel, suspend and add conditions to registrations where necessary for safety, and add a power to temporarily suspend a registration while the operator is under investigation
- (iii) Developing a list of sector-specific near-miss incidents adventure activities operators must notify WorkSafe of when they occur (**notifiable incidents**).

131. The regulatory changes included in this package aim to reinforce the crucial importance of risk communication and provide additional assurance operators have effective communication systems in place, build more direct relationships between operators and the regulator, and provide WorkSafe with additional information and powers to support its monitoring and enforcement functions.

132. New requirements under this option will be enforced through the existing registration process and regulatory offence frameworks. Operators will be required to follow amended registration processes to be accepted for registration. Penalties for the breach of a new risk communication duty would be set according to the established health and safety at work regulatory enforcement framework.

#### ***Discussion of Option Two***

133. Our recommended approach is that the components of Option Two are implemented as a package and in addition to the non-regulatory changes outlined as Option One. We consider that enacting these changes together is preferable as the benefits of changes will be cumulative and mutually supporting, and the full package is needed to ensure the Option effectively addresses all three areas for improvement identified in our problem definition.

134. However, each of the three components of Option Two could viably be enacted in isolation. For the purposes of this analysis we have therefore considered each component separately against our five criteria, before briefly commenting on the benefits of enacting these changes as a package.



**(i) Regulatory risk communication duty for operators**

*(a) Reducing harm*

135. This change will not have any significant, direct impact on harm outcomes.

*(b) Assurance*

136. Introducing a regulatory requirement for risk communication will provide an authoritative statement of the importance of these practices and provide an additional enforcement option (of a regulatory offence) if operators do not meet standards. This will provide assurance that this critical element of safety management is being performed to a consistent standard throughout the sector.

137. Participants will also have additional assurance that they will receive sufficient information to make an informed decision about their participation and make their own judgements of the risks involved.

*(c) Costs*

138. We expect this option will have minor cost implications for operators. Operators are expected to have already have some existing systems in place for risk communication under current requirements. Operators will therefore only be required to review and make minor adjustments to existing practices to ensure they align with the new duty.

*(d) Access to activities*

139. This option will not have any significant impact on access to activities.

*(e) Changes are implementable quickly*

140. These changes are expected to be implemented quickly through regulatory amendment. Operators will be required to demonstrate compliance with the new duty as part of their next scheduled audit.

**Stakeholder views**

141. Stakeholders in consultation generally indicated they agreed effective risk communication was an important part of operator's obligations. The majority of operators and industry associations indicated they were open to strengthened and/or more detailed requirements for risk communication to be introduced.

142. A number of operators, industry associations and risk experts noted that there were inherent difficulties in participants understanding concepts like uncertainty and residual risks, and so there was a need to be realistic about what risk communication could accomplish. Several operators also noted participants commonly disregard risk and safety communications due to these being perceived as taking away from the "excitement" of activities.

143. As noted in our problem definition, while many participants considered current risk communication practices were adequate, a significant minority indicated being provided more information about matters such as emergency scenarios may be of value.<sup>33</sup>

144. WorkSafe has indicated it supports a regulatory duty for risk communication being introduced to strengthen requirements.

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<sup>33</sup> See above n 24.

## **(ii) Adjustments to registration process and registrar powers**

### *(a) Reducing harm*

145. This change may support some improved safety outcomes, but such benefits are likely to be minor. Expansions to WorkSafe's powers to decline, suspend and cancel registrations will allow easier intervention by the regulator to require problematic operators to cease operations. However, given the high threshold before such powers can be exercised, these benefits are only likely to be realised in select cases.

### *(b) Assurance*

146. We consider this change will provide notable additional assurance that safety standards in the sector are consistently high. The provision of more information to WorkSafe about operations and the establishment of a more direct relationship between operators and the regulators will assist in addressing information gaps and ensure the regulator is well positioned to monitor the performance of the sector. Strengthened enforcement powers will ensure the regulator can intervene where required if safety standards are not being met.

### *(c) Costs*

147. This option will not result in significant costs for operators. Operators will have the information required for registration readily available through their ordinary operations. Only minor administrative adjustments will be required to adjust to new registration processes.

148. Costs to WorkSafe are also expected to be minor. While some adjustments to processes and policies will be required to enable direct registration and recognise expanded enforcement powers, these impacts will be minor. This change will also better align the adventure activities regime's registration process with other authorisation systems overseen by WorkSafe, leading to efficiencies.<sup>34</sup>

### *(d) Access to activities*

149. This option will not have any significant impact on access to activities.

### *(e) Changes are implementable quickly*

150. This option can be quickly implemented through regulatory amendments and adjustments to WorkSafe's operational practices. WorkSafe has indicated such changes will be implementable within 18 months.

## **Stakeholder views**

151. In consultation, operators and industry associations were broadly supportive of changing the process to directly register with WorkSafe and to provide WorkSafe more information. These stakeholders were also generally supportive of expanding WorkSafe's powers to suspend and cancel registrations. However, this support was frequently qualified by comments that WorkSafe would need to have appropriate processes and expertise in place to make effective use of this additional information and powers.

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<sup>34</sup> For example, proposed changes to the registrar's decline, suspension and cancellation powers will align with existing powers under the *Health and Safety at Work (Asbestos) Regulations 2016* and planned powers under the forthcoming *Health and Safety at Work (High Risk Work Licencing) Regulations*. Systems and processes developed under these Regulations will be able to be adapted for the adventure activities context.

152. Feedback from audit providers suggested that they consider this option will not have any substantive impact on safety management in the sector, but no particular concerns with these changes was raised.
153. WorkSafe are supportive of this option and consider this package of changes will support its broader programme of operational improvements. WorkSafe notes that other authorisation regimes give the regulator broader powers to decline, cancel and suspend registrations where the regulator considers this necessary for safety, which allows greater flexibility to consider information from inspectors or new information about the safety of the activity itself.

### **(iii) Notifiable incidents**

#### *(a) Reducing harm*

154. This change will not have any direct impact on safety outcomes.

#### *(b) Assurance*

155. This option will ensure near-miss events are reported to the regulator, providing assurance that the regulator is aware of the issues occurring in the sector and can act appropriately. Effective regulatory oversight will support broader assurance the sector is consistently managing safety well.

#### *(c) Costs*

156. There are no significant cost implications associated with this option. Operators will already have information about incidents available as part of existing record-keeping requirements and will simply have to provide more of this information to the regulator through WorkSafe's established notification systems.

#### *(d) Access to activities*

157. This option will not have any significant impact on access to activities.

#### *(e) Changes are implementable quickly*

158. Some further work will be needed to identify the specific near-miss incidents that will become notifiable and amend the regulations accordingly. We expect these changes will be implementable within 18 months.

### **Stakeholder views**

159. Stakeholders were generally supportive of this option. The majority of operators, industry associations and other parties commenting on this option indicated they were supportive of notifying WorkSafe of additional near-miss events.
160. However, stakeholders did not have a consistent view on what specific incidents should be notifiable. Several operators and industry associations noted that the specific requirements of what types of incidents are notifiable would need to be carefully designed to capture incidents where there were serious risk of injury or death, while avoiding capture of "routine" events that do not present serious risks. A limited number of operators also noted concerns that these requirements would unnecessarily duplicate existing expectations that operators log incidents as part of their safety management systems.
161. WorkSafe is supportive of this option, but similarly note further work will be needed to identify what specific incidents should become notifiable.

## **Overall assessment of Option Two**

162. We consider that all three components of Option Two add value and that they should be implemented together as a package.
163. The primary benefit of the changes in Option Two, in comparison to Option One, is the additional assurance provided that safety is consistently being managed well in the sector, through ensuring that the regulator has effective oversight and intervention options and strengthening risk communication requirements. The benefits of each of the individual changes contained within Option Two will be cumulative and in some instances mutually reinforcing, such as increased information about near miss incidents supporting the targeted use of enforcement powers, supporting their introduction as a package.
164. As outlined above, none of these changes are expected to result in significant costs or negative impacts on access to activities, and all are considered implementable within 18 months. Implementing all changes as a package is not expected to introduce any additional costs or delays to implementation timeframes.
165. A full implementation of Option Two is our preferred option.

### **4.3 Option Three – Regulatory changes including landowner duties to manage natural hazard risks**

166. In addition to the regulatory and non-regulatory changes outlined in Option Two, this option would create a regulatory duty requiring landowners and managers who provide access to adventure activity operators to either:
- Provide information to operators about natural hazard risks on their land that they know about (or should reasonably know about); or
  - Assess and manage the risks of natural hazards when granting permission for adventure activity operators to operate on their land.
167. Landowners and managers have existing requirements under the HSW Act to manage risks, as a PCBU with management or control of a workplace, and to coordinate with other PCBUs with duties.<sup>35</sup> To meet these requirements, landowners/managers are generally expected to have checked the registration status of operators and to inform operators of hazards on the site. A regulatory duty would make explicit and add detail on how these general duties under the HSW Act apply to natural hazards in the adventure activities sector.
168. Under an information provision duty, landowners/managers would be required to have processes in place to pass information about hazards and their associated risk level to operators. In some cases, the relevant owner/manager may need to engage technical experts to assess hazards on their land, where the owner could be reasonably expected to have an accurate risk information about the hazard.
169. Under an assessment and management duty, landowners/managers would additionally be required to do everything reasonably practicable to manage the access to their land to minimise risks. This could include, for instance, restricting operators from accessing particularly hazardous areas or limiting the number of people permitted to be in an area at once.

<sup>35</sup> Under ss 37 and 34 of the HSW Act. The extent of this duty's application in the adventure activities sector is likely to be an issue examined in the upcoming prosecution of White Island Management Ltd regarding the Whakaari tragedy.

170. Developing a more detailed regulatory duty for landowners and managers will provide a further way to ensure these parties are engaged as part of the risk identification and management process. Owners and managers may in some cases have access to information about a hazard not readily available to operators, such as historic information about incidents.

### ***Discussion of Option Three***

#### ***(a) Reducing harm***

171. Option Three may provide some improvement in safety outcomes beyond Option Two through ensuring an additional party is directly involved in the risk identification and assessment process. It will emphasise and make explicit requirements for operators and landowners to cooperate and share information about hazards. However, as noted by stakeholders, safety benefits are only likely to arise in a limited number of cases.

172. Some of these benefits are also likely able to be realisable through non-regulatory options. As noted above, landowners and managers have existing duties under the HSW Act. Compliance with these existing duties will generally require landowners to pass information about hazards on the site to operators. Feedback in the 2021 consultation suggested that several operators were unaware of these requirements and had limited interaction with landowners. Education and compliance activity regarding these existing duties may therefore improve coordination and information sharing between operators and landowners without requiring regulatory change.

173. Overall, we therefore consider that, in comparison to Option Two, Option Three will provide moderate safety benefits, and these benefits will apply to only some activities.

#### ***(b) Assurance***

174. Option Three may provide some additional assurance beyond Option Two through creating specific requirements that additional parties must be involved in risk management processes for adventure activities. This option would also further highlight natural hazards as a key source of risk that must be managed, providing assurance that these risks are being managed well.

175. However, overall, these additional assurance gains appear fairly marginal beyond the benefits achieved in Option Two, as regulator oversight appears the more effective means to provide assurance.

#### ***(c) Costs***

176. This option also may result in significant costs to some landowners, which are likely to be passed on to operators through new or increased access charges. While landowners would only likely be expected to have technical assessments of hazards in highly selected cases (where such a step is reasonably practicable), such assessments have significant costs. For example, feedback from the Department of Conservation is that a hazard point source analysis will generally cost \$10,000-\$20,000, while a valley landslide analysis costs in excess of \$100,000. Such costs are likely to make activities in these locations unviable.

(d) *Access to activities*

177. Creating a new regulatory duty carries a significant risk of land owners and managers denying access for adventure activities. While landowners have existing legal duties, feedback from the sector clearly indicates this option is considered a significant expansion beyond current practices. Given landowners frequently derive little benefit from activities occurring on their land, denying access rather than incurring additional costs or liabilities is a foreseeable outcome.
178. These negative impacts on access to activities and costs arise under both sub-options for how a regulatory duty could be designed. Impacts are likely to be particularly acute under an assessment and management duty, due to the higher expectations being placed on landowners/managers. However, as obtaining information about hazards is the primary additional cost that would be introduced, these negative impacts will also be present under an information provision duty.

(e) *Changes are implementable quickly*

179. A reasonable lead-in time would be required to implement these changes, to educate landowners and managers about new requirements and allow them a reasonable time period to comply. Approximately two years is likely to be required before these duties could be implemented.

*Overall assessment*

180. Overall, the costs and potential impacts on access associated with either approach under Option Three appear disproportionate to the safety gains that may result. This option is therefore not preferred.

***Stakeholder views on Option Three***

181. Stakeholders were strongly opposed to this option.<sup>36</sup> Operators and industry associations particularly expressed strong opposition. Submitters frequently expressed the view that strengthened requirements on landowners would result in adventure activities operators (and recreation activities) being denied access to current activity areas, due to landowner concerns about liability and/or compliance costs.
182. Operators and one audit provider also noted that landowners would only have a better understanding of hazards than operators in very limited situations, meaning this change would have no significant impacts on safety.
183. A comprehensive view from private landowners has not been able to be obtained,<sup>37</sup> but the limited feedback received suggests private landowners are also strongly opposed to this option, considering it will raise costs with limited safety benefit.
184. The Department of Conservation, as a major landowner that would be affected by this option,<sup>38</sup> consider that providing comprehensive risk information to operators about all relevant hazards would require changes to existing practices, which would come at significant cost.

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<sup>36</sup> 72% of submissions in the 2021 consultation were opposed or strongly opposed to this option (from 254 responses providing comment on this question).

<sup>37</sup> Only 4 parties identifying as landowners responded to this proposal in 2021 consultation.

<sup>38</sup> An estimated 60% of registered adventure activities take place (in whole or part) on Department of Conservation land



185. Of the two sub-options for how a regulatory duty could be framed, stakeholders expressed a strong preference that, if such a duty were created, landowners/managers should only be required to provide information, not manage hazards.<sup>39</sup> Submitters indicated that while they were opposed to any such duty, an information provision duty would be the less burdensome of the two options.

#### **4.4 Option Four: Regulatory changes including introduction of a risk classification system**

186. In addition to the regulatory and non-regulatory changes in Option Two, this option would introduce a new framework operators would be required to use to assess and communicate the risks associated with their activities.

187. Operators would be required to assign each activity they offer a “risk score” based on a matrix established in regulations and/or the audit standard to assess their environmental and activity technical risks. Risk scores would be provided to WorkSafe as part of registration and disclosed to participants as part of communicating the risks associated with activities.

188. The accuracy of each operator’s risk assessment and application of a risk score would be assessed through the audit process.

189. A risk classification could also be used to distinguish between high and low risk adventure activity operations to more effectively target how frequently operations are audited.

#### ***Discussion of Option Four***

##### *(a) Reducing harm*

190. Whether introducing a risk classification system will reduce harm outcomes is uncertain. Previous attempts at introducing risk rating systems in the health and safety at work system were found to have had limited impacts on behavioural outcomes.<sup>40</sup>

##### *(b) Assurance*

191. A risk classification system could provide a simple and understandable way to communicate the relative risk of different activities. This could support effective risk communication to participants, assist WorkSafe in recognising high-risk areas of the sector, and prompt more comprehensive risk assessments and minimisations by operators. This transparency would provide a higher level of assurance safety is being managed well in the sector.

##### *(c) Costs*

192. Implementing a risk classification system is likely to introduce additional costs to the government to develop and monitor the system, and to operators to apply the classification framework to their operations. While further evaluation would be needed to accurately estimate the precise scale of these costs, both government development costs and increased costs of audits to evaluate risk classifications are likely to be significant.

##### *(d) Access to activities*

193. This option is unlikely to have any significant impact on access to activities.

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<sup>39</sup> 143 of 196 submitters providing comment on this question.

<sup>40</sup> Pilots to introduce a “Safety Star” rating system for business’s health and safety performance that would be adjust ACC rates were not continued in 2016, due to the rating’s standards-based assessment not being found to result in sustained behavioural change that warranted levy discounts (refer EGI-17-MIN-0110).

*(e) Changes are implementable quickly*

194. Developing a risk classification system that will provide both an accurate representation of risks involved in activities and be easily communicable, is likely to be highly difficult and will require extensive consultation with the sector and experts. Implementing a classification system would likely require an intensive role for WorkSafe. It is unlikely such a system would be implementable within the next two years.

*Overall assessment*

195. Option Four will not be able to be implementable quickly and is likely to give rise to significant costs. It is also unclear if this option would result in meaningful benefits to safety. This option is therefore not preferred.

***Stakeholder views on Option Four***

196. Feedback from the sector regarding this option was unclear. Many operators were unwilling to provide a view on the proposal in the absence of more detailed information about how it would be implemented. Where operators indicated support for this option, this was based on the potential for a classification to support less frequent audits.
197. A number of operators and industry associations commented that they were unsure of the viability of any risk classification system.
198. Audit providers similarly commented that, while a risk classification system may appear valuable in theory, they did not consider that in practice a viable system could be developed. Audit providers also noted they should not be given a role to confirm risk classifications as this would create conflicts of interest.
199. WorkSafe consider that a risk classification is likely to be difficult to develop and apply, and that it is unclear if such a system would result in any meaningful improvement in safety outcomes.

## 5. How do the options compare to the status quo?

Option		Criteria					Overall assessment
		Reduce potential for serious harm and fatalities	Provides ongoing assurance for participants, the government and others safety is managed well	Costs not unduly burdensome to the sector, government or participants	Ensure access to adventure activities is maintained	Changes are implementable quickly	
<b>1. Non-regulatory changes only</b>		++ Changes to guidance and the audit standard likely to drive improvements to operator practices	+ More specific requirements in audit standard will standardise practices across sector, but does not support increased assurance regulator can monitor and intervene effectively.	- Minor increases to audit costs, as audits will assess compliance with regulatory requirements. Operators will need to produce evidence to show compliance.	0 No significant impact on access to activities.	0 Changes to guidance and audit standard expected to be implementable within 18 months, with operators required to show compliance with new requirements in next audit.	+ This option will support our objectives of reducing harm and providing assurance, and costs appear proportionate.
<b>2. Non-regulatory and moderate regulatory changes</b>	Full implementation Option Two plus Option One	++ As in Option One. May be further minor gains in addition to Option One from expanded registrar powers, but these will be marginal.	++ Will support increased monitoring and enforcement by regulator, and provide more assurance of effective risk communication through regulatory duty.	- In addition to Option One, minor administrative costs as operators adjust to new registration process but these are unlikely to be significant.	0 No significant impact on access to activities.	0 Package expected to be implementable within 18 months, with operators required to show compliance in next audits.	++ Recommended option. In addition to the safety benefits of Option One, this package of components will provide greater assurance through providing for a stronger regulator role, while costs remain proportionate.
	(i) Risk disclosure duty for operators only	0 Unlikely to have any additional direct benefits to safety outcomes.	+ Ensures risks are communicated to participants, allowing them to make informed decisions. Placing requirements in regulations emphasises importance of this requirement and ensures operators can be held accountable if do not meet duty.	0 Minor cost changes. Operators have existing duties to communicate risks, will only need to adjust existing procedures to ensure meet new requirements.	0 No significant impact on access to activities.	0 Change quickly implementable through regulatory amendment, and operators can be required to show compliance in next audit round.	+ While each of these individual changes would be beneficial and provide greater assurance, full implementation is preferred because benefits will be cumulative and mutually reinforcing.
	(ii) Changes to registration process and registrar powers only	0 May be further minor gains in addition to Option One from expanded registrar powers, but these will be marginal.	+ Expanded capacity for regulator to oversee operators and intervene will increase assurance in registered operators' performance.	0 No significant cost changes. Operators will have to provide some additional business information to registrar, but information should already be readily available.	0 No significant impact on access to activities.	0 Options can be quickly implemented through regulatory amendments and adjustments to WorkSafe operations	

Option		Criteria					Overall assessment
		Reduce potential for serious harm and fatalities	Provides ongoing assurance for participants, the government and others safety is managed well	Costs not unduly burdensome to the sector, government or participants	Ensure access to adventure activities is maintained	Changes are implementable quickly	
<b>2. Non-regulatory and moderate regulatory changes (cont.)</b>	<i>(iii) Sector-specific notifiable incidents only</i>	0 Unlikely to have any direct benefits to safety outcomes.	+	0 No significant cost changes. Minor additional reporting requirements only.	0 No significant impact on access to activities.	0 Some further work will be needed to confirm specific incidents to be included, but requirements will be implementable within 18 months.	<i>(As above)</i>
<b>3. Regulatory changes including landowner duties</b>		++ In addition to Option Two, requiring landowners to provide information will provide another source of risk identification, that may have better information about some hazards than operators. However, these safety benefits likely only to be significant in limited cases.	+	-- Requiring landowners to assess hazards may result in significant additional costs, which are likely to be passed on to operators.	-- Consistent feedback was that landowner duties would result in landowners declining access for adventure activities, due to risks of liability and/or costs of providing information.	- Approx. 2 years would be required before change fully implemented, to educate landowners and allow time to comply.	-- Not recommended. Costs and impacts on access to activities are disproportionate to safety and assurance gains.
<b>4. Regulatory changes including risk classification system</b>		++ As in Option Two. Unclear this option will provide any additional benefit.	++	-- Cost increases both to operators to adjust practices and in audits, and costs to government to develop system.	0 No significant impact on access to activities.	-- Significant implementation time required to design classification system and educate duty holders. Likely at least 2+ years before system able to be fully implemented.	- Not recommended. Change unlikely to be able to be implemented quickly and may give rise to significant costs.

<b>Key:</b>	
++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
--	much worse than doing nothing/the status quo

## 6. What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

200. Our preferred option is Option Two: Non-regulatory and moderate regulatory changes. This option will introduce a package of regulatory and non-regulatory changes with the following key elements:

- Strengthened requirements in safety audit standard to assess and manage natural hazard risks
- Introducing a regulatory duty for risk communication
- Strengthening requirements in the safety audit standard for risk communication
- Amending the registration process and registrar powers
- Introducing sector-specific notifiable incidents
- Reviewing and updating activity safety guidelines and providing additional guidance to operators regarding natural hazard risk management.

201. We consider this option will improve the status quo through:

- **Reducing harm and providing assurance** that operators are appropriately focusing on risks associated with natural hazards and that their management of these risks are a focus of audits.
- **Provide greater assurance** that operators are effectively communicating risks to participants, and that action can be taken when operators are not meeting risk communication expectations.
- **Providing greater assurance** safety is being managed well through ensuring the regulator has the tools and powers it needs to effectively oversee the sector and intervene in cases of serious safety concern.

202. This preferred package is also proportionate, as it will not result in significant restrictions in access to adventure activity or result in significant additional costs to the sector, government or participants.

203. This package of regulatory changes is consistent with, and will be supported by, planned non-regulatory changes in the adventure activities regime, such as WorkSafe's planned review of the safety audit standard and operator guidance updates.

## 7 What are the marginal costs and benefits of the recommended option?

204. Detailed information about cost impacts was sought as part of consultation. In most cases, operators were not able to provide detailed information about the cost impacts of proposals. Operators generally indicated they considered that they were already following good practice, suggesting cost impacts of the preferred option would be minor. Detailed, monetised costs that would result from these changes are generally not available. MBIE have, however, produced a broad estimate of additional audit costs that would result to indicate one of the main potential areas of cost increase.
205. Quantifying the benefits of the preferred option is also highly difficult. Given primary benefits are additional assurance and reduced harm, benefits cannot be monetised. Given the uniqueness of New Zealand’s adventure activities regulation, there are also no available precedents to project precise harm reduction impacts of changes. The precise harm reduction impact resulting from regulatory changes will also be conditional on other factors, like regulator action and the response of regulated parties.
206. Overall, we consider that these changes will result in minor additional costs. The changes will also result in moderate improvements to provide assurance that the adventure activities sector is managing safety effectively and is reducing harm rates.

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
Adventure activity operators	<p>Reviewing safety management systems to comply with new obligations, including assessment of natural hazards and risk communication.</p> <p>Implementation of systems to comply with new requirements.</p> <p>Increased audit costs due to expansion to audit costs</p>	<p>Low</p> <p>Current average cost of operator audits approx. \$10,000 over 3 years (with variations depending on size and nature of operation). Our projection is costs may increase 5-15% based on changes (av. \$400-1200 per operator over 3 yrs). These additional costs are likely to decrease over time as changes embed.</p> <p>Monetary and time costs for operators to review systems for compliance, and to comply with duties moving forward are unable to be quantified, but are expected to be low given the majority of operators are currently following good practice and so will only be required to make minor adjustments to practices.</p>	Low



Affected groups	Comment	Impact	Evidence Certainty
Participants in adventure activities	<p>Potential for cost increases for participation in activities as operators pass costs on</p> <p>Fewer people and schools choose to participate in activities</p>	<p>Low</p> <p>The extent to which operators will pass on cost increases to participants is unclear, but given overall cost increases to operators under the preferred option will be low, only minor cost increases to participants are expected to result if costs are passed on.</p>	Low
WorkSafe	<p>Developing guidance on new requirements – particularly good practice guidance for natural hazards and risk communication</p> <p>Review of safety audit standard to incorporate new topic areas.</p> <p>Operational policy resource to implement changes</p> <p>Education and engagement</p> <p>Minor new IT resources to update operator registration system to align with new process and operationalise new notifications.</p>	<p>Approx. \$2.22m</p> <p>\$2.22m funding has been approved through Budget 21 to fund operational policy, development of guidance, natural hazard expertise, education and engagement activities to support policy changes to improve the management of natural hazards. No additional costs are expected under the recommended option.</p>	High
<b>Total monetised costs</b>		\$2.22m, plus \$0.12-0.38m triennially recurring expenses	
<b>Non-monetised costs</b>		Low	

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional benefits of the preferred option compared to taking no action</b>			
Adventure activity participants and workers	<p>Improved safety of workers and participants</p> <p>Increased public trust in safety standards of the sector and in WorkSafe's oversight of adventure activities</p> <p>Reduced loss of life</p>	<p>Medium</p> <p>Participants and workers will be the primary beneficiaries of safety and assurance benefits of the preferred option.</p>	Medium
Adventure activity operators	<p>Clearer requirements</p> <p>Greater standardisation and spread of good practice across sector</p>	<p>Medium</p> <p>Consultation suggests in some areas operators have inconsistent understandings of requirements, suggesting increased clarity will result in a more level playing field for operators.</p>	Medium
Regulators	<p>Increased information about operators, allowing more effective targeting of resources</p> <p>Additional enforcement options</p>	<p>Medium</p>	Medium
Wider government	<p>Reduced draw on ACC and the health system from injuries/deaths associated with activities</p> <p>Search and rescue costs</p>	<p>Low (costs associated with adventure activities are minor part of these systems)</p> <p>Low (adventure activities are a small part of SAR activity, unlikely to be significantly impacted by changes)</p>	Medium
Other parties	<p>Reputational benefits to NZ tourism from addressing questions around safety in the adventure activities sector</p>	<p>Low</p>	Medium
<b>Non-monetised benefits</b>		<p>Medium</p>	

## 8 Risks and unintended impacts of preferred option

207. There is a low risk that this package of changes are not considered significant enough to address safety issues in the sector, particularly given the association of this review with the Whakaari tragedy. However, feedback in consultation indicated only minor adjustments to the regime were needed, this risk does not appear significant. The package of changes recommended includes the elements key stakeholders have indicated will have the most practical impact on safety.
208. There is a low risk that the changes are not well received by the sector, resulting in complaints and reluctance from operators to comply with new requirements. The effectiveness of changes will be limited if operators take a view of taking the minimum action required to comply due to disagreeing with new requirements. However, this risk is limited as the recommended package of changes does not include proposals the sector indicated would not be viable or would create costs grossly disproportionate to any safety gains (such as additional regulatory duties for landowners). To further manage this risk, MBIE will continue working closely with key industry stakeholders to draft regulatory changes and communicate the rationale of changes to the sector.
209. There is also a low risk that this package of changes leads to unintended outcomes, such as operators restructuring their businesses to fall outside the coverage of the Regulations to avoid compliance burdens. This could lead to negative safety outcomes, if for instance, operators shifted to providing unguided activities.<sup>41</sup> However, given the recommended package is expected to only result in minor cost increases for operators, this risk is considered minimal.

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<sup>41</sup> While in this situation operators would continue to be subject to duties under the Health and Safety at Work Act 2015 to minimise risks from their work, in practice the removal of guides will reduce the extent to which operators can control how risks are managed. In such a situation operators would also not be subject to the additional checks of mandatory safety audits and registration imposed by the Adventure Activities Regulations.

## Section 3: Delivering an option

### 1 How will the new arrangements be implemented?

210. Implementing the preferred option will require regulatory change. We anticipate draft regulations could be prepared for Cabinet approval in March 2023. Further stakeholder feedback on matters of detail, such as what specific incidents should be required to be notified to WorkSafe, will be obtained through targeted consultation in mid to late 2022.
211. Non-regulatory changes to the safety audit standard and guidance materials will be made by WorkSafe, in consultation with key stakeholders, such as industry associations, audit providers and technical experts. WorkSafe has a programme of work to implement changes to guidance materials by late 2023. A review of the Safety Audit Standard that will implement changes is planned to begin in Quarter 3 of 2022, and an updated version of the Safety Audit Standard is expected to be in place in late 2023.
212. Changes to registration processes and the information required for registration will require the development of new registration forms and processes by WorkSafe and supporting communication to operators. We anticipate these will be in place by mid-2023.
213. Changes will be supported by education and communication packages by MBIE and WorkSafe to ensure the sector is aware of upcoming changes and new requirements.
214. Operator compliance with new requirements relating to natural hazard risk management and risk communication will be primarily examined through the current audit cycle. Auditors will examine compliance with new regulatory and Safety Audit Standard requirements as part of audits and general monitoring of operators.
215. Having changes in place by late-2023 is important to ensure the compliance of the majority of operators with new requirements to be examined in audits within the next three years. Approximately 40% of currently registered adventure activity operators are due to undergo their full, onsite audit and re-register their operation with WorkSafe between September and December 2023. Failing to meet implementation targets would mean this group of operators are not audited against new requirements until 2026.
216. Enforcement of new requirements will occur primarily through existing registration requirements. If operators do not meet audit standard requirements, they will not be eligible to register their operations with WorkSafe and so will not be able to legally provide adventure activities. Where new regulatory duties are being established (regarding risk communication and sector-specific notifiable incidents), these will also be enforceable through associated regulatory offences, with WorkSafe the primary enforcement agency.

217. Key risks associated with implementation are:

- Regulatory and audit standard changes are not in place by late-2023. This may result in some operators delaying updates to their safety management systems, on the basis their compliance may not be comprehensively examined until they are next due to be fully audited in 2026-2027. This risk can be managed through targeting late-2023 as the intended implementation date for changes, as well as emphasising that compliance with new requirements will be checked as part of ongoing monitoring of operators by auditors between full audits.
- Operators are not given sufficient time to change safety management practices to meet new requirements. This risk can be managed through comprehensive communications to ensure operators are given notice of new requirements and registration processes.

## **2 How will the new arrangements be monitored, evaluated, and reviewed?**

218. A full review of the adventure activities regulatory regime is planned to begin in 2026. This full review will provide the main opportunity to analyse the impact of these changes. At the time of this full review, requirements will have been in place for three years and the compliance of all operators will have been assessed through audits, which will provide a basis for assessment of immediate impacts. This review will also provide an opportunity to make further changes to the regime.

219. In the interim, MBIE and WorkSafe will continue to monitor harm data and incident reports related to the sector, to observe any changing trends. Work is currently underway to investigate whether more comprehensive harm data, including non-fatal injuries, can be obtained. This will allow a more comprehensive picture of the harm occurring to be provided in future reviews.

220. MBIE and WorkSafe will also continue to monitor information about suspensions and cancellations of operator registrations, and any complaints made by operators associated with these decisions, to monitor the impact of expanded powers granted to the registrar.

221. Regular engagement with key stakeholders will also monitor the implementation and impacts of changes. MBIE and WorkSafe will continue to have regular engagement to discuss the functioning of regulatory systems, providing an opportunity to monitor WorkSafe's implementation of changes and identify any issues arising. WorkSafe also regularly engages with key industry groups, audit providers and the accreditation body, providing these stakeholders an opportunity to provide regular feedback on the system.

# Annex 1: Natural hazards, fatalities, and catastrophic harm events

## A comment on data and methodology

Regulations for the adventure activities sector were implemented in 2014.<sup>42</sup> This means information about adventure activities as a legally defined and regulated sector is limited to a relatively small timeframe.

While there is a range of historic fatality data available, it can be difficult to apply the definition of “adventure activities” regulated under current regulations to this data. Historic data is generally categorised under alternative labels such as adventure tourism or outdoors recreation, and the limited information about some incidents makes it difficult to determine whether an activity would be considered an “adventure activity” under current definitions.

The following data and analysis, therefore, represents a best approximation based on our understanding of the available data. When we use the term ‘adventure activities sector’ in the analysis, it is intended to convey this approximation.

Data on serious harm, other than fatalities, in the sector is also limited. While we have some information about serious injuries in the sector, this does not always record injuries to participants and can be unclear about whether injuries occurred in an adventure activity or in personal recreation.<sup>43</sup> Because of this limitation we have adopted fatality data as the best available representation of serious harm in the sector.

We have cross-referenced WorkSafe fatality data with a range of other sources to draw our conclusions for the purpose of the discussion.

The data sources include:

- Coronial reports of deaths in the adventure activities sector
- *Review of Risk Management and Safety in the Adventure and Outdoor Commercial Sectors in New Zealand 2009/10 Final Report* (June 2010), Department of Labour
- *Risk comparisons for Department of Conservation (DOC) Visitors and Workers* (July 2020), a report produced by Tony Taig on behalf of GNS Science
- Media articles on New Zealand natural hazards
- Media reports of deaths in the adventure activities sector
- WorkSafe fatality and notifiable event data
- WorkSafe’s register of work-related catastrophic events.

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<sup>42</sup> With the exception of the accreditation scheme for auditing bodies, which was introduced in late 2015.

<sup>43</sup> This anomaly is due to the way ACC injury data is collected.



## What are natural hazard risks?

Natural hazards are physical, quick-onset natural events with a degree of localised impact that have the potential to cause fatalities.

The 2020 targeted review found 12 types of natural hazard risks that could affect registered adventure activity operations. These included extreme weather (such as high winds or severe temperature changes), water surges and flooding, rockfalls, landslides, avalanches, volcanic eruptions, geothermal hazards and rapids.<sup>44</sup>

Earthquakes are excluded from this definition as they can occur on such a large scale that participating in an adventure activity would not significantly increase an individual's exposure to the risk. Several consequent natural hazard risks that can arise as a result of earthquakes, such as tsunamis and rockfall, are however included.

Incidents involving natural hazards are a common feature of New Zealand adventure activities, and often receive considerable media and public attention. Examples of such incidents include the 2008 Mangatepopo Gorge tragedy which claimed seven lives, the Paritutu Rock incident (Taranaki Outdoor Pursuit & Education Centre coasteering tragedy) which claimed three lives in 2012, incidents involving mountaineers in 2013 and 2019, and the 2019 Whakaari tragedy that claimed 22 lives.

All these incidents resulted in the deaths of multiple people. In addition, there are also incidents involving the death or serious injury of a single person, which tend to receive less attention and may go unreported in the media.

## What does the data show about harm from natural hazards?

Almost all registered adventure activities experience some risk from natural hazards. The targeted review found that 311 of the 312 operators registered in November 2020 had to manage risks from natural hazards in some way.

Many of these hazards present a risk of catastrophic harm, where if a major incident occurs it can cause multiple deaths or serious injuries.

## The proportion of fatalities related to natural hazards remains constant:

While fatality rates in adventure activities overall have reduced since the introduction of regulations in 2014, natural hazards have remained a significant source of fatalities.

In 2010, before the Adventure Activities Regulations were introduced, the Department of Labour conducted a review into safety in the adventure tourism and outdoors sectors.<sup>45</sup> This review examined 39 fatalities in the sectors that occurred over the five-year period between July 2004 and June 2009. Twenty-nine of these deaths occurred in activities that would be considered "adventure activities" under current regulations.

Of these 29 fatalities in the 2004-2009 period, 13-18 deaths resulted from failures to manage risks from natural hazards, depending on the definition of natural hazard used.

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<sup>44</sup> A fuller explanation of natural hazards and how they interact with adventure activities can be found in Annex 1 of the targeted review.

<sup>45</sup> *Review of Risk Management and Safety in the Adventure and Outdoor Commercial Sectors in New Zealand 2009/10 Final Report, 9 June 2010*, Department of Labour, NZ 2010

A significant part of the harm that occurs in adventure activities comes from natural hazards. In the five-year period between November 2014 (when the Adventure Activity Regulations took effect<sup>46</sup>) and November 2019, there were nine fatalities in adventure activities. Four of these fatalities resulted from natural hazard events. The total number of fatalities increases to 32 when the timeframe is extended to December 2019. This includes 22 fatalities from the 2019 Whakaari tragedy and one fatality on the Routeburn Track. Twenty-six of the 32 fatalities resulted from natural hazard events.

*Table 1: Summary of adventure activities fatalities notified to WorkSafe: 1 November 2014 to December 2019<sup>47</sup>*

Year	Month	Summary of incident	Natural hazard event	Registered adventure activity operator
2014	November	One participant died on guided diving expedition near Hahei on the Coromandel Peninsula.	No	Yes
2015	August	One participant killed in avalanche while heliskiing in the Hector Mountains.	Yes	Yes
2018	October	Two guides died on a mountain climbing expedition in Mt Cook National Park.	Yes	No
2018	December	One participant drowned while kayaking near Tapeka Point and Roberton Island.	Yes	Yes
2019	March	One guide and one participant on a yamaha 6 seater all-terrain vehicle fatally fell into a ravine in the Waitaki District.	No	No
2019	November	Two participants fatally fell while alpine climbing in the Remarkables.	No	Yes
2019	December	One participant fell to death on Routeburn Track while on a guided walking tour.	No	Yes
2019	December	Twenty participants and two guides died in a volcanic explosion or from sustained injuries while on guided tours of Whakaari	Yes	Mix of registered and unregistered operators

<sup>46</sup> With the exception of the accreditation scheme for auditing bodies, which was introduced in late 2015.

<sup>47</sup> These fatalities have been notified to WorkSafe, confirmed as meeting WorkSafe's reporting criteria (excludes deaths from natural causes), recorded as occurring in the adventure activities focus area, and identified as relating to the Adventure Activities Regulations. It does not include information on work-related fatalities that occurred within other regulators' jurisdictions (e.g. Maritime New Zealand (maritime), Civil Aviation Authority (aviation), or NZ Police (road)).

## Natural hazards are also the major source of catastrophic events in the adventure activities sector:

Natural hazards also appear to be the main cause of catastrophic incidents in the adventure activities sector. “Catastrophic incidents” are where more than five people die as a result of a single event.

While we have limited historical data to draw from, there appears to be catastrophic events (or near-catastrophic events) related to natural hazards occurring frequently over a 30-year period. These events take place at least every ten years in the adventure activities sector, resulting in around eight fatalities and seven serious injuries per event.

*Table 2: Catastrophic or near catastrophic incidents resulting from failures to manage natural hazard risks in the adventure activities sector*

<i>Incident</i>	<i>Natural hazard event</i>	<i>Consequences</i>
2019 - Whakaari/White Island eruption	Volcanic eruption	22 fatalities 25 injured
2012 - Paritutu Rock incident *	Water surge	3 fatalities 11 remaining in the group at risk of death
2008 - Mangatepopo Gorge canyoning	Flood	7 fatalities 4 injured
2003 - Southern Alps, Mt Tasman *	Snow avalanche	4 fatalities 2 injured
2000 - French Pass drift diving *	Water surge, tidal currents	3 fatalities 4 injured
Total		39 fatalities 35 injuries

The periodic occurrence of catastrophic events has much to do with the nature of adventure activities, which are defined by the deliberate exposure of a participant to serious risk to their health and safety, as well as the group make-up of many of the activities.

It is unlikely we will be able to eliminate the risk of catastrophic events entirely from adventure activities, given that, by definition, many activities expose participants to serious risks from dangerous terrain or waters. However, we can seek to reduce the frequency at which such catastrophic events occur.

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\* While not strictly meeting the definition of a catastrophic event these examples have been included because of the high likelihood that the injured parties or remaining group members could have died

The Department of Conservation has recently been conducting work on the management of natural hazards on public conservation land. Indications are that a catastrophic natural hazard harm event could occur every 30 to 50 years on a DOC visitor site. Climate change is likely to increase the frequency of significant natural hazard events in the future. The table below provides some indicative examples of such events.

*Table 3: Examples of foreseeable catastrophic natural hazard events that have potential to impact adventure activities and members of the public on public conservation land in future*

<i>Location</i>	<i>Natural hazard event</i>	<i>Consequences</i>
Tongariro (Red Crater)	Volcanic eruption	Would depend on the scale, duration and frequency of exposure, and time of day but in peak tourist season it could involve multiple individuals and tour groups.
Lake Rotoroa, Rotomahana and other lakes, Tasman Glacier	Landslide or glacial collapse into lake	There are numerous locations where unstable slopes mean there is a risk of landslide or glacial ice collapsing into lakes or other enclosed bodies of water causing water surges. This risk will increase over time as glacial lakes get bigger and more extreme rain events occur.
Southern Alps, Taranaki, Ruapehu	Avalanche	Avalanche risks increase in different seasons and in some locations where topography combines with popular skiing, walking and climbing routes meaning elevated overall risk.
Heliskiing in Southern Alps or glacier terrain	Avalanche (icefall) / crevasse hazards	Alpine conditions change continually and although guides are responsible for assessing and managing risks to individual skiers and climbers, there is potential for multiple groups to be caught in a single event.
Plateau Hut Aoraki Mount Cook National Park	Landslide, rock and ice collapse	There is landslide risk to the hut most likely during a major earthquake. The risk is lower than the risk of alpine climbing or camping in the vicinity.
Southern Alps	Rock avalanche	Rock avalanches of up to several million m <sup>3</sup> of rocks occur at regular intervals in alpine regions. <sup>48</sup> Their paths are identifiable and methodology exists to calculate the likelihood of occurrence.

<sup>48</sup> There is an inventory of at least 126 spontaneous rock avalanches and rockfalls >10,000 m<sup>3</sup> within the Aoraki Mount Cook National Park that have occurred since the c.12 million m<sup>3</sup> collapse of Aoraki in 1991 (S.Cox/GNS Science pers comm ).

## Catastrophic workplace events in New Zealand more generally

To provide context we reviewed the number and type of catastrophic workplace events that have taken place in New Zealand over the same timeframe (1990-2019, drawing on WorkSafe’s register of work related catastrophic events. For the purpose of the analysis, we make no distinction between the Health and Safety and transport regulatory regimes.

- Between 1990 and 2019, there have been ten work related catastrophic events in New Zealand
- Six out of the ten events took place in the arts and recreation industry. Of these, four were tourism related and two involved commercial recreation activities.<sup>49</sup>
- Five out of the ten events involved natural hazards.
- By comparison, Australia had four work related catastrophic events over the same timeframe. One took place in the arts and recreation industry and involved a natural hazard event.
- The United Kingdom over the same timeframe had 13 work related catastrophic events. One of the 13 events was in the arts and recreation industry and two of the 13 events involved natural hazards.

*Table 4: Catastrophic workplace events in New Zealand between 1990-2019*

Year	Event	Deaths	Industry classification	Purpose of activity	Natural hazard events
1990	Ruapehu snow camping/caving	6	Education and training	Training camp for military personal	Yes - extreme weather
1993	Franz Josef Glacier air crash	9	Arts and recreation services	Tourism - sightseeing	No
1995	Cave Creek disaster	14	Education and training	Outdoor recreation course	No
2008	Mangatopopo tragedy	7	Arts and recreation services	Adventure activity - recreation	Yes - flooding
2010	Fox Glacier air crash	9	Arts and recreation services	Adventure tourism - skydiving trip	No
2010	Pike River mine disaster	29	Mining	Commercial mining	No
2012	Carterton hot air balloon crash	11	Arts and recreation services	Adventure tourism	No
2012	Foveaux Strait fishing tragedy	8	Agriculture, Forestry and Fishing	Commercial fishing	Yes - extreme weather
2016	Kaipara boating tragedy	8	Arts and recreation services	Recreation - fishing charter	Yes - extreme weather
2019	Whakaari/White Island eruption	22	Arts and recreation services	Adventure Activity - tourism	Yes - volcanic eruption

<sup>49</sup> Though note only two of these incidents would be regulated as “adventure activities” under current regulatory frameworks. Of the remaining four, three are regulated under aviation regulatory systems and one under maritime.