Bushfires Transcript

I’ll be providing some basics about bushfires in Australia

such as what is a bushfire and provide some historical examples,

and where at-risk areas are.

I’ll outline the process for bushfire monitoring, warning,

and who assists in the event of a bushfire.

I’ll explain some basic actions that community members can

take to prepare for bushfires.

**What is a bushfire?**

A bushfire is defined as ‘an uncontrolled, non-structural

fire burning in grass, scrub, bush or forest areas’.

Bushfires are a completely natural process within the Australian

environment and have occurred on the continent for millions of years.

Many plant species in Australia have evolved to flourish

following bushfires and need them to germinate and grow.

Aboriginal and Indigenous peoples have used fire or have triggered

bushfires for tens of thousands of years to manage the natural landscape.

Bushfires are divided in to two major classes: ‘flat grassland fires’

(e.g., the Black Saturday Victorian Bushfires)

and ‘hilly/mountainous fires’ (e.g., the 2013 Blue Mountains Bushfires).

**How do bushfires start?**

Approximately 50% of all bushfires are triggered by lightning strikes.

The other 50% are due to human activity (either accidental or deliberate).

Bushfires are most likely to occur during ‘fire season’ when there are high temperatures,

low humidity, strong winds present – together with a fuel source

on the ground and a trigger.

Climate change is expected to increase the frequency and severity of

bushfires in coming decades and may already be responsible for

increased bushfire disasters.

Bushfires tend to be more common and disastrous during El Niño events,

with its hot and dry conditions.

**History of bushfires affecting Australia**

The record or history of past bushfires has not been comprehensively collated.

That has changed in recent years as State and Territory Fire authorities

have become much better resourced.

There is no national database of past bushfires affecting Australia prior to

European settlement in 1788.

It is difficult to record every single bushfire that has occurred in Australia.

This is because Australia is very large and the population is relatively

small and wide spread. It is difficult to gather information

about past bushfires affecting areas without direct observation

(before the modern instrumental and satellite observation period)

and before written records were kept.

In a recent study, Blanchi *et al*., (2014) identified a total of

260 bushfire events between 1901 and 2011 responsible

for the death of 825 people.

Notable bushfire disasters in the last 100 years or so include the:

2009 Black Saturday Victorian event

1983 Ash Wednesday South Australia and Victoria event

1967 Black Tuesday Tasmania event

1939 Black Friday Victoria event

1926 Black Sunday Victoria event

You can look online for further details including information

of loss of human and animal life and impacts on agriculture,

buildings, natural environments and the wider

community.

**Which States and Territories in Australia are at risk from bushfires?**

The simple answer is every State and Territory is at risk from bushfires.

The most devastating bushfires have tended (in the past) to

occur in the more southern States including NSW, Victoria, South Australia

and Tasmania (Figure 2). This is because of the overlap

between extreme fire danger weather, large fuel loads on the ground,

favorable climate for vegetation growth.

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This is a map of major bushfires in Victoria in the 2000’s

Bushfires don’t have to affect large geographic areas

to be especially devastating. The 2009 Black Saturdays fires were

not the largest in terms of area affected but were responsible

for the largest loss of life in a bushfire in Australia’s history.

Each state and territory in Australia has their own combat agencies for bushfires

Additionally, the Bureau of Meteorology gathers and analyses the

meteorological data and provides fire weather forecasts.

These forecasts are then passed to State and Territory Fire authorities.

Bushfire danger days are classified in to an index that

represents how intense (and therefore potentially dangerous)

the [bushfire] day might be based on the fire danger rating.

This index slightly differs in each state and territory.

Ensure that you are familiar with your home state’s classification system.

The Bureau forecast includes fire danger index information –

one index is used for grasslands and another index is used for forest areas.

Based on this information, and other factors, the regional fire agency determines the fire danger rating. Ratings identify the potential rates of spread, or suppression difficulty for given conditions.

It is important to discuss with others, and have a plan in the event of a likely bushfire

I will explain the fire danger ratings, and the impacts. Some ratings contain

total fire bans. You will need to check the guidelines for your local area as to what is permitted

in your state on days with a total fire ban, such as the use of BBQs. Can you use welding machinery? There is information available online relating to restrictions

in your state or territory.

There are different levels of the Fire Danger Rating.

(Using the SA CFS information)

Catastrophic (Total Fire Bans will be declared)

These are the worst conditions for a bush or grass fire.

If a fire starts and takes hold, it will be extremely difficult to control

and will take significant firefighting resources

to bring it under control.

Spot fires will start well ahead of the main fire and cause rapid

spread of the fire. Embers will come from many directions.

Homes are not designed or constructed to withstand fires in these conditions.

The safest place to be is away from bushfire prone areas.

What should I do if the rating is ‘Catastrophic’?

You need to act immediately.

Pack your emergency kit and leave bushfire prone areas the night

before or early in the day - this is your safest option.

Act immediately - do not wait and see

Avoid forested areas, thick bush or long, dry grass.

Prepare, know and practise a plan for:

When you will leave

 How you will get to your destination

 What you will do if you cannot leave

 Where you will go

When you will return

This preparation is important

Extreme Fire Danger Rating (Total Fire Bans will be declared)

These are very hot, dry and windy conditions for a bush or grass fire.

If a fire starts and takes hold, it will be unpredictable,

may move very fast and be very difficult for fire fighters to bring under control.

Spot fires will start and move quickly.  Embers may come from many directions.

Homes that are prepared to the highest level, have been

constructed to bushfire protection levels and are actively

defended may provide some safety.

You must be physically and mentally prepared to defend

in these conditions.

The safest place to be is away from bushfire prone areas.

What should I do in the if the rating is Extreme?

You need to get ready to act.

Only stay with your property if you are prepared to the highest level.

This means your home needs to have been constructed to bushfire

protection levels e.g.; enclosed eaves, covers over external air

conditioners, metal flyscreens etc.

You must be well prepared and able to actively defend your home

if a fire starts.  This means you have the right equipment and

resources to put out fires around your home e.g.; enough water supply,

petrol/diesel portable pump, generator, protective clothing etc.

If you are not prepared to the highest level, leaving bushfire

prone areas early in the day is your safest option.

Severe Total Fire Ban Rating (Total Fire Bans are likely)

These are hot, dry and possibly windy conditions for a

bush or grass fire.

If a fire starts and takes hold, it will be hard for fire fighters to bring under control.

Well prepared homes that are actively defended may provide safety.

You must be physically and mentally prepared to defend in these conditions.

What should I do in the event of a Severe Fire Danger?

You need to be aware.

Well prepared homes that are actively defended can provide safety.

This means you have the right equipment and resources to put out fires

around your home e.g.; enough water supply, petrol/diesel portable pump,

generator, protective clothing etc.

If you are not prepared, leaving bushfire prone areas early in the day

is your safest option.

Very High; High; Low-Moderate Fire Rating

If a fire starts, it is likely to be controlled in these conditions

and homes can provide safety.

Be aware of how fires can start and reduce the risk.

What should I do in the event of the Very High to Low-Moderate Fire Danger Rating?

Check your Bushfire Survival Plan.

Monitor conditions.

Action may be needed.

Leave if necessary.

As Fire Danger Ratings are different in each state and territory,

please check the websites that apply to you i.e.

the Bureau of Meteorology, or the relevant sites for your state.

For Victoria, Victoria Emergency; for New South Wales,

the Rural Fire Services; for South Australia, Country Fire Services;

for Queensland, Rural Fire; for Western Australia, Department of

Fire & Emergency Services; Canberra, Rural Fire Services;

Northern Territory, Police, Fire, and Emergency Services.

**Warning announcements**

Announcements from fire authorities are usually made

through TV, radio, or internet

Further, once an emergency has begun and alerts and

warnings and other instructions are

being issued, these are generally broadcast live on television

and local/national radio via the ABC and its NEWS24 channels

giving communities access to current information and

further access points for information.

Alerts are issued by the authorities when conditions

have worsened or when a fire(s) have started but do not

yet pose a threat. Communities are asked to pay attention

to the situation and take actions accordingly.

Warnings are issued which require the public to respond

in one way or any other (e.g., evacuate, stay and defend etc.) –

depending on the particular circumstances and the

bushfire plan they have prepared.

It’s important to understand that these messages and their

content is variable and linked to local conditions so it’s not

possible to generalise. You will need to pay close attention

to the relevant authorities for each bushfire emergency.

Having noted that each state and territory have their own guidelines,

it is possible to highlight the points related to getting prepared.

I will use the NSW Rural Fire Service information to provide a broad guide.

Firstly,

1. Develop a bushfire survival plan
2. Prepare your home
3. Prepare yourself and your family
4. Know the Fire Danger ratings and alert levels
5. Know your neighbourhood’s safer areas
6. Building planning for bushfire protection
7. Think about and prepare for evacuation
8. Staying and defending
9. Travelling in a bushfire affected area

Ensure that you do some research online for your local guidelines

to help you prepare for bushfires that affect your area.

**In summary**

Bushfires are a natural part of the Australian landscape.

There is a definite geography to bushfires with the

most severe more likely in the southern States but their

occurrence vary in time according to location and seasonal conditions

such as hot and dry conditions.

Australia has a history of large and devastating bushfires

and 50% of all bushfires are caused by human activity and the

the other 50% are caused by lightning.

Bushfire weather conditions exist, so know

your area’s Fire Danger Ratings. This will help you to prepare and decide what to do. Make sure you are prepared to take action.

Climate change is expected to increase the frequency and

severity of bushfires in coming decades and may already

be responsible for increased bushfire disasters and bushfires

tend to be more common and disastrous during El Niño events.

The Bureau of Meteorology provides information to inform fire danger ratings in routine

weather forecasts and fire weather warnings for dangerous days.

Australia’s states and territories have their own lead agencies

for bushfires, and state based guidelines.

There are many preparations individuals, families, communities

and businesses can take to help them in the event of a bushfire.

You may not live in an area that is affected by bushfires but

if you work or holiday in a place affected by bushfires, you could

be affected. As such, it is your responsibility to understand the

hazard and take appropriate actions.