



WHAKARATONGA IWI

**FIRE
EMERGENCY**

NEW ZEALAND



Tasman Fires Action Plan

A plan to address the recommendations of the
AFAC Independent Operational Review

He anga whakamua – to move forward positively

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Tasman fires, February 2019

Introduction

On 5 February 2019, a fire started in Pigeon Valley near Nelson, New Zealand. In the days and weeks that followed, this fire went on to burn over 2,300 hectares, including significant areas of mature pine plantation. During the Pigeon Valley fire response, several other suspicious fires also occurred in the region: Rabbit Island (6 February), Atawhai (8 February), Moutere Hill (27 February) and Dovedale Hill (6 March). These other fires made the fire managers' task more complex. The fires are collectively called "the Tasman fires".

Local, regional and national resources helped to control the Tasman fires. At the fires' peak, 23 helicopters, two fixed wing aircraft, 150 firefighters and 23 heavy machines fought to contain them.

While it is reassuring that no human life was lost during the fires, they caused extensive physical and economic damage to property and the environment in the region. They destroyed commercial forests, one home, multiple outbuildings, plastic water tanks and lines, fences, shelter belts, native forest and pastures. Approximately 3,000 people and 700 livestock and pets were evacuated or self-evacuated from the surrounding valleys. The fires affected several planned festivals and events in the area, threatened a communications tower and closed the main state highway.

There are few precedents for this event in recorded New Zealand history. Observers of the fire regime in New Zealand were concerned that this fire came only two years after the Port Hills fire near Christchurch, which caused serious damage and cost a firefighting helicopter pilot his life.

Fire and Emergency New Zealand commissioned an independent report into the Tasman fires because we want to improve how we manage wildfires: it is only a matter of time before the next one occurs. We have developed this action plan in response to the lessons and opportunities this report identified. The plan also supports the work we are undertaking following the Port Hills review.

About the review

The Australasian Fire Authorities Council (AFAC) independent review was conducted by a team from both Australia and New Zealand with broad and varied experience of structure fire, wildfire management and aviation operations.

Review methodology

The review team ('the reviewers') carried out field work in New Zealand between 5 and 14 June 2019. They met with Fire and Emergency personnel, staff from other agencies, government, and representative bodies. The reviewers had the opportunity to visit the fire ground and discuss the strategies used there. They considered documentation relevant to emergency management risk reduction, readiness, response and recovery.

Participating agencies provided the reviewers with a significant amount of documentation. The reviewers identified and examined key documents to clearly understand the fire's circumstances.

The reviewers made recommendations, comments and suggestions for Fire and Emergency to take account of in future business planning.

Context

The context for each of the recommendations comes directly from the Tasman fires operational review.

Relationship to other review activities

The reviewers' report is independent and based on the evidence that the reviewers gathered during the fieldwork phase of the review. The report deliberately did not deal with the detailed operational issues that have been or will be addressed in internal after-action reviews.

Acknowledgements

The reviewers acknowledged the fire management and reduction initiatives initiated with the affected communities and the relationships between Fire and Emergency personnel and these communities.

The reviewers also acknowledged the residents and communities impacted by the Tasman fires through damage or loss to property and the effects of evacuation. Fire and Emergency recognises and acknowledges the communities' perspectives and priorities raised during the interview and debrief processes. We will address these as we consider how to improve in future.

The review also acknowledged the firefighters and other personnel who worked tirelessly in extreme conditions to respond to the Tasman fires. Fire and Emergency also takes this opportunity to thank everyone involved in these fires for their professional, committed and willing contributions, which ensured that we responded effectively to the incident and to community needs.

Next steps

Fire and Emergency accepts the findings of the report and the recommendations of the independent reviewers.

This action plan outlines how we will respond to these recommendations. Appendix one outlines the accountabilities and projected timelines for each action. The actions and timelines for achieving these are subject to change as they need to be balanced against the other areas of organisation development and prioritisation. Fire and Emergency's financial position as a result of COVID-19 is not yet fully known and the impact of this will need to be a factor when determining organisation priorities. The timeframes of some of the action points are also dependent on the timing of the implementation of the new Service Delivery organisational structure.

Many of the recommendations and associated action plan deliverables affect communities, stakeholders or partner agencies. We intend to develop these deliverables by working collaboratively with communities and across partner agencies and this is being demonstrated through work already underway.

In implementing the plan, we will:

- discuss with our affected communities, stakeholders, partners and the emergency sector so we can further inform and refine our activities
- We will establish governance and collaborative arrangements to actively develop, manage and monitor its implementation

Tasman Fire Action Plan recommendations and responses

Recommendation 1

Fire and Emergency New Zealand should develop and implement a nationally consistent framework for strategic and tactical fire planning, community education and risk reduction activity that engages all stakeholders including the New Zealand public as a whole.

Context

The impacted communities were aware of the heightened fire risk before the fires. However, their preparedness and knowledge about what this meant and what actions they should take varied considerably. To be better prepared will require a proactive approach that achieves joint ownership of the risk and a shared understanding with the community about fire prevention and preparedness.

The impacted communities did have a risk reduction system approach that Fire and Emergency personnel promoted as a pilot, and many people were aware of some risk reduction initiatives.

However, the reviewers identified a need for national systems and processes that look at community risk profiles strategically across the Regions and Districts to support the development of local risk and reduction plans and inform key tactical plans. These systems should enable, empower and encourage the community to come together and develop a shared understanding and responsibility of risk and key ways of managing risk.

Current work

Section 21 of the Fire and Emergency New Zealand Act 2017 requires us to undertake local planning, to do this we are developing a formalised local planning function. We are also required to prepare and issue a fire plan for each local area, no later than 2 years after the establishment of local area boundaries.¹ A framework for evaluating the impact and effectiveness of our current national risk reduction programmes has been developed. Based on the results of that evaluation, we will revise or develop new programmes to address gaps and identified needs.

To support the local planning function and inform fire plan content, it is proposed that national policy, systems and processes for wildfire risk analysis and management be further developed. Examples include but are not limited to:

- Tools that enable the clear identification of wildfire-prone areas
- Processes that support the analysis of wildfire risk and development of treatment options
- A suite of education tools focusing on community education.

Several strategic and tactical fire management plans have been completed, ranging in complexity, approach used, and area applied to. The knowledge gained from undertaking this work will be valuable for further developing our national systems, processes and procedures.

¹ Fire and Emergency New Zealand (Fire Plans) Regulations 2018, reg 6.

Proposed actions

The project teams completing these actions will consider opportunities and recommendations from the review when collaboratively developing systems, tools, methodology and community risk reduction programmes with our communities, key stakeholders and partner agencies who are impacted.

- 1.1 Develop tools, templates and processes to guide the direction of risk reduction activities and inform risk reduction promotion initiatives.
- 1.2 Implement the framework for evaluating the impact and effectiveness of the current national risk reduction programmes.
- 1.3 Ensure a consistent methodology is applied across all Districts to risk reduction and community risk planning activities.

Recommendation 2a

Fire and Emergency New Zealand should establish and promote a set of risk reduction guidelines/requirements around permitted heat and spark activities that relate to the community as a whole and not just Forestry.

Context

Fire and Emergency and land management agencies use the New Zealand Fire Danger Rating System for a range of fire management activities and to inform the public of fire danger conditions.

Section 56(1)(b) of the Fire and Emergency New Zealand Act 2017 allows Fire and Emergency to declare a restricted fire season if the level of fire risk indicates the need for this. During a restricted fire season, a permit must be obtained from Fire and Emergency before lighting any fire in the open air.

As conditions get even hotter and drier, we declare a prohibited season, which bans lighting any fires in the open air. Noting that during a Restricted and Prohibited fire season certain fire types are permitted subject to specific conditions being followed.

Fires don't just start from being directly lit – other causes of ignition include grass slashing, welding, grinding, chainsaw operations and tracked machinery operations.

The forest industry has developed a Forest Operations Fire Risk Management Code with restrictions that apply when the danger of fire is elevated. Currently this code is voluntary and only applies to the forest industry.

Current work

A few fire districts, working with industry, have developed activity triggers for spark hazardous activities, based on the forestry approach and research from Scion.

Information about activity triggers is available on the NIWA Fire Weather website fireweather.niwa.co.nz and in other publications produced by the districts.

This work has been well received by industry and insurance sectors, and Australian-owned international insurers Insurance Facilitators Ltd have recognised it as best practice.

The Management of Fire Seasons and Activities Project, which is currently under way, aims to use the concept of activity triggers to develop a framework, which we will then apply across New Zealand.

Key outcomes for the project are:

- Use further research by Scion to establish an initial set of triggers for the country to enable a more widely informed discussion with industry
- Develop a framework for districts to establish trigger levels, working with local industry and considering local variation and alignment with local fire risk conditions.

We have recently adopted a Risk Reduction Strategy and will roll it out using public education campaigns and promotions to educate the public about fire risk and risk reduction behaviours.

We will begin evaluating and reviewing our national risk reduction programmes in 2022. We aim for them to be focused and effective in reducing unwanted wildfires.

Proposed actions

2.1 Deliver the Management of Fire Seasons and Activities project, including implementation of the framework by districts.

2.2 Districts will work with land management agencies to annually review and amend the activity triggers as necessary to ensure these are being effective in reducing the incidents of unwanted wildfires.

2.3 In collaboration with partner agencies, develop policies and processes for communicating wildfire risk and activity trigger information that enables easy access, interpretation and implementation.

Recommendation 2b

Fire and Emergency New Zealand should work to promote any changes required to legislation or regulations to develop a mandatory system of 24 hour Total Fire Ban days applicable to the whole community, to be declared by Fire and Emergency New Zealand based on predicted fire weather and associated risk.

Context

The review concluded that although most people are aware when there is a high risk of fire, their understanding of what they need to do can vary widely.

The reviewers felt that on days of extreme fire danger, Fire and Emergency needs to be able to ban all spark-producing activities, that have not developed agreed mitigation activities (e.g. Total Fire Ban/Red Flag Warning Day) in a specified community area, district, region, or nationally.

Current work

The Management of Fire Seasons and Activities Project shows that it is not about stopping activities, although at times of extreme fire danger this may be required. Rather, it's about setting fire control mitigation measures appropriate for the fire risk. This approach considers that some very large fires have occurred outside extreme fire conditions.

Australia, in developing their new fire danger rating system, completed a large study of the language used to convey fire danger information. The study revealed that there is a lot of confusion about how total fire bans operate, as well as about fire danger restrictions and other messaging. The study recommended simplifying both the language and the approach to informing the public.

Australia has a much higher risk of wildfires, which happen much more often than in New Zealand. If Australians are confused by messages about and approaches to wildfires, we in New Zealand should take note.

As mentioned in Recommendation 2a, we will begin evaluating and reviewing our national risk reduction programmes in 2022, aiming for these to be focused and effective in reducing unwanted wildfires.

While we acknowledge the reviewers' recommendations, we believe the current legislation under section 52 of the Fire and Emergency Act 2017 has appropriate provisions to prohibit activities and fires in the open air if required, including over a 24-hour period.

A national fire permitting system is now in place to establish and approve the conditions under which fire can be used during restricted or prohibited fire seasons.

Fire and Emergency is currently establishing Regional Land Management Forums, which will enable us to discuss the effects of risk reduction initiatives and enable land managers to advocate any changes necessary.

Fire and Emergency will also support Te Uru Rākau/Forestry New Zealand in establishing a National Land Management forum.

It should be noted that legislation is a mechanism for achieving compliance. As the forestry industry has shown, trigger activities developed by industry, self-regulation, and other drivers such as insurance can also provide incentives toward compliance.

Proposed actions

- 2.4 As part of our National Risk Reduction Programmes, develop a comprehensive community education package that outlines the various levels, triggers and components of the fire danger rating system and the actions to be taken or followed for each component.
- 2.5 Work with partner agencies and other organisations to identify and promote alternative legislative requirements for achieving compliance.
- 2.6 Complete the establishment of Regional Land Management forums and provide regular updates between forums that help lift the value of these nationally.
- 2.7 Develop a greater understanding among District Managers and in some cases additional decision-making support tools for the fire control measures, including legislation, available to support risk reduction initiatives.

Recommendation 3

Fire and Emergency New Zealand should introduce a policy that each Region develops a matrix of air, ground, incident management team and machinery resources that will be on stand-by at given forecast levels of fire danger, to include business rules about response times.

Context

The reviewers found that both ground and air crews' initial response was prompt. However, they found limited day-to-day pre-set levels of resource availability matched to the fire danger levels. The reviewers believe that a more robust and standardised approach to resourcing on days of very high to extreme fire danger, one that works irrespective of individual availability, would benefit Fire and Emergency across the country.

The reviewers also recommended establishing a national process to get regional stakeholders together before the fire season to decide how they can make sure the appropriate mix of heavy plant, aircraft, ground resources and management teams is in place.

Current work

We have established projects to develop the frameworks, policies, processes and resources required to support local planning and fire plan development. These projects will inform local planning, local risk modelling and district capability planning. The outcomes are as follows:

- Create nationally consistent guidelines defining how districts must prepare, including:
 - business rules
 - response times for machinery and aircraft on standby at defined fire danger levels.
- Identify and refine user requirements for a nationally consistent system and database to migrate the current regional and district resource and availability systems into.
- When considering user requirements, collaborate with partner agencies to achieve common platforms where possible.

Proposed actions

3.1 Complete and implement the policies and framework to support local planning, including guidelines for Districts to engage in readiness activities such as standby arrangements for given forecast fire danger levels.

3.2 As part of wildfire season preparedness activities, districts shall discuss and confirm with key partners and stakeholders the standby arrangements that will be in place at given forecast fire danger levels during the coming wildfire season.

Recommendation 4

Fire and Emergency New Zealand should develop a national aviation management function.

Context

The reviewers identified that we should establish a strategic direction for Fire and Emergency use of aircraft at emergency incidents. Aircraft are essential to fire suppression efforts in New Zealand, but they are costly and must be used safely, efficiently and effectively. Since managing aircraft is complex and expensive, we will have to make difficult cost-benefit decisions; therefore, the reviewers recommended Fire and Emergency consider national coordination and funding for this function.

Current work

We have begun an aviation enhancement project to:

- develop and refine all existing aviation procedures and systems, including drone/remotely piloted aerial systems (RPAS) operations used at vegetation fires
- establish aircraft operational specifications that apply to all work across all Fire and Emergency response types that use aviation resources
- consider establishing of national aviation management systems (national air desk) for ordering and tracking aircraft.

Proposed actions

4.1 Delivery of the Aviation Enhancement Project.

4.2 Planning and Operations Incident Management Team (IMT) personnel to have a greater understanding of the safe, efficient and cost-effective use of aircraft to suppress fires.

4.3 When we have completed the current project, consider the functional requirements to effectively support aviation management and establish this function nationally.

Recommendation 5

Fire and Emergency New Zealand should develop national guidelines for pre-season data-sharing between stakeholders, and Regions should be responsible for ensuring that they have identified key data sources to support operations and verifying that they will be readily available in the event of an incident occurring.

Context

Many participants in the review noted the lack of available data due to data set compatibility or access problems. The review found that commercial operators, industry, iwi and other stakeholders held a significant amount of valuable current data, but the IMT was not easily able to source and use this data. The policy of storing only national data sets also affected access and use. We need to review this to allow other sub-regional data sets to be uploaded onto a nationally accessible framework.

Current work

Projects are under way to develop the policy, systems and processes to support districts and regions to plan and develop fire plans locally, including collaboration, engagement and information-sharing requirements.

A project is current under way to develop a common operating platform, Geospatial Common Operating Platform (GCOP), which will enable users to view data from a range of sources and formats through a single application. In many cases, Fire and Emergency does not need to hold the data to have access to it; this resolves many of the issues of data maintenance, formatting and storage.

The Australian bushfires highlighted problems with data-sharing: many agencies wanted access to information, which caused many host servers to fail as they were never set up to handle the level of data-sharing needed. Solutions such as Map Broker have been developed: these act as a buffer, sharing data with end users without overloading the source.

The National Emergency Management Agency (NEMA) is developing an all-of-government data-sharing solution that could help Fire and Emergency access relevant information to aid decision making during incidents.

Proposed actions

- 5.1 Deliver the Geospatial Common Operating Platform (GCOP) project.
- 5.2 Review the current policy of only storing national data sets to ensure a range of data sharing approaches are available to support Region and District needs.
- 5.3 Regions and Districts are to identify what data is required from partner agencies to support decision-making and implement data-sharing arrangements based on the approaches established in 5.2
- 5.4 Fire and Emergency will work with NEMA in establishing an all of government data-sharing solution and identify how it could be of benefit in accessing information to support decision making during incidents.

Recommendation 6

Fire and Emergency New Zealand should develop guidelines for proposed ICC locations, functionality and connectivity, to include a single ICT system to be used across all locations. ICC locations should be tested and endorsed prior to each season.

Context

Other factors apart from data slowed down the IMT's attempts to find out what type of resources they would need to manage the Tasman fires:

- inconsistent IT operating systems
- operator unfamiliarity
- connectivity at incident control centres.

The reviewers identified that:

- many people did not have access to appropriate computers
- data terminals were not available
- in many cases, there were no non-generic logins for external agency staff.

People found workaround solutions, but these create the risk of losing or compromising data or making data unavailable to incoming shifts.

The review also noted that relocating to an Incident Control Centre (ICC) was inevitable because as the incident developed into a long-duration event, event control moved from the front line to the ICC. Inconsistencies in ICT provision, connectivity and working spaces could be minimised by identifying, testing and endorsing potential locations before fire seasons. Co-location opportunities should also be investigated with partner agencies to maximise integration and interoperability initiatives.

Flexibility and mobility are required for local coordination centres and the current Incident Command Units capability must be aligned to ICP's centres.

Current work

In most cases, districts have identified possible facilities they could operate from during larger events. However, in many cases, they have not thoroughly tested that these facilities can accommodate the personnel needed or how they will meet ICT requirements.

We have undertaken an initial review of the information technology requirements to support incident management teams. We have put processes in place to improve Incident Management Teams' (IMTs) access to ICT equipment. This includes accessing USAR resources and ICT personnel to provide technical support for setting up and problem-solving.

One of the outcomes of the projects to support local planning will be drive readiness measures such as identifying what facilities (e.g. ICCs) and equipment are needed to support incident management.

Proposed actions

- 6.1 Establish an Incident Control Centre (ICC) project that encompasses developing clear policies and processes for establishing, setting up and operating centres.
- 6.2 Districts to plan and carry out regular exercises of ICCs.

Recommendation 7

Fire and Emergency New Zealand should undertake a comprehensive review of the National Incident Management Teams and their processes, operating policies, training and membership including an increased focus on predictive services capacity to support fire suppression and consequence management.

Context

High-level pre-identified incident management teams were established in 2001 with a multi-Agency make up and have been managing a range of incidents in New Zealand and overseas since then. The review concluded that they are now due for a review and refresh. The development of Fire and Emergency and the additional functions mandate provides the opportunity to review and revisit the composition, training and role of National Incident Management Teams (NIMTs) and their potential role in the wider management of all incidents.

As the new organisation has access to a much larger and more diverse group of people and skills, it is timely to review NIMT membership and the supporting policy, systems and processes.

The review also noted the competing priorities of business-as-usual activities, incident response, and how these affected IMT availability and churn. We need to consider this carefully as we develop policy and procedures in this area.

Effective NIMTs have experienced, trained and highly skilled members who can operate at the largest and most complex incidents. The review identified the challenge for Fire and Emergency in maintaining skills, membership, and availability of appropriately skilled, trained and experienced people to fill these roles. To mitigate this, the review also highlighted the benefits and advantages Fire and Emergency has received from past international exchanges, study tours and deployments and the potential for further enhancing skills and experience by continuing or extending these practices.

The review also noted significant developments in the field of fire prediction and consequence management in recent years and felt that this role was not given enough prominence at many stages throughout this incident, or for that matter in developing and resourcing NIMTs.

Current work

We have decided to retain the existing NIMT structures until 2021–22.

We have developed a NIMT operational plan, which we will review annually before the wildfire season starts. Among other things, the plan describes the operating, training and selection processes for NIMT members.

We have started a project to review and better align the various systems, tools and processes that NIMTs use.

The National Manager Response Capability has confirmed that by 31 December 2022, subject to funding approval, we will move to the Australasian Inter-Service Incident Management System (AIIMS) as the Fire and Emergency Incident Command System (ICS). This will include updating the command and control policy.

Proposed actions

- 7.1 Complete the current NIMT project to review and achieve greater alignment between the policies, system, tools, training and processes used by NIMT.
- 7.2 In the two-year interim for NIMTs, continue the annual review and update of the NIMT Operational Plan to ensure arrangements around NIMTs are clear.
- 7.3 Review the current NIMT role capability and make critical improvements, for example, to core and specialist roles such as fire behaviour.
- 7.4 Include in the AIIMS implementation project a full review of incident management team approach with Regions and Districts having a greater capability.

Recommendation 8

Fire and Emergency New Zealand should review wildfire related training requirements across Fire and Emergency New Zealand and key partner agencies and identify national requirements for standard wildfire training for personnel in all roles (including fire ground support roles such as plant manager).

Context

The reviewers found many personnel from different backgrounds were engaged at the Tasman fires. People on the fire ground came from a wide range of locations, partner agencies, urban and rural backgrounds, and their understanding of suppression techniques required for the often complex fuel types associated with this fire varied considerably. It was often reported to the reviewers that people on the fire ground and in management positions did not fully realise some of the complexities involved with campaign vegetation fires and the work that goes on behind the scenes. The review highlighted the extent of training required to gain a sound understanding of wildfire suppression at large-scale incidents. It is not a matter of undertaking a weekend course or similar, and the depth of training and practice required should be factored into training schedules and pathways for those who may be tasked with managing large-scale vegetation fires, especially in the tall timber and complex fuel types.

It was also reported that it often took much longer to achieve containment of the fire perimeter than expected because of the poor quality of the 'mopping up' process. Firefighters can be trained on the job to mop up comprehensively in a very short time. It was concluded this failing showed up a lack of competency amongst some of our Fireline supervisors.

The reviewers emphasised the importance of engaging forest workers for a wide range of roles at the incidents because they bring significant experience and understanding of the forestry environment.

The reviewers also noted that many of the plant managers and plant operators on the Tasman Fire had no formal training in placing fire breaks or suppressing wildfires beyond a basic introduction to wildfires and many had never been involved in any large fire suppression operations.

Using land management personnel, plant operators and managers effectively and safely requires a concerted approach to engaging, training and developing them.

During this campaign event it became evident that we exhausted our pool of fully competent fire behaviour specialists.

Current work

We began reviewing the Guidelines for forest and vegetation wildfire management positions in September 2019 (Draft 2.12). This document outlines the skills, experience and attributes required for various wildfire roles.

Fire and Emergency has established a national exercise programme that requires regions to conduct joint inter-agency wildfire exercises annually to maintain currency and competence. The Fire and Emergency Rural Fire Response Team Project is an annual skills maintenance and development event for crew leaders and sector supervisors. We are planning to expand it in 2020/21 to include skill maintenance for advanced tree fallers. We are developing partnership arrangements and MOUs that involve partner agencies, forest industry and other land management agencies. This recognises the contribution our partners make.

Proposed actions

- 8.1 The pre-wildfire season regional exercises are to focus on the key learnings from the Tasman fires review and incident debriefs.
- 8.2 Continue the annual Rural Fire Response Training programme for crew leaders and sector supervisors plus skill maintenance options for Advanced Fallers
- 8.3 Complete the review of the Guidelines for forest and vegetation wildfire management positions.
- 8.4 Ensure that firefighters and fire-line supervisors deployed outside of Regions are competent, experienced and meet minimum standards for the roles they fill.
- 8.5 Develop a Region matrix of the minimum numbers of personnel required to be trained/experienced and available for each of the functional roles as outlined in the Guidelines for forest and vegetation wildfire management positions.
- 8.6 Carry out a Region training gap analysis, based on 8.4 and those currently trained/experienced personnel within Fire and Emergency and partner agencies.
- 8.7 Develop a training plan based on the response from Regions to the work carried out in 8.4 and 8.5.

Recommendation 9

Fire and Emergency New Zealand should embed AIIMS as the preferred internal incident control system for the management of its incidents. Personnel who interface outside of

Fire and Emergency New Zealand with one or more agencies including the broader emergency management arrangements should retain an understanding of CIMS management structures and liaison and reporting requirements so they can operate in that capacity when required.

Context

New Zealand emergency management agencies, including Fire and Emergency, currently use the New Zealand Coordinated Incident Management System (CIMS) as their Incident Command System (ICS). Australian fire and emergency service agencies use the AIIMS to manage incidents. Whether to use AIIMS or CIMS was an important question raised in the Port Hills review and was reinforced during the Tasman fires review. CIMS has a wider focus on incident, local, regional and national arrangements, while AIIMS goes into more detail about the key tasks and outcomes required of functional roles at an incident level. While considering how the Tasman fires were managed, the reviewers identified a number of ways that implementing AIIMS might have helped.

Current work

The operating model for Fire and Emergency established a National Manager Response Capability position. This position is responsible for designing and developing response frameworks, guidelines and tools.

We have confirmed our decision to adopt AIIMS as our incident command system and will develop a new command and control policy, processes and tools based on AIIMS management principles.

We have also confirmed that we are committed to CIMS as New Zealand's multi-agency coordination system. All personnel involved with multi-agency command and control management structures will maintain currency and competence in operating CIMS.

NIMTs are actively involved in developing and modelling best practice and training exercises across New Zealand. They will play a key role in supporting the implementation of AIIMS into Fire and Emergency.

Proposed actions

- 9.1 Implement AIIMS throughout Fire and Emergency by 31 December 2022.
- 9.2 Consider how NIMTs could be of assistance in the development and implementation of AIIMS.
- 9.3 Work with partner agencies, forest industry and other land management agencies to develop a clear plan for how partners will be incorporated within AIIMS.
- 9.4 Review training requirements to ensure Fire and Emergency personnel are 'bilingual' in both AIIMS and CIMS for multi-agency incident coordination.

Recommendation 10

Fire and Emergency New Zealand should develop systems and standard operating procedures to support a national resource ordering, tracking and availability system, to include developing a cadre of trained staging area managers.

Context

A fire is a constantly changing situation and this makes it challenging to track resources (people, machinery and aircraft) effectively and efficiently. However, this tracking is crucial for planning, logistical and safety reasons. The reviewers identified a lack of clear consistent doctrine, system and processes for resource management. To complicate matters, various people ordered resources through various channels using variable terminology. This resulted in some resources arriving that were not fit for purpose, while other resource orders went unfilled.

The review found that the lack of a national Fire and Emergency resource tracking and availability system made more unnecessary work and exposed people to potential workplace health and safety risks.

There were also difficulties managing resources arriving at and leaving the fire ground because of a deficient 'check in/check out' system and a lack of process for inducting, tracking and accounts payable for contractors.

The reviewers found that there was no systematic staging area management to help accurately track personnel and equipment being tasked to operational activities.

Current work

We have started a project to develop and refine all existing aviation procedures and systems. This will include determining whether the aircraft tracking database systems established by AFAC agency the National Aerial Fire Fighting Centre (NAFC) are suitable for use in New Zealand.

We have confirmed our decision to adopt AIIMS as our ICS, and will develop new command and control policy, processes and tools based on AIIMS management principles. These will include resource management roles and processes.

NIMT and Regional Incident Management Teams have trialled Office 365 and other solutions to track resources.

Recommendation 8 covers the need to train staging managers, and the actions required.

Proposed actions

- 10.1 Scope and implement a national resource ordering, tracking and availability system for all Fire and Emergency operations, including how partner agencies' resources can be incorporated.

Recommendation 11

Fire and Emergency New Zealand should review, clarify and document the roles of the NCC, RCC and IMT in Fire and Emergency New Zealand managed incidents, to include reporting lines for NIMTs.

Context

The reviewers found that people involved in the Tasman fires did not always understand the relationships between incident, regional and national levels. This meant that they were unclear on reporting lines, which made status reporting, resource management, ordering and provision challenging.

The logic of the local – regional – national hierarchy is challenged when a national incident management team is set up that (by definition) needs some of the most senior and experienced emergency managers in the country to lead it.

When an NIMT is assigned to manage a vegetation fire under the current FENZ structure the Incident Controller reports to the local PRFO. Under the proposed FENZ structure it is presumed the IC will report to the District Manager.

The reviewers consider an unambiguous policy about the chain of command to be key to the organisation working effectively during times of crisis. Incident managers need to know who they are reporting to and regional and national levels of management need to clearly understand what is and isn't appropriate when intervening in incident management.

Current work

We have confirmed our decision to adopt AIIMS as our ICS and we will develop a new command and control policy, processes and tools based on AIIMS management principles. These will include incident management roles, support structures and processes.

We have decided to keep the existing NIMT structures until 2021–22. We have developed a NIMT operational plan, which we review annually before the wildfire season starts. Among other things, the plan describes the reporting lines and how the team will operate.

Recommendation 7 outlines the actions that will support this work.

We have established a project to review and reform the coordination centres' structures, processes and guidelines as part of the Response Capability Directorate work programme.

This project includes identifying the roles and modular requirements for coordination centres in alignment with our operating model and national, regional and district structures.

Proposed actions

11.1 Delivery on the project to review and reform the coordination centres that clearly establishes the form, function and fit of NCC/RCC/LCC and ICC to supporting incident management.

11.2 Ensure that the AIIMS implementation project considers the outcomes of the review in 11.1 and how coordination in support of incident management teams will be carried out within an AIIMS environment.

11.3 Provide wide awareness internally and with partner agencies of the critical roles, accountabilities and dependencies of National Coordination Centre (NCC), Regional Coordination Centres (RCCs) and Local Coordination Centre (LCC).

11.4 Carry out regular exercises between National Coordination Centre (NCC), Regional Coordination Centres (RCCs), Local Coordination Centre (LCC) and NIMTs to test systems and processes.

Recommendation 12

Fire and Emergency New Zealand should develop doctrine to formally integrate iwi into local and national IMTs.

Context

Iwi as tangata whenua with their long cultural history in New Zealand hold specific information and knowledge that is essential to all the facets of fire management. During the Tasman fires, there was evidence of good practice in involving iwi in the IMT's structure. The Review heard that not only was embedding an iwi representative in the IMT highly beneficial to managing the fires, but the relationships built during the incident have had positive after-effects.

It is envisaged that the regional iwi liaison officers would be the initial contact to identify the appropriate iwi to support the incident planning function by providing technical specialists who can advise on local values and places of importance to local Maori.

Iwi involvement within the IMT teams also aligns directly with Objective number 8 under the National Disaster Resilience Strategy – to build relationships with iwi to ensure greater recognition, involvement and understanding of iwi issues in emergency management.

Current work

We have worked and will continue to work with iwi and tangata whenua when managing incidents. Since the Tasman fires, local iwi/tangata whenua have been more widely involved in the planning function of IMT as technical specialists. This has allowed us to draw on their knowledge more effectively so that we respect cultural values and beliefs.

While iwi involvement in the Tasman fire IMT worked well, we should not assume that every iwi will be able to stand up representation as quickly or as effectively as the Te Taihū iwi collective did. This is a current risk, and we need to ensure we have strong relationships with iwi throughout the country before any incident.

Proposed actions

- 12.1 Districts to work with the Fire and Emergency National Kaupapa Māori Directorate to build relationships and understanding with local iwi/tangata whenua.
- 12.2 Local iwi/tangata whenua are to be incorporated into the IMT Planning function as technical specialists where their knowledge may be mutually beneficial in the management and outcomes of wildfire incidents.
- 12.3 Consider the inclusion of an iwi representative in the AIIMS development and implementation project to explore and broaden the ways iwi/tangata whenua can have input into incident management.

Monitoring and reporting 13

Fire and Emergency New Zealand will develop a monitoring and reporting process to work with and inform communities, partner agencies and the emergency sector on our progress as we implement the actions set out in this document.

Proposed actions

- 13.1 Share the Tasman Fire Action Plan with partner agencies and discuss how their involvement can support achieving the actions described.
- 13.2 Establish governance and management arrangements to actively monitor and manage implementation of the action plan.

Input into the development of the action plan

The following people have contributed to developing the Tasman Fire Action Plan:

Name	Position
Paul Turner	National Manager Response Capability
Roxanne Hilliard	National Manager Risk Reduction
Steve Turek	National Manager Community Readiness and Recovery
Mike Grant	Region Manager
Tim Mitchell	Manager Rural Fire
John Sutton	Service Delivery Advisor
Bryan Cartelle	Service Delivery Advisor
Rob Saunders	Service Delivery Advisor
Zoe Mounsey	Chief Advisor Finance and Business Operations
Piki Thomas	Pou Herenga Māori / National Manager Kaupapa Māori
Kate Hill	National Advisor Coordination Centres
Tony Amar	Senior Spatial Intelligence Analyst
Nick Fagerlund	Legal Counsel
Lawrence Arps	Education Services Manager
Pete Scarlet	Manager Region Training
Murray Mitchell	Chief Information and Technology Officer
Heather Elder	Technical Writers

Appendix one – Accountability and Timelines

The following actions have been prioritised for 2020/2021, or are being completed as part of BAU activities/funding:

#	Action	Accountability	Timeline
1.1	Develop tools, templates and processes to guide the direction of risk reduction activities and inform risk reduction promotion initiatives.	National Manager Community Readiness and Recovery	30 June 2021
1.2	Implement the framework for evaluating the impact and effectiveness of the current national risk reduction programmes.	National Manager Community Readiness and Recovery	31 December 2021
1.3	Ensure a consistent methodology is applied across all Districts to risk reduction and community risk planning activities.	National Manager Community Readiness and Recovery and District Manager	31 December 2021
2.1	Deliver the Management of Fire Seasons and Activities project, including implementation of the framework by districts.	National Manager Risk Reduction	30 October 2021
2.2	Districts will work with land management agencies to annually review and amend the activity triggers as necessary to ensure these are being effective in reducing the incidents of unwanted wildfires.	District Managers	30 September 2022
2.4	As part of our National Risk Reduction Programmes, develop a comprehensive community education package that outlines the various levels, triggers and components of the fire danger rating system and the actions to be taken or followed for each component.	National Manager Community Readiness and Recovery	31 December 2022
2.5	Work with partner agencies and other organisations to identify and promote alternative legislative requirements for achieving compliance.	National Manager Risk Reduction	31 December 2021
2.6	Complete the establishment of Regional Land Management forums and provide regular updates between forums that help lift the value of these nationally.	Region Managers	30 September 2020
2.7	Develop a greater understanding among District Managers and in some cases additional decision-making support tools for the fire control measures, including legislation, available to support risk reduction initiatives.	National Manager Risk Reduction	31 December 2021
3.1	Complete and implement the policies and framework to support local planning, including guidelines for Districts to engage in readiness activities such as standby arrangements for given forecast fire danger levels.	National Manager Response Capability	30 June 2022
3.2	As part of wildfire season preparedness activities, districts shall discuss and confirm with key partners and stakeholders the standby arrangements that will be in place at given forecast fire danger levels during the coming wildfire season.	District Managers	30 September 2020

#	Action	Accountability	Timeline
4.1	Delivery of the Aviation Enhancement Project.	National Manager Response Capability	30 December 2020
4.2	Planning and Operations Incident Management Team (IMT) personnel to have a greater understanding of the safe, efficient and cost-effective use of aircraft to suppress fires.	National Manager Response Capability	30 June 2021
4.3	When we have completed the current project, consider the functional requirements to effectively support aviation management and establish this function nationally.	National Manager Response Capability	30 April 2021
5.3	Regions and Districts are to identify what data is required from partner agencies to support decision-making and implement data-sharing arrangements based on the approaches established in 5.2	Region Managers and District Managers	30 July 2021
6.1	Establish an Incident Control Centre (ICC) project that encompasses developing clear polices and processes for establishing, setting up and operating centres.	National Manager Response Capability	June 2021
6.2	Districts to plan and carryout regular exercises of ICCs.	District Managers and National Manager People and Workforce Capability	31 December 2020
7.1	Complete the current NIMT project to review and achieve greater alignment between the policies, system, tools, training and processes used by NIMT.	National Manager Response Capability	31 August 2021
7.2	In the two-year interim for NIMTs, continue the annual review and update of the NIMT Operational Plan to ensure arrangements around NIMTs are clear.	National Manager Response Capability	31 December 2020
7.3	Review the current NIMT role capability and make critical improvements, for example, to core and specialist roles such as fire behaviour.	National Manager Response Capability	31 December 2020
8.1	The pre-wildfire season regional exercises are to focus on the key learnings from the Tasman fires review and incident debriefs.	Region Managers	31 December 2020
8.2	Continue the annual Rural Fire Response Training programme for crew leaders and sector supervisors plus skill maintenance options for Advanced Fallers	National Manager Response Capability	31 September 2020
8.3	Complete the review of the Guidelines for forest and vegetation wildfire management positions.	National Manager Response Capability	31 December 2020
8.4	Ensure that firefighters and fire-line supervisors deployed outside of Regions are competent, experienced and meet minimum standards for the roles they fill.	District Managers	31 November 2020
8.5	Develop a Region matrix of the minimum numbers of personnel required to be trained/experienced and available for each of the functional roles as outlined in the Guidelines for forest and vegetation wildfire management positions.	Region Managers	31 March 2021

#	Action	Accountability	Timeline
8.6	Carry out a Region training gap analysis, based on 8.4 and those currently trained/experienced personnel within Fire and Emergency and partner agencies.	Region Managers	30 March 2021
8.7	Develop a training plan based on the response from Regions to the work carried out in 8.4 and 8.5. Note the implementation of the training plan may require future funding considerations.	National Manager People and Workforce Capability	30 June 2021
11.1	Delivery on the project to review and reform the coordination centres that clearly establishes the form, function and fit of NCC/RCC/LCC and ICC to supporting incident management.	National Manager Response Capability	31 December 2021
11.4	Carry out regular exercises between National Coordination Centre (NCC), Regional Coordination Centres (RCCs), Local Coordination Centre (LCC) and NIMTs to test systems and processes.	Region Managers and National Manager People and Workforce Capability	31 June 2022
12.1	Districts to work with the Fire and Emergency National Kaupapa Māori Directorate to build relationships and understanding with local iwi/tangata whenua.	District Managers and National Manager Kaupapa Māori	31 December 2021
12.2	Local iwi/tangata whenua are to be incorporated into the IMT Planning function as technical specialists where their knowledge may be mutually beneficial in the management and outcomes of wildfire incidents.	Region Managers and National Manager Kaupapa Māori	31 December 2020
13.1	Share the Tasman Fire Action Plan with partner agencies and discuss how their involvement can support achieving the actions described.	National Manager Response Capability	30 September 2020
13.2	Establish governance and management arrangements to actively monitor and manage implementation of the action plan.	National Manager Response Capability	30 September 2020

The timing of the following actions will be subject to further consideration and organisation prioritisation following the 2020/2021 year:

#	Action	Accountability	Timeline
2.3	In collaboration with partner agencies, develop policies and processes for communicating wildfire risk and activity trigger information that enables easy access, interpretation and implementation.	National Manager Risk Reduction	30 July 2022
5.1	Deliver the Geospatial Common Operating Platform (GCOP) project.	National Manager Response Capability	31 October 2021
5.2	Review the current policy of only storing national data sets to ensure a range of data sharing approaches are available to support Region and District needs.	Chief Information and Technology Officer	30 October 2021
5.4	Fire and Emergency will work with NEMA in establishing an all of government data-sharing solution and identify how it could be of benefit in accessing information to support decision making during incidents.	National Manager Response Capability	30 October 2022
7.4	Include in the AIIMS implementation project a full review of incident management team approach with Regions and Districts having a greater capability.	National Manager Response Capability	31 December 2022
9.1	Implement AIIMS throughout Fire and Emergency by 31 December 2022.	National Manager Response Capability and National Manager People and Workforce Capability	31 December 2022
9.2	Consider how NIMTs could be of assistance in the development and implementation of AIIMS.	National Manager Response Capability	31 December 2022
9.3	Work with partner agencies, forest industry and other land management agencies to develop a clear plan for how partners will be incorporated within AIIMS.	National Manager Response Capability	31 December 2021
9.4	Review training requirements to ensure Fire and Emergency personnel and 'bilingual' in both AIIMS and CIMS for multi-agency incident coordination	National Manager People and Workforce Capability	30 June 2022
10.1	Scope and implement a national resource ordering, tracking and availability system for all Fire and Emergency operations, including how partner agencies' resources can be incorporated.	National Manager Response Capability	30 April 2022
11.2	Ensure that the AIIMS implementation project considers the outcomes of the review in 11.1 and how coordination in support of incident management teams will be carried out within an AIIMS environment.	National Manager Response Capability	31 June 2022
11.3	Provide wide awareness internally and with partner agencies of the critical roles, accountabilities and dependencies of National Coordination Centre (NCC), Regional Coordination Centres (RCCs) and Local Coordination Centre (LCC).	National Manager Response Capability	31 July 2022
12.3	Consider the inclusion of an iwi representative in the AIIMS development and implementation project to explore and broaden the ways iwi/tangata whenua can have input into incident management.	National Manager Response Capability and National Manager Kaupapa Māori	31 December 2022