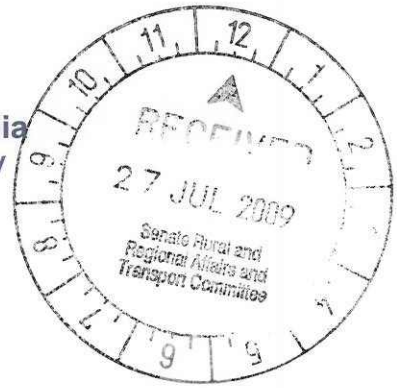
Government of **Western Australia**
Fire & Emergency Services Authority



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Our Ref: 11601

The Secretary
Senate Select Committee on Agricultural and Related Industries
PO Box 6100
Parliament House
CANBERRA ACT 2600

Dear Sir/Madam

Inquiry into the incidence and severity of bushfires across Australia

Thank you for the opportunity to make a submission to the Senate Select Committee on such an important topic.

This submission from the Fire & Emergency Services Authority (FESA) of Western Australia is intended to inform the committee of the work that FESA is undertaking to reduce the incidence and severity of bushfires in Western Australia. We have made comment against each of the terms of reference and where appropriate highlighted our view of gaps or room for improvement.

We note that the committee may conduct public hearings and our organisation would welcome the opportunity to contribute by providing evidence in support of this submission.

The Fire & Emergency Services Authority of Western Australia

The introduction of FESA on 1st January 1999 has enhanced both provision of emergency services to the Western Australian community and support for more than 30,000 volunteers and 900 career firefighters around the State.

FESA is funded primarily by the Emergency Services Levy (ESL), which is collected, in the main, by local governments in Western Australia, and contributions from the State Government.

The funding is allocated through FESA's ESL Grants Program, Capital Works Investment Program (CWIP) and operational budgets. It provides resources for emergency preparedness and response as well as the delivery of prevention and mitigation services to our community.

FESA's services contribute towards the achievement of safer communities in Western Australia and provide support to other emergency service organisations across Australia and internationally when required.

The emergency services volunteers and career personnel who are supported by FESA respond to a range of hazards – bush and structural fires, incidents involving hazardous materials (chemical, biological, radiological), floods, storms, cyclones and earthquakes. Emergency services personnel also undertake searches and rescues on land and at sea.

FESA not only helps improve the State's capability to respond to hazards but also undertakes wide-ranging programs to help the community:

- prevent hazards such as fires; and
- mitigate the effects of others such as cyclones, storms and floods.

In addition, it helps communities to recover from emergencies.

FESA facilitates the development and maintenance of emergency management arrangements for the State and provides advice and support on emergency management issues to key stakeholders at the local, State and national levels.

FESA Submission

FESA's submission is detailed below against each of the terms of reference:

a. the impact of bushfires on human and animal life, agricultural land, the environment, public and private assets and local communities;

The impact of bush fires on human and animal life, agricultural land, the environment, public and private assets and local communities is primarily a factor of the intensity of the fire, and the time that the community has to prepare for the travel of the fire. FESA is very pro-active in encouraging and assisting the community to undertake prevention and mitigation activities prior to and during the bush fire season.

It is widely acknowledged that bush fire intensity is a factor of the fuel consumed by the fire, the rate of spread of the fire and the heat yield of the vegetation burnt. By managing the fuel load, either through prescribed burning, chemical herbicide use, mechanical clearing such as graded firebreaks or hand clearing will reduce the impact of any bush fire that occurs. This is critical in minimising the potential adverse impact of unplanned fires on the community.

Bush Fire Threat Analysis

Managing the bush fire fuels, being aware of the values at risk, the potential consequences of a bush fire are all critical to reducing the impact of bush fires. FESA recognised the complexity of identifying the impact of bush fires on the various community assets. In 2005 FESA established a substantial project to develop a state-wide bush fire threat analysis that could be applied across the breadth of Western

Australia regardless of land tenure. FESA is the project manager and co-ordinator in partnership with the Department of Environment and Conservation and more recently Western Power. The project was fortunate enough to receive Commonwealth financial assistance through Emergency Management Australia (EMA). The project was completed in 2008 and the Pilbara and southwest corner of WA can now be compared for fire behaviour, response times, fire consequences and values regardless of land tenure.

Strategic Fire Management – Pastoral and Indigenous Communities

Managing the bush fire fuels requires that strategic plans are developed for the land tenure, land purpose and values. FESA has been very proactive attempting to get remote indigenous communities and pastoralists in the Kimberley to develop strategic fire management plans. FESA has been working with these groups over many years developing burning and fire break guidelines. This project has also received Commonwealth financial assistance through EMA. Through the development of these burning and fire break guidelines FESA has developed guidelines for the development of map based strategic fire management plans. FESA works with the communities and pastoralists at their location and convenience and develops a map based fire management plan that can then be implemented by the land owner/manager. By working with these groups in a pro-active way ensures that the impact of bush fires can be mitigated or preferably prevented. These strategic fire management plans also ensure that cultural and economic values can be maintained or enhanced.

FESA is replicating the work in the Kimberley within the Pilbara Region.

Biogeographic Regions

Environmental and biodiversity needs are very complex in a State the size of Western Australia. This complexity is acknowledged through the extensive number of biogeographic regions and sub-regions within WA. Vegetation is the primary bush fire fuel. The vegetation complex is a primary consideration of the biogeographic regions and sub-regions classification. FESA utilises the biogeographic regions and sub-regions classification as a demarcation tool for its bush fire management. By linking FESA's bush fire management to the biogeographic regions and sub-regions classification permits FESA to apply the most up to date research, primarily conducted by the specialist Federal and State Government Agencies and universities, when considering fire behaviour modelling, environmental issues and biodiversity.

As a consequence of the environmental and biodiversity needs it is essential to have fire regimes that consider fire seasonality, burning frequency, fire intensity and the ability of the site to recover from other disruptive ecological processes such as phytophthora dieback (*Phytophthora cimmamomi*).

As recommended in the COAG report "National Inquiry on Bushfire Mitigation and Management[1]" FESA has been working with community groups and individual pastoralists to develop a zoning approach to the classification of fuel management areas. The creation of the strategic fire management plans for remote indigenous communities in the Kimberley and strategic pastoral station fire management plans are examples of this work.

High Intensity versus Low Intensity Fires

It must be noted that bush fire mitigation can, and in many instances will place competing land use activities in conflict. It is known that at certain intensities fire suppression management options change, with high intensity bush fires precluding direct attack on the headfire and therefore more land is burnt. Low intensity bush fires permit direct attack on the fire and therefore the fires may be smaller and impact less area. As fuel loads are a significant determinant in bush fire intensity the level of fuel accumulation is critical to the ability of firefighter to quickly suppress the bush fire.

As bush fire fuels accumulate over time, a fire frequency shorter than the vegetations ability to set seed and regenerate can ultimately lead to that species being removed from the area. This can lead to a situation where for community protection the area is burnt on a rotation that precludes a species regenerating.

b. factors contributing to the causes and risks of bushfires across Australia, including natural resource management policies, hazard reduction and agricultural land maintenance;

Factors contributing to the risks of bush fires across Australia appear to be as a consequence of an amalgamation of a wide range of social, economic, and cultural factors.

Times of Change

Australia has since white settlement concentrated its development around the coastal fringe. Since the 1970's the agricultural sector, natural resource management and the community in general have undergone significant restructuring. The agricultural sector has seen a concentration of farms and pastoral stations into conglomerates controlled by companies. This transition from a family based industry to a company structure has resulted in less people working the farm, with a resultant reduction in the support structure within the small country towns. This has resulted in a decline of people living and working in the country locations. It has also resulted in less of the general population being exposed to the management requirements for effective and efficient agricultural production. When a population is removed from the actual production it is less likely to understand the need for various land use management options such as

[1]Ellis, 2005, "National Inquiry on Bushfire Mitigation and Management", COAG report, Commonwealth of Australia, Canberra. (page xxvi recommendation 6.3)

prescribed burning, and therefore more willing to complain when discomforted by smoke.

Western Australia's Changing Fire Management Scene

Similarly, within Western Australia, since the 1970's natural resource management, in particular State Government managed lands, has undergone significant transition. In the 1970's there was a Forests Department which had been established in 1918, a National Parks Authority, a Fisheries and Wildlife Department, a Public Works Department and a Planning Agency managing land. In the mid 1980's the Forests Department amalgamated with the National Parks Authority and the Wildlife Section of the Fisheries and Wildlife to create the Department of Conservation and Land Management (CALM). The hierarchy of CALM was primarily the foresters who by the nature of their training, skills and experience in the complex land (including flora and fauna) management roles were able to continue to implement the recommendations of the Royal Commission into the fires of the south–west of WA in December 1960 and January, February and March of 1962.

In the late 1990's there was further restructuring where the Forest Products Commission (FPC) was created to undertake the logging responsibilities from CALM and then a number of years later to amalgamate CALM with the Department of Environment to create the Department of Environment and Conservation (DEC). It appears that the role and responsibility of the multi skilled foresters has been reduced in the senior hierarchy of the new DEC.

In 2001 an internal report within CALM identified that "fire management be identified as part of the duties of all departmental staff in the forest regions, and a relevant skills base be maintained[2]" bush fire management exposure within the job description forms and therefore an increase in the number of staff available for bush fire management. The FPC still support the bush fire management conducted by DEC by the provision of staff for their fire duties roster.

Other significant factors in the changes that have occurred to bush fire management is the lack of understanding in the general community of fires in the bush, whether prescribed or unplanned and their role in determining the vegetation structure and composition.

Concurrently the population has moved away from using wood fires for heating, cooking and heating the water. It was also common for Australians to have a wood barbeque in the 1970s and 1980s. The option of gathering firewood from the State government multiple use lands has diminished as the logging industry has diminished. There appears to be less non-commercial thinning of the forest near major community centres and therefore less readily available fire wood. The State Government and a number of

[2] C Muller, 2001, "Review of fire operations in forest regions managed by the Department of Conservation and Land Management", Department of Conservation and Land Management. (page 95, recommendation 13.2)

local governments have actively discouraged the use of wood fires for winter heating on the grounds of air pollution.

The combination of all of these factors has effectively resulted in the general community being isolated from fires in the bush, or the burning of wood products. By creating this ignorance and the isolation from fires, has resulted in the community being less aware of the requirements for effective bush fire and the acceptance of smoke in the atmosphere, other than associated with unplanned bush fires. When an unplanned bush fire creates dense smoke that is within the atmosphere for several days there are very few complaints. Smoke that is significantly less dense or disruptive, but created from a planned burn will receive numerous complaints and may end up as a report in the press. Smoke from a burn can also be deemed pollution under the *Environmental Protection Act 1986,* which carries very heavy penalties if the burner is prosecuted.

To be effective in reducing the cause and effect of bush fires the community needs to return to the premise of:

1. The land owner / manager are responsible for managing the fuel load on their land so as to not expose themselves or their neighbours to an unacceptable risk. They must also prevent a fire from occurring on their land, but if a fire does occur they must suppress the fire, or at least undertake activities to the limit of their ability to suppress the fire. This includes State Government Authorities.

2. The local government must ensure that the land owner / manager manages their fuel load and ensure that land owner / manager undertakes appropriate bush fire prevention and suppression activities. The local government must also provide the next tier of management for bush fire suppression so that when the capability of the individual land owner / manager is exceeded they should coordinate additional resources.

3. The State Government Fire Agency must ensure that the local government undertakes its roles appropriately. The State Government Fire Agency must also provide the next tier of management for bush fire suppression so that when the capability of the local government is exceeded they should coordinate additional resources.

This is essentially the structure developed in the WA *Bush Fires Act 1954*, with the exception of the role of the State Government Fire Agency should be expanded and enhanced.

c. the extent and effectiveness of bushfire mitigation strategies and practices, including application of resources for agricultural land, national parks, state forests, other Crown land, open space areas adjacent to development and private property and the impact of hazard reduction strategies;

Across Australia there appears to be a level of duplication between fire agencies and the state based land management agencies regarding bush fire management and responsibility. Whilst many of the land management agencies have previously been involved with forestry operations there appears to be a general movement for the land management agencies to be conservation and ecocentric based and less involved in active intervention and management of the natural resources.

Multiple Agencies and Tenures

The effectiveness of bush fire mitigation would be enhanced if the multiple agency and jurisdictional arrangements were abandoned. The principle or pre-eminent fire agency should be enabled to manage bushfire preparedness regardless of tenure or ownership.

One central agency must be made responsible through the State statutes to coordinate and approve the regional and strategic fire reduction strategies. The onus for developing the strategies and then implementing the strategies should quite rightly remain the responsibility of the local government and the local land owners/managers or managing authority. Where the local government, local land owners/managers or managing authority did not undertake the work the pre-eminent fire agency must have the statutory authority and resources to undertake that work in a timely manner and where appropriate recover the cost of that work from the local land owners/managers or managing authority.
This is currently the situation in regard to bush fire prevention works under the powers contained within the *Bush Fires Act 1954*, with the exception that the State Government agencies, such as the land management agencies are not bound by the *Bush Fires Act 1954.*

In essence, the primary responsibility for undertaking bush fire mitigation and prevention must reside with the local land owners/managers who must have the on-ground responsibilities. The next level of responsibility must reside with the local government who must have the statutory powers to ensure that the on-ground work is completed in a timely and appropriate manner. The over arching responsibility for the strategic bush fire mitigation and prevention works must reside with the State fire authority who must have the statutory powers to undertake the work and recover the costs in a reasonably efficient manner.

This statutory authority must also cover the supervision and suitability of the strategic fire mitigation and prevention plans for all State agencies. The non-implementation of the plans must be able to be rectified through the State fire authority undertaking the work on the State lands and recovering the costs from the land management agency.

The Commonwealth Government should ensure that it subjects its fire management plans for its land holdings to the same process, although it is acknowledged that there is no legal reason for it to do so. It would however reinforce through its action that it was seeking to ensure that Commonwealth land posed no increased bush fire threat to the community than any other lands.

d. the identification of measures that can be undertaken by government, industry and the community and the effectiveness of these measures in protecting agricultural industries, service industries, small business, tourism and water catchments;

Emergency management of particular hazards are allocated to Hazard Management Agencies (HMA) in WA under provisions of the *Emergency Management Act 2005*. There are therefore three agencies that have HMA responsibilities in respect of bushfires – Local Government (122), Department of Conservation (DEC), and FESA (Gazetted fire districts – urban areas and the periphery).

FESA has a significant statewide leadership role in developing and implementing policy and programs in support of its HMA role and that of other HMAs. The West Plan Bushfire, is a state-level emergency management plan endorsed by the State Emergency Management Committee, describe these arrangements.

Local Governments in WA, through the *Bush Fires Act 1954* (the Act) have carriage of local measures to prevent and mitigate bushfires on private lands. The Act has a specific provision (s28) that requires an occupier of land to "...take all possible measures at his own expense to extinguish the fire."

The Act also regulates activities likely to cause fires, and measures to be taken while using fire (for whatever purpose) on land. Local Governments are also able to require land holders to reduce or remove fuels and/or create fire breaks. These requirements are published by all Local Governments in WA and are commonly termed an annual Fire Break Order.

In addition, local risk management of bushfires is outlined in every local government area Local Emergency Management Plan – though these vary in sophistication, most areas of the State have a plan that at least describes local response arrangements.

FESA believes that the principles of community engagement are essential in implementing effective programs that reduce and mitigate risk to communities. In support of this approach FESA has also undertaken to employ a number of Community based fire and emergency services managers (CFMs & CESMs) in high risk communities. The CFMs and CESMs are jointly funded by FESA and the relevant local government that ensures that there is a "buy in" by all stakeholders. Additionally the State Government has through FESA employed a number of Community Emergency Management Officers (CEMOs) that work with local governments and their communities to establish and develop their local emergency management arrangements.

e. any alternative or developmental bushfire prevention and mitigation approaches which can be implemented;

An alternative to the standard bush fire prevention and mitigation approach that can be implemented are approaches similar to the ones developed and being implemented by FESA.

FESA is seeking to engage, educate, make the community aware that they can assist themselves and improve their community protection by actively participating in bush fire prevention activities well before the summer bush fire period. To assist the community FESA has developed and continuous to develop community centred tools that can be used by untrained people, and achieve a successful safe result.

A number of examples of this approach are:

Winter Burning Program

The "Winter Burning Program" where FESA has developed burning guidelines that is basic in nature, but designed to ensure that a prescribed fire will not escape and cause damage. This project is designed to give the people living in the rural / forest interface zone on land holdings of less than five hectares the knowledge on how to conduct a prescribed burn. This knowledge base is developed through the provision of a DVD on how to burn, burning guide booklet and field demonstration days.

FESA's Bush Fire & Environmental Protection Branch have developed burning criteria based on the Keetch-Byram Drought Index, drought factor, rain, temperature, relative humidity, dew point, wind speed and atmospheric stability.

By combining all of these components, FESA was able to determine that in the Mundaring area

- if a burn using a single ignition point was created after three in the afternoon between the period of 15 June and 15 September;
- when the wind was between 12 and 19 kilometres per hour;
- when there was no haze alert for the day of the burn or the next day; and
- there has been between five and 10 days since last rains; then
- the fire will self- extinguish by around six thirty in the evening.

Where an area will not burn out by six thirty in the evening then additional individual point ignitions 15 to 20 apart can be used to facilitate the burn out time. The burns are conducted in a manner that encourages the bulk of the area to be burnt utilizing a backing fire, rather than a headfire.

The winter months are a perfect time for owners to prepare their properties in readiness for summer bush fires. The aim is to create different levels of fuel to maintain a mosaic of recently burnt and unburnt vegetation.

The burn area should be one fifth of the available bush land and be between 50 and 200 square metres. This will create a five year burning plan. This is done so fuel loads

are managed and firefighters may be able to protect the homes. At the end of the winter burn there should still be some bush unburnt with compressed leaf litter on the ground, this is so the structure of the bush remains and weeds are unable to take over.

The benefits of this project are many. These are primarily:

- Demonstrating to people in the rural / forest interface zone that they can reduce the potential impact of a summer bush fire on their home by undertaking prescribed burning during prescribed periods under nominated conditions will lead to a reduced fuel load within the community.
- After a suitable period of years the areas where this project is undertaken will be significantly more protectable from unplanned summer bush fires as the fuel loads will be reduced and the corresponding bush fire intensities will be lower;
- People who undertake their burning will be better placed to understand the smoke management implications associated with prescribed burning and may be more accepting of State agencies undertaking burning in neighbouring lands;
- By demonstrating that fire in the bush under pre-determined conditions does not expose the community to unnecessary risk will help to educate the community about the benefits of appropriate prescribed burning;
- This project empowers the community to protect itself from summer bush fires and take ownership of the potential problem and solution; and
- The project empowers the community by prescribing the conditions under which the successful burning can be undertaken, so that those with limited knowledge can participate.

The ultimate benefit of this project is that communities will be better protected from the impact and adverse consequences of summer bush fires.

Rural Urban bush fire Threat Analysis (RUBTA)

In 2003 FESA developed the 'Rural Urban Bush Fire Threat Analysis (RUBTA)'. The purpose of this analysis tool is to provide a system that fire managers can use to quantify decisions associated with bush fire hazards, risks and values to determine the threat that a bush fire would pose.

It is expected that the RUBTA tool will be applicable in situations where bush land and communities interface. This may include several streets in the metropolitan area, or a brigade zone, or local government authority area. The expectation is that the hazards, risks and values analysed and the resultant threat determined by use of this analysis tool can be applied with equal success in all areas. This analysis tool is not designed to be applied in isolated areas that contain little residential or commercial development.

As most bush fires are caused by human activity, either by deliberate actions or carelessness, risk can be equated with human activity and available fuels. For the development of this analysis (RUBTA), a zone is any area that is being assessed. It can be a local government area, brigade area, or a subdivision.

This analysis tool acknowledges that community needs be placed in the context of:

- People (e.g. residents, employer/employees, students, patients and visitors);
- Property (e.g. houses, businesses, public buildings); and
- Infrastructure/systems (e.g. utilities, transport, communications).

All of these are components of the "community" section of the threat analysis, but they are also significant components of the "risk" section. They fall in both sections because people start the majority of bush fires and also have values that are potentially under threat. Therefore people make up a large portion of the problem of the risk of bush fires. The RUBTA is designed to identify where a more significant potential problem may exist when compared with other areas after completing a threat analysis of the jurisdiction or assessment zone.

Actions — specific to achieve a Community Safety Outcome

Whilst RUBTA provides the opportunity to undertake a considered structured approach to identifying the potential threat to a community from bush fires, it does not recommend what should be done to mitigate the potential threat. The RUBTA process seeks to document the items that may cause a bush fire control problem and potentially damage community assets and values. It is recommended that after undertaking the RUBTA analysis, which itself should have suitable community representation, the community should be consulted as to how the potential bush fire threat can be mitigated.

In most instances this consultation should be undertaken via the local Bush Fire Advisory Committee. The bush fire threat must be mitigated to a level that the community is willing to accept. The potential consequences of the action, or alternatively inaction, must be understood by those making the decision as a pre-requisite for it to be appropriate for that community.

Bush Fire Threat Analysis (BFTA)

The Bush Fire Threat Analysis (BFTA) is an assessment of the comparative risk of damage resulting from bush fires throughout Western Australia regardless of land tenure. It is a strategic risk analysis that is applied by FESA and the Department of Environment and Conservation and does not purport to be a real time fire simulation model. In accord with the principles of Australian Standard AS/NZS 4360 (1999), risk is defined in terms of the likelihood of occurrence of an event (in this case a bush fire affecting a value), and the subsequent consequences should the event occur. A combination of quantitative and qualitative approaches to risk assessment has been used in developing the BFTA model, making best use of available data, and supplementing this with expert opinion. Whilst not fully quantitative, the BFTA provides a framework for consistent and repeatable assessment of risk, and a basis for comparing risk in disparate areas. The analysis has been developed for the 95 percentile weather conditions.

A series of models have been developed utilising Microsoft Access databases and ESRI ArcGIS to determine the likelihood and consequence at each point in the landscape. The contributing factors are classified according to potential severity into one of five likelihood or six consequence classes.

The ArcGIS model presented performs a spatial determination of the Bush Fire Threat in by summing the likelihood and consequence classes, and reclassifying the result as per the matrix. These values can then be plotted and printed to maps to assist fire managers in determining risk and mitigation priorities.

Fire management and organic soils

As a consequence of the drying climate and draw down on subterranean water sources wetland, peat lands and organic soil sites that historically had been subject to seasonal inundation are no longer being wet for extended periods.

These soils are now available to burn for periods of many months, as early as November and as late in the year as June. A fire that commences in early summer, if not suppressed quickly, can burn until substantial winter rains. These organic soil sites have taken around 10,000 years to develop and are very important biodiversity sites.

These sites are important remnant ecosystems that require protection. A further compounding problem is that many of these sites are also acid sulphate soil sites, which means that fire suppression can cause significant adverse environmental impact by releasing acid and heavy metals into the environment, particularly the subterranean aquifer if not managed appropriately. Western Australia has around 30% of Australia's acid sulphate soils, and most of these are on the Swan Coastal Plain near the major cities of Western Australia. These areas are generally below 5 metres above sea level, have melaleucas or she-oaks vegetation present and/or iron staining on the soils exposed to oxygen are all indicators of potential acid sulphate soils.

Prevention of a fire entering these sites is the preferred suppression management option. If that is not possible then early aggressive bush fire suppression, with around 4 litres per square metre of water is required to effectively suppress the fire and prevent the fire becoming a subterranean fire or producing acid sulphate soil creation conditions.

FESA has developed fire suppression techniques supported with a widely available brochure designed to provide fire fighters with a quick reference tool to determine if the site is a potential acid sulphate soil site and the options for fire suppression.

Guide and tables for bush fire management in Western Australia

In 2004 FESA identified that it required guides, tables and other tools to assist bush fire management across Western Australia. The guides, tables and tools needed to be able to be applied with basic information that could be gathered both on-site and also utilsing the Bureau of Meteorology (BoM) forecasts. It was acknowledged that once fires occurred away from the south west of WA, the weather readings became less concentrated and as a consequence the weather forecasts became more problematic.

FESA recognised that the most appropriate fire spread and fire danger meters were the CSIRO / McArthur meters. These meters are applied across Australia and by applying these meters it was possible to utilise applicable research and supporting documents applied by, and utilised other jurisdictions. The CSIRO / McArthur meters have application for all vegetation types found in Western Australia. The guide and tables is an amalgamation of anecdotal information and knowledge from experienced FESA fire managers and research undertaken by CSIRO, Victorian Department of Sustainability and Environment, University of Melbourne, Department of Conservation and Land Management, FESA and Edith Cowan University. The guide and tables was originally published in 2006 and has been reprinted in 2007 and 2009 with improvements and additional information as it has become available. The purpose of the guide and tables is to provide fire practitioners with a tool that assists in bush fire management.

Linked to the guides and tables are visual fuel load guide for the scrub vegetation of the Swan Coastal Plain including the Geraldton Sand plains & Leeuwin Ridge Regions of Western Australia", Kimberley Region and Pilbara Regions of Western Australia.

Many factors influence fire behaviour but none is more significant than fuel. Bush fire fuel is the availability, size, arrangements, moisture content and type of flammable material available. As a fuel load increases the potential fire run and heat output increases thus increasing the risk to life, property and the environment.

The visual fuel load guide is designed to assist fire managers, land managers, community members and local government to effectively assess the total fuel load on the land under their jurisdiction. The determination of scrub fuel loads is problematic as there are only two ways to undertake the measurement, either by destructive sampling or through a visual assessment. To develop the visual fuel load guide has required widespread destructive sampling where 1 square metre of vegetation is removed, dried and weighed. The fuel loads are measured in oven dried weight and in tonnes per hectare.

Operationally it is impractical to undertake destructive sampling during fire suppression duties, therefore alternative tools are required. The visual fuel load guides are the operational tool that can be applied easily and consistently by a range of people. The visual fuel load guides support the "Guide and tables for bush fire management in Western Australia"

These tools where recognized by the Emergency Management Australia Safer Community Awards where it was the national winner in the pre-disaster category in 2007.

In summary:

- FESA is very proactive in communicating with the community to ascertain what the primary issues are, and then FESA works to develop tools and processes to empower the community to actively increase their own level of protection from bush fires;
- FESA works to ensure that the science of bush fire behaviour and management form the basis of the tools and processes developed by FESA for the community;
- FESA works with specialist organisation such as Western Australian universities, the Bureau of Meteorology, Landgate (Remote Sensing – WA Government Agency) and Geoscience Australia to ensure that FESA is obtaining the best information and most current research; and
- Through these partnerships and with the expertise within FESA, FESA is able to develop new initiatives to improve community protection through bush fire mitigation and prevention.

f. the appropriateness of planning and building codes with respect to land use in the bushfire prone regions;

The planning and building codes in Western Australia are deficient in that the declaration of bush fire prone areas is left to the local government authority to declare areas bush fire prone. The declaration of bush fire prone areas generally occur when the local government updates is town planning or regional planning scheme. This occurs only every five or 10 years depending on the scheme.

In Western Australia most local governments have not declared their municipal areas or portions of the municipal areas bush fire prone. By not declaring the municipal areas bush fire prone proves problematic for building surveyors who wish to impose the "Australian Standard 3959 – Construction in bushfire prone areas" which would increase the survivability of the building if attacked by a bush fire. There are a number of local governments who have declared portions of their municipal areas bush fire prone and they should be commended. When a municipal area declares a bush fire prone area the Building Code of Australia applies, as does "Australian Standard 3959 – Construction in bushfire prone areas". It is the absence of the declaration of the bush fire prone areas that is holding back the protection of the community.

By unilaterally declaring their municipal areas bush fire prone may act as a deterrent for a local government as it may lead to increase building costs, or a reduction of lots in a zone leading a reduction in rates.

To improve this situation it is recommended that it be a State Government responsibility and that the whole of the State be declared bush fire prone where the level of bush fire attack (proneness) is determined at the land development stage and determined by the developer (at their cost) and approved by the local government and subject to review by the State's fire agency. FESA is currently seeking these changes to the State legislation.

g. the adequacy and funding of fire-fighting resources both paid and voluntary and the usefulness of and impact on on-farm labour;

It is recognised in Western Australia that the rural community and in particular the farming community are important and in some instances the key component of the available bushfire fighting resources.

Through the *Bush Fire Act 1954* land owners are required at their own expense to ensure that outbreaks of fire are extinguished on their property and where possible assist the suppression of fires on neighbouring properties.

A point of contention is the interface of public lands and the rural communities where in particular unallocated crown land is not appropriately managed by the land manager. Currently the *Bush Fires Act 1954* does not bind the crown and as such fire management on these lands is not mandatory. FESA is proposing that the proposed legislative amendments will bind the crown and that all land tenures should have an appropriate risk based fire management plan.

Further to the fire management issues a number of factor are impacting on volunteerism that are specific to regional Western Australia. This includes:

- declining rural populations;
- many of those people moving from the city to live "in retirement " in rural areas do not volunteer as its not part of their new lifestyle;
- ageing volunteer workforce;
- fly in – fly out arrangements for many people; and
- younger generations less interested in volunteering.

FESA has been successful in introducing many new recruitment initiatives such as the Volunteer Website, 1800 volunteer recruitment phone line, creation of brochures/pamphlets/display boards, production of a Volunteer Recruitment DVD, advertising on SEEK, Youth Development Program and Reward & Recognition Program.

Our most recent significant new initiatives are the Volunteer Employer Recognition Program (VERP) and the production of the FESA Volunteer Recruitment Action Handbook.

FESA has sought EMA funding for the 2009/10 Financial year to undertake a study and produce a handbook on Volunteer Retention as well as making improvements to our Reward and Recognition Program, plus enhancing information systems to assist our volunteers in undertaking their emergency services roles.

h. the role of volunteers;

FESA support over 30,000 volunteers in Western Australia. They are comprised of:

Volunteers supported by FESA	
Bush Fire Service	24,901
Fire and Rescue Service	1,781
History Society	18
Marine rescue volunteers	1,231
State Emergency Service	1,827
Volunteer Emergency Service	510
Volunteer Fire Service	265
Total	**30,515**

FESA is also the host organisation to 1,500 Emergency Services cadets and 200 unit leaders and instructors.

The role of volunteers in our State's emergency services as indeed Australia cannot be overstated. Attracting and retaining emergency services volunteers is becoming more difficult as the population demographics and other personal commitments and interests change. To lose emergency services volunteers all together would create an enormous financial burden on the Government in the replacement of the volunteers with fully paid emergency services personnel.

Recognition and support of Western Australia's 30,000 and Australia's 250,000 or so emergency services volunteers is paramount to the continued success of the volunteers in the emergency services sector.

A recent study by AFAC has confirmed that emergency services volunteers save various tiers of government approximately $4 billion per annum.

Western Australian proposal for Volunteer Recognition

It is important that this important role is recognised by the Commonwealth Government and it contributes in a demonstrable way its commitment to the role they play in Australian communities.

At its meeting in Sydney on 9 February 2007 the Council for the Australian Federation, which was attended by the Premiers and Chief Ministers of the States and Territories called upon the Commonwealth Government "....to provide tangible recognition and support for Australia's emergency service volunteers through the tax system."

The meeting recognised the critical contribution that emergency services volunteers make to local communities in Australia and noted that there have been a number of forums at a national level that have examined models for supporting emergency services volunteers.

The Western Australian proposal for a nationally funded recognition scheme is not new as it has been discussed and progressed since 2002. The State and Territory Emergency Services Ministers' meeting in September 2002 endorsed the exploration of methods to gain national recognition and support for volunteers.

At the March and October 2005 meetings of the Ministerial Council for Police & Emergency Services Management (MCPEM), the WA Minister for Police and Emergency Services submitted a research paper by PKF Chartered Accountants that assessed a number of tax options to provide tangible recognition and support for Australia's emergency service volunteers. The preferred option was a national tax rebate for emergency service volunteers was developed following national consultation and gained broad support from all jurisdictions.

The tax rebate option was considered the better option as:

- It is available to all eligible volunteers regardless of their tax profile unlike the tax deduction option.
- It is a readily apparent benefit.
- The initial and ongoing administrative work required of volunteers and the emergency services agencies is minimal compared to the other options.
- Legislation is easier to implement, as there is already a template in existence.
- The Australian Taxation Office compliance activities would not be as great as the other options.

Volunteers who satisfied the eligibility criteria would be entitled to a capped tax rebate of $300, generally offset against tax payable, but refundable regardless, so those volunteers who are unemployed or under the tax-free threshold would not be disadvantaged.

On 15 August 2006 the Western Australia Premier wrote to the Prime Minister further supporting his full support for the "Volunteering in Australia" proposal and in particular to honour and encourage Australia's emergency services volunteers through taxation. As stated above, this was subsequently endorsed at the Council for the Australian Federation on 9 February 2007.

On 9 October 2006 the Queensland Minister for Emergency services suggesting that – in order to minimise overlap and maximise efficiency – the scope of the Costs of Volunteering Taskforce should consider the work already undertaken, in particular by FESA, for the AAPMC.

At its November 2006 meeting, the MCPEM agreed to submit the work commissioned by the FESA, on volunteer tax concessions, for consideration by the Costs of Volunteering Taskforce.

Additionally, in December 2006, Volunteering Australia presented their report, "The Rising Costs of Volunteering", to the Australian Government. Their Report suggested six options for alleviating the rising costs of volunteering. Three of those options related to taxation concessions for Volunteers. They were:

Option 3: Tax Credit / GST Offset
Option 4: Personal tax rebate / offset, and
Option 5: Personal tax deduction

The Report was noted by the Australian Emergency Management Committee (AEMC), which comprises emergency management officials from the States and Territories, the Australian Local Government Association and the Department of Transport and Regional Services.

At its meeting of 3 April 2007, the AEMC agreed to seek advice from the Australian Taxation Office on the feasibility of the options outlined in the FESA report. The AEMC has not received a response from the Commissioner of Taxation.

FESA would again seek the assistance of this inquiry in raising this important proposal as an important opportunity for the Commonwealth Government to formally recognise the emergency service volunteers.

i. the impact of climate change;

There is now broad consensus that climate change is impacting on areas of WA. With the vastness of the State, the bushfire threat extends much longer in WA than other areas of the nation with fire seasons in the south during summer (October – May) and north of the State in the dry season (April – September). The landscape in these areas varies greatly however climate change in both areas is likely to increase the fire risk and at the same time the capacity to mitigate bushfire risk is reduced as the changing weather will reduce the times where prescribed burning to reduce fuel levels can be undertaken safely.

Climate change will have both direct and indirect impacts on bushfire management. The direct impacts are characterised by potential increases of temperature across all areas of the State with the highest temperature increase predicted in the north and inland areas. The current drying trend in the south is expected to continue while rainfall

in some north western areas predicted to increase. In the southern areas, a probable result is drier forests and lower fuel loadings in grasslands. Evaporation rates are also expected to rise and the lower soil dryness is likely to increase fire intensity. This will be exacerbated by predicted increased frequency of extreme weather events where some have predicted an increased potential for 'mega fires' to occur. Conversely, increased rainfall in the northwest could result in heavier grassland fuel loadings, a reduction in woodlands and tall shrubs and more grassland fires.

The fire season in southern areas in particular appears to be lengthening with high community impact fires now being experienced from early November to late April. Further extension of the southern fire season is predicted and this reduces opportunities for hazard reduction activities which are the principal means of mitigating bushfire risks and assist in maintaining fuel levels so unplanned fires can be effectively managed.

The impact of climate change will also have indirect impact on bushfire management. The emerging weather patterns are likely to change the rural landscape as current agricultural activities may not be sustainable in all locations. This conceivably will affect both the spread of population and the viability of regional centres supporting current agricultural areas. This de-population will reduce the number of volunteer firefighting groups which provide fire suppression and undertake mitigation activities to protect vulnerable community assets. The social and demographic changes associated with climate change adaptation are anticipated to have equal, and possibly greater impacts, than the direct bushfire risk consequences.

Climate mitigation initiatives such as carbon offset schemes involving broad scale tree plantings will also change the bushfire risk profile. With the introduction of carbon reporting fire agencies are currently reporting on emissions from hazard reduction activities and it is anticipated this may extend to estimating emissions from fire emergencies (unplanned fires) sometime in the future.

FESA is closely monitoring potential impacts with local government and other key stakeholders to adapt resourcing and bushfire management strategies to meet the challenges required with bushfires and other hazards increased by climate change. Adaptation strategies to minimise exposure to potential impacts will focus on improved planning (both operational and land use) to manage the increase in bushfire risk, identifying measures to build capacity to deal with potential increases in frequency and intensity of bushfires and enhancing community resilience to bushfire risk.

There are many areas of uncertainty in the climate change sphere and FESA along with other fire and emergency management agencies will rely heavily on research to assist in the development of future strategies to meet climate change challenges. The work undertaken by Commonwealth agencies such as the CSIRO and BOM climate change is essential to ensuring fire and emergency management agencies have sufficient knowledge to guide adaption policy and practices. Commonwealth funded initiatives such as the National Climate Change Adaptation Research Facility (NCCARF) and the proposed Fire and Society CRC convened by the Australasian Fire and Emergency

Services Authorities Council (AFESAC) is seen as pivotal to reducing the uncertainty of climate change for emergency management.

j. fire – its causes (accidental, natural and deliberate) and remedies;

The Fire and Emergency Services Authority of Western Australia (FESA) is concerned with the high number of arson bush fires that are occurring in the very important remnant vegetation islands within the urban areas, and also in the bush adjacent to the expanding urban areas. The arson bush fires are being lit in many areas on a frequency that is displacing endemic native vegetation and replacing it with introduced annual weed species. These weed species are then becoming an annual bush fire fuel. Ongoing fires in these areas are then leading to a loss of biodiversity.

These arson bush fires are also adversely affecting the quality of life of people within close proximity. The bush fires are creating nuisance smoke, diminishing the visual amenity of the area by turning the bush black and in some cases leading to the loss of homes through ember attack on evaporative air conditioners. Importantly these arson bush fires are also taking up valuable fire fighting resources. The fire fighting resources are then not available for immediate dispatch to either life or property threatening incidents.

To reduce the number of arson bush fires FESA has developed a community centred program that is designed to raise community awareness of the bush fires and what the community can do about them. The community awareness process involves providing information and tools as to how the community members can reduce arson bush fires in their community. The program is designed to empower the local community to maintain their lifestyles, visual amenity and protect the natural environment by reducing arson bush fires.

Arson bush fires are a significant environmental and social problem in Western Australia, particularly in important remnant vegetation of major cities and towns. Arson bush fires remove many of the potential land management options that can be applied by land managers. In the urban environment large numbers of important remnant native vegetation islands are formally the responsibility of the local authority. In many instances the local authorities have encouraged the day to day management of these important remnant vegetation islands to come under the control of community members who have a passion to maintain, and where possible enhance, the environmental and social values of these areas.

Bush fires that are too extreme in regime, being too frequent or totally excluded from an area, can have an adverse impact on biodiversity. Bush fires that are caused by arson will often be on a regime frequency that is too frequent for the maintenance of native biodiversity. Endemic species that require a period free of fire sufficiently long enough to permit viable seed development will in most instances start to be lost to these areas.

FESA recognises that deliberate bush fire lighting is often undertaken by children and others who may be unaware of, or have not considered the possible consequences of their actions. Whilst in young children, in particular, their actions may be deliberate, they are not necessarily malicious.

In December 2001 FESA introduced a proactive approach to attempt to reduce the high number of arson bush fires in the community. The community centred bush fire (arson) reduction program is the result.

Program Background

FESA incorporates the team approach in the community centred bush fire (arson) reduction program, by partnering other government and non-government agencies and local communities. FESA also applies a standard approach of education, engineering and enforcement.

Arson bush fires generally occur when the bush is at its driest and the resultant fires are at their most intense. As a number of the native species are prone to produce fire brands (ignited particles) during a bush fire, the houses in the vicinity are potentially at risk from fire brand attack. Most houses have not been constructed to a standard that protects them from fire brand attack. Fire brand attack is generally the greatest risk to a house in a bush fire.

Arson bush fires consume an enormous amount of fire suppression resources. These resource commitments are to bush fires that are completely avoidable. Not only do frequent arson bush fires cause environmental degradation and displace native species with short lived weed species, they take resources away from being immediately available to respond to protect life and property emergencies.

By making the community aware of the high number of arson bush fires and seeking a partnership with the community, arson bush fire numbers generally reduce.

Program Development

The targeted bush fire (arson) reduction program was initiated in December 2001. It was initiated after several months of comprehensive analysis and review of the bush fire attendance data. The bush fire attendance data provided an opportunity to ascertain whether arson bush fire ignition patterns could be determined. This monthly analysis provided some superficial trends. The data was plotted onto maps, providing an opportunity to determine major physical features that may attract firelighters. By analysing physical locations, vegetation types and times of ignition it was possible to develop a hypothesis on how to reduce the high number of arson bush fires.

Matching the targeted arson reduction program with FESA's cooperative community centred joint agency approach also provided some significant benefits. As FESA undertakes joint training and practical application for bush fire investigations, the

process supports a partnership arrangement for the targeted arson reduction program. The WA Police Service, particularly the Arson Investigation Unit, Crime Stoppers and many of the General Duties Officers have been strong partners in the targeted arson reduction program. Equally, the Department of Education and Training has provided great support and access to schools for FESA to present a consistent message to the students and staff. Catholic education schools have also provided easy access to their schools, particularly in the Kimberley Region. Shopping centres have also shown themselves to be very cooperative and have assisted by providing access to the shopping centres where static displays have been set up.

FESA consulted widely with the potential partners, particularly during the development phase of the program, to ensure that the prevention objectives address the bush fire arson problem from a whole of community perspective. The program has been specifically focused on:

- Primary schools in and around the immediate target area. It has been shown that if the primary schools immediately adjacent to the target area are not covered, then the natural movement into and through the area can result in less effective bush fire reductions;
- Shopping centre displays (where possible) with poster displays and specific relevant local information; and
- Door knocking of all houses within the target area promoting the program message of "help us help you". Houses not attended during the door knock are left with a fridge magnet and information flyer with the relevant bush fire reduction message.

It has become apparent during these activities that we required two specific communication streams and that separate strategies are required to ensure that message retention is optimised and not lost or diluted.

Specifically separate strategies were developed for:

- Children in primary school; and
- Adults who are the primary carers.

Program Implementation

The implementation phase was designed to maximise the impact within the community by undertaking the three components simultaneously and utilising well trained and experienced staff. Undertaking the three components simultaneously provides the opportunity for more than one contact to occur with a customer. The person that is home during the door knocking component may go to the local shops and again come into contact with the display and message. Or the primary carers of school children may be home during the door knocking and then have the message delivered again when the children return home from school. As a consequence of this cross messaging

approach it is imperative that the messages are consistent and appropriate to the audience.

When undertaking the school education component FESA Community Safety Portfolio staff with education qualifications and experience, and (if available) FESA Fire Service staff or volunteers, Police Officers and Department Education and Training staff attend the whole of school assemblies. These personnel deliver a predetermined message. The message covers such issues as the inappropriateness of arson bush fires and then an explanation of the social and environmental consequences of unauthorised lighting activities. The importance of having a range of people from the various FESA Portfolios and other organisations should not be underrated as it clearly demonstrates to the children and teachers that the different agencies treat this matter seriously and as highly important. A school ruler with an appropriate related message has been produced to reinforce the message. One ruler is left with each child.

The static shopping centre display is utilised as a tool to raise general community awareness. The level of participation by the community can vary markedly, but there have been a number of instances where staff door knocking in the afternoon have received informal feedback (general comments) about the display in the shopping centre. The anecdotal information appears to indicate that it is the older people who seem to notice these types of displays. The static display is once again managed by a Community Safety Officer, and also uniformed Police, and career and volunteer fire fighters (if available).

The door knocking component is the most intensive of the three approaches. It requires pairs of Officers, one from FESA and one from the Police, jointly working through the suburb. During this component if a house has no one home then a fridge magnet and information flyer is left in the letter box.

Once again there has been positive feedback from the community that it is appreciated that the Government Agencies are working together. By having the Police involved in this component it is also possible for a case manager to be appointed so that any information that may be phoned through to Crime Stoppers can be appropriately handled.

Program Outcome

In all instances, following the activities the arson bush fire numbers have declined and never returned to the pre targeted arson reduction levels. The level of decline, has however, varied between suburbs and towns, and the duration of the reduction has also varied.

The reduction in bush fires has also provided a benefit to the community by reducing the amount of smoke in the environment. It also reduces the loss of visual amenity that occurs when the bush is burnt and turned black.

An additional outcome is that fire fighters are immediately available to undertake emergency potentially life threatening duties instead of being committed to avoidable nuisance and environmentally destructive bush fires.

A further outcome is in the field of environmental and biodiversity protection. The reduction in bush fire frequencies is assisting in allowing the native flowering species to develop mature seed and maintain a presence in the remnant vegetation islands. The retention of endemic flora assists in retaining the native fauna.

The greatest potential outcome of the targeted bush fire arson reduction program is the creation of a generation in the community that is breaking the arson bush fire cycle, and not developing a belief that setting fire to the bush is acceptable. Breaking the arson bush fire cycle will improve the quality of the remnant vegetation and through that the lifestyle quality and options of the general community will be enhanced.

While this program has been successful in the town and suburban environment it has not been tested on the more isolated communities. A plan is currently being developed for implementation in the Kimberley in the near future. A component of the development phase is ensuring that there is sufficient local community consultation. The message and the message mediums must be appropriate to meet the individual community needs.

The benefits to the community of FESA and its partners undertaking community centred targeted bush fire (arson) reduction activities are numerous. The benefits are:

- Reduce commitment of fire fighters to avoidable nuisance bush fires;
- Improved community safety through an increase in the number of community members; who are aware of and concerned with the high number of bush fires;
- Reduction in the potential loss of flora and fauna biodiversity;
- Reduced smoke in the atmosphere and loss of visual amenity;
- Reduced cost of fire suppression; and
- It demonstrates to the community that Government Agencies can work together cooperatively.

By being proactive in reducing the incidents of arson bush fire FESA is seeking to make the community safer.

This program was recognised by the Emergency Management Australia Safer Community Awards where it was a national finalist and was highly commended in the pre-disaster category in 2002. The program was also recognized in the 2003 COAG Crime and Violence awards where it was highly commended.

Since 2005 the integrated community centred bush fire arson reduction program has been scaled back by FESA and is no longer applied in its original community centred format. Since this period, with the changes to the program and its bush fire numbers in Western Australia have increased.

k. the impact of bushfires on biodiversity and measures to protect biodiversity;

The impact of bush fires on biodiversity is very complex to quantify in a general sense. The impact will vary according to the:

1. intensity of the fires;
2. frequency of the fires;
3. season of the fires;
4. patchiness of the area burnt;
5. vegetation susceptibility of the fire; and
6. vegetation structure and composition.

Biodiversity can be protected or in some instances enhanced by the appropriate use of fire within the landscape. The complexity of bush fire management is to identify and apply the appropriate fire regime to ensure that the key values of that landscape are protected. In many instances the needs of flora, fauna, ecological communities and community protection will be in conflict. The zoning of the landscape to identify the priority assets is one method of ensuring that key biodiversity values are identified and then protected where ever possible.

Repeated high intensity bush fires are undesirable in the landscape and will lead to the loss of biodiversity and if contiguous of the built community values may also pose a threat to those values.

FESA has undertaken a broad range of measures to protect both diversity and built community values. These range from:

1. developing guides and tables for bush fire management;
2. developing visual fuel load guides so that community members can determine the fuel loads;
3. in consultation with remote indigenous communities developing strategic fire management plans;
4. in consultation with Kimberley pastoralists developing pastoral fire management plans;
5. conducting annual "Dry season" and "Summer safe" activities;
6. conducting training and awareness session within the community; and
7. conducting prescribed burning activities in the early dry season in the Kimberley.

The principle methods currently adopted by FESA in regard to the planned use of fire include undertaking aerial prescribed burning the savannah woodlands of the Kimberley. This planned use of fire is designed to reduce the potential for unplanned fires to burn large tracts of land under very intense conditions. The early dry season planned burning is undertaken during periods when the fire will self extinguish and result in a mosaic of burnt and unburnt pockets, but with sufficient areas burnt to

provide an effective fire break. The savannah woodlands are by their nature an annual grass fuel load that if left unmanaged will result in significant late dry season extreme bush fires.

In the south of WA FESA also undertakes prescribed burning and the establishment of firebreaks. FESA has developed draft guidelines for the establishment and maintenance of firebreaks. These draft guidelines are currently being circulated and local government, farmers and volunteer firefighters are being encouraged to comment.

Organic soils fires are a significant and growing problem in the south-west of WA. FESA identified these as a problem and in 2004 in association with Edith Cowan University conducted a workshop on "Fire and wetlands on the Swan Coastal Plain". The proceedings of the workshop have been published in the Journal of the Royal Society of Western Australia volume 88 part 3 September 2005. FESA believes that this is the only workshop of its kind on this important fire and biodiversity matter. An outcome of the workshop has been the development by FESA of comprehensive fire and organic soil protocols to protect the drying organic soil sites many of which have taken 10,000 years to develop.

Again FESA has sought community input and engagement with its fire management and biodiversity protection techniques. Many of the initiatives that FESA has developed have been new initiatives developed to meet the needs of Western Australia and its unique biodiversity and built environment values.

I. Insurance against bushfires.

FESA does not wish to make specific comment against this term of reference. Nevertheless it does acknowledge that the Insurance industry is an important partner in the recovery process from major bushfire events.

Insurance is important to the preparedness measures that householders and property owners undertake. Where there is evidence of underinsurance or no insurance, recovery issues are inevitable. This aspect is also a matter of community concern when recovery and relief funds respond more quickly to those without insurance coverage.

Incentive schemes for increased property preparedness similar to those related to security measures are an aspect that the Insurance industry should consider. It would be another way of assisting fire agencies to encourage appropriate community response to bushfire preparedness.

Conclusion

FESA welcomes the opportunity to make this submission to the Senate Select Committee on Agricultural and Related Industries and should the opportunity arise, it would like to attend a suitable public hearing in support of this submission.

Should you seek further information or clarification on this submission, please contact Martine Butler Executive Officer Operations on (08) 9323 9394.

Yours sincerely

JO HARRISON-WARD
CHIEF EXECUTIVE OFFICER

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