

Would you please consider this submission to the:

Inquiry into the impact on the agricultural sector of vegetation and land management policies, regulations and restrictions.

1. Background

Our family partnership breeds beef cattle in range country of coastal central Queensland between Mackay and Rockhampton.

This area is considered to be prone to potentially very high / high intensity bush fires (Leonard *et al*, 2014)

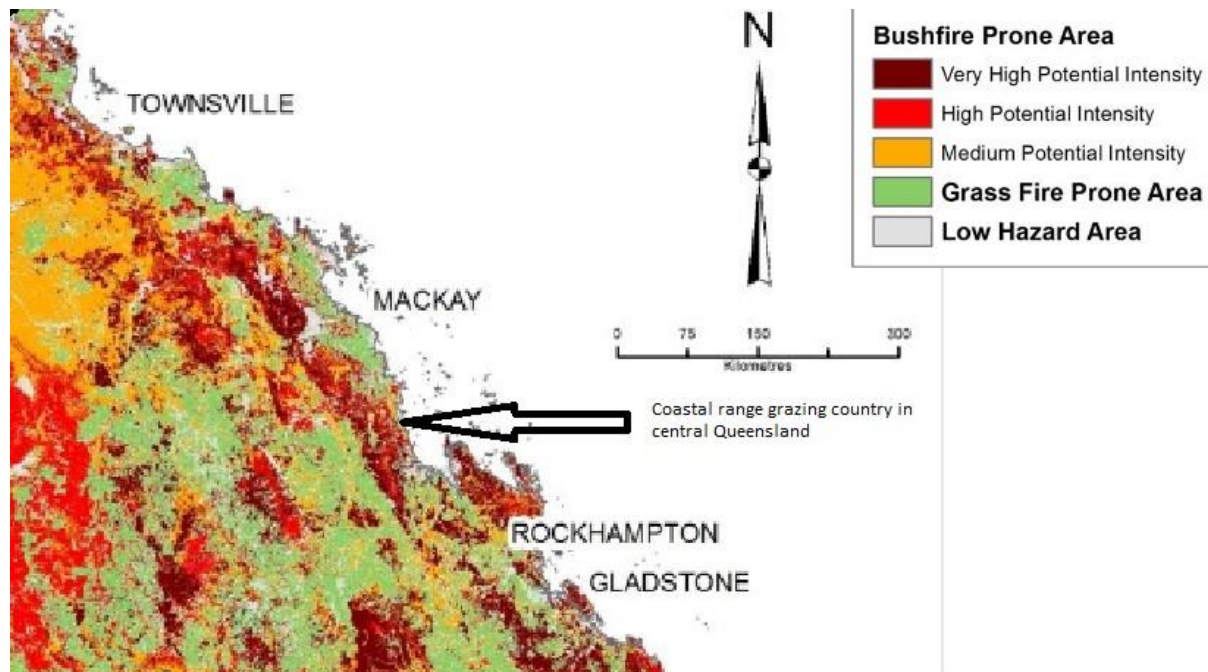


Figure 1 Ratings for Bushfire Prone areas particularly applicable to grazed range country between Mackay and Rockhampton in central Queensland. (Adapted from Leonard *et al*, 2014).

In simple terms we utilise key drivers to assess the potential to experience wildfire. For us these are fuel load, slope and past / current weather events / conditions. A key consideration is the time since fire (fire interval) and this varies with the grazing pressure. CSIRO (Leonard *et al*, 2014) consider 10 years a "long unburnt interval".

Lightly grazed areas in our ranges are able to support continuous fire of high intensity after 3 years. This is an important consideration for us as we have a long narrow property with eastern fall and western fall boundaries to nine neighbouring properties. There is only one of these nine that uses the common boundary land for regular grazing. Thus eight boundaries adjoin thick native grasses in woodlands that are, in a good season, a fire hazard every year. Six western neighbours and one

2. Scope of the inquiry

The inquiry will have particular regard to:

- (a) Past and current practices of land and vegetation management by the agricultural sector and regional industries;*

- (b) The science behind activities such as back burning, clearing and rehabilitation;*

- (c) The economic impact of vegetation and land management policies, regulations and restrictions;*

- (d) The impact of severe fires on the agricultural landscape, agricultural production and industry in regional, rural and remote areas;*

- (e) Factors that contribute to fire risk in regional, rural and remote areas; and*

- (f) The role the agricultural sector has in working with emergency services and forestry management officials in managing fire risk.*

I will address my comments to the points (a) to (f).

2 (a) Past and current practices of land and vegetation management by the agricultural sector and regional industries;

It has been shown in Australia-wide research that intensive management for cattle and sheep grazing has altered the open woodlands that were maintained by regular fire under indigenous management (Gammage, 2011). Tree killing by axe girdling (ringbarking) in early 1900s and later by chemical treatment or bulldozing caused growth of thick regrowth and loss of grass layers (Scanlan, 1988). These thickened woodlands are degraded forests and are very difficult burn in cool season burns.

The role of regular fire has been overlooked by many. Expertise in fire management has been lost with the demise of government owned native forest management by trained foresters. The management expertise is being lost to the cane industry as green harvesting becomes the norm. The use of supplementary licks endowing brahman cattle especially, the ability to survive drought, made landowners reluctant to burn in dry times. Government intervention has increased red tape around fire use and the community is increasingly concerned by the appearance of fire.

The Malone review into rural fire services in Queensland (2013) highlights that the rural philosophy of the fuel owner is responsible for management of the active or potential fire has increasingly become reliant on a 000 call for help from a

government authority. Those who are not used to seeing fire in the landscape clutter the 000 help line by reporting smoke and demanding action or response from authorities.

This review also highlighted that greater focus on a response that requires suppression, appears to drive the training, equipment funding and public education programs at the sacrifice of early preparedness by hazard reduction burning”.

I consider that primary production businesses suffer due to a lack of accurate weather forecasting. Subsequently some managers take a conservative approach to fodder conservation rather than prioritising regular fire and fuel reduction.

Take home message from Malone review (2013):

Fire must be accepted as a legitimate tool in the landscape.

I would add not only for good land management in the intensively managed landscape but as an ecological tool in a landscape that has evolved with fire (Lunt, 2002).

A very useful publication which outlines management guidelines for spotted gum and iron bark in dry sclerophyll woodlands has been published by Qld Department of Primary Industries and Fisheries (QDPI&F) , see Debus,V. and Lewis,T.(2007).

2(b) The science behind activities such as back burning, clearing and rehabilitation

The science behind back burning is greatly informed by the work of southern researchers within the CSIRO and Coperative Research Centre for Bushfire Research. Local sugar farmers, before green cane harvesting were able to control cane fires using back burning with great skill. A great resource is the publication “Grassfires- Fuel, weather and fire behaviour” Cheney and Sullivan (2008). Some points summarised from this reference are:

*In extreme conditions with a head fire moving at 300 m per minute (18km per hour) a back burn started when front was 6km away will have spread 1km but it will only take a 10 degree shift in wind direction for the front to miss the back burn. Back burns are best in slow moving fires.

*Intense fires are best held at a road or a fire break. Bare earth brakes constructed to contain a head fire in wildfire need to be wide enough so the low flames lying parallel to the ground do not ignite fuel on the other side. Additionally fire crews need to be able to work the break, outside their vehicles, to mop up cinder ignited spot fire outbreaks. (10m is the width allowed under Queensland rules).

*It is a good tactic to grade a bare earth break as soon as any perimeter is extinguished by water.

*A single tree 20m from a fire break will decrease the effectiveness from potentially 80% to 30% in a fuel load of 4t/ha and fire spread speed 5km/hr, based on graphs in Cheney and Sullivan(2008).

The maximum width of a bare earth break under Queensland Government legislation is 10m. The science would say even in a moderate summer fire this is dangerous and would be totally ineffective.

Most fires in eucalypt woodlands will not require any rehabilitation. That is, where the woodland structure of a discontinuous woody overstory and a continuous grass understory is maintained by management activities. They need fire.

2(c) The economic impact of vegetation and land management policies, regulations and restrictions;

The present Queensland vegetation management policies are unworkable. The disincentive they pose for landowners to actively manage their vegetation will convert our open woodlands to degraded forests that lack a grass ground cover. This will increase fire intensity, dwell time, ground temperatures in fire and subsequent erosion potential after fires.

They have no scientific basis for the grazed woodlands of Queensland. The science they are supposedly based, on is restoration ecology from southern Australia. They have no reference to 40 years of woodland research by Qld. Department of Primary Industries.

Additionally we know that the global green representatives the government refers to as "stakeholders" will require our last remaining planning tool be relinquished at the next election in exchange for votes. This is the Property Map of Assessable Vegetation (PMAV).

The future for the grazed woodlands of Queensland is under threat and that extends to endangering our iconic woodland fauna.

(d) The impact of severe fires on the agricultural landscape, agricultural production and industry in regional, rural and remote areas;

Such fires in drought years would have the potential to put a family farm out of business. Flow on effects to the local region and business would ensue.

(e) Factors that contribute to fire risk in regional, rural and remote areas;

On a property level the quantity of fuel in a cured state is the greatest risk factor for carrying a fire. Lightning in early summer storms is a frequent source of ignition. After ignition, inter-fire interval is the variable which influences the ability of fire to either burn all night or reignite in the heat of the day. Once again a response to fuel load but with longer inter-fire intervals the fuel is increasingly comprised of woody debris which burns for long periods. The longest time a log has smouldered on our land is 3 months in summer.

A lack of burn "patchiness" can hinder the suppression of fires on a regional basis. That is, it is desirable to have many controlled fires, in different seasons, working to

an agreed plan among all landholders/landowners. Alternatively, an aerial ignition exercise over a region will in benign, moist conditions result in a pattern of burnt areas rather than a single region burnt as in a wildfire. Our region tried this once but we fired in May and it was too late and not enough country burnt to be effective. Costs have prohibited us trying again.

The Queensland government needs to accept that it is just another landowner and must actively manage their lands with adequate resources. Local staff should be trained in burn techniques as well as suppression at the equivalent to the CRC for Bushfire Research or a School of Forestry.

Acceptance of the fact that heavy earthmoving machinery is necessary to control fires and fire breaks have to be an effective width which will vary depending on topography, woodland structure season and weather conditions.

Phil Cheney in his address to the Stretton group (2004) titled "The Green Inferno- do we really want to minimise Disaster fires?" has this to say after the Canberra fires in 2003:

"The 2003 fire season demonstrated just where we are placed with fire management. Governments, State, Territorial and Federal did not address the problems they had created for land managers but rather they accepted the convenient deception that the conditions were so bad that nothing could be done about it".

This quote bears a striking resemblance to the words from the premier of Queensland after the fires which burnt the areas shown in Figure 3, blaming Climate Change and not the lack of management of protected areas.

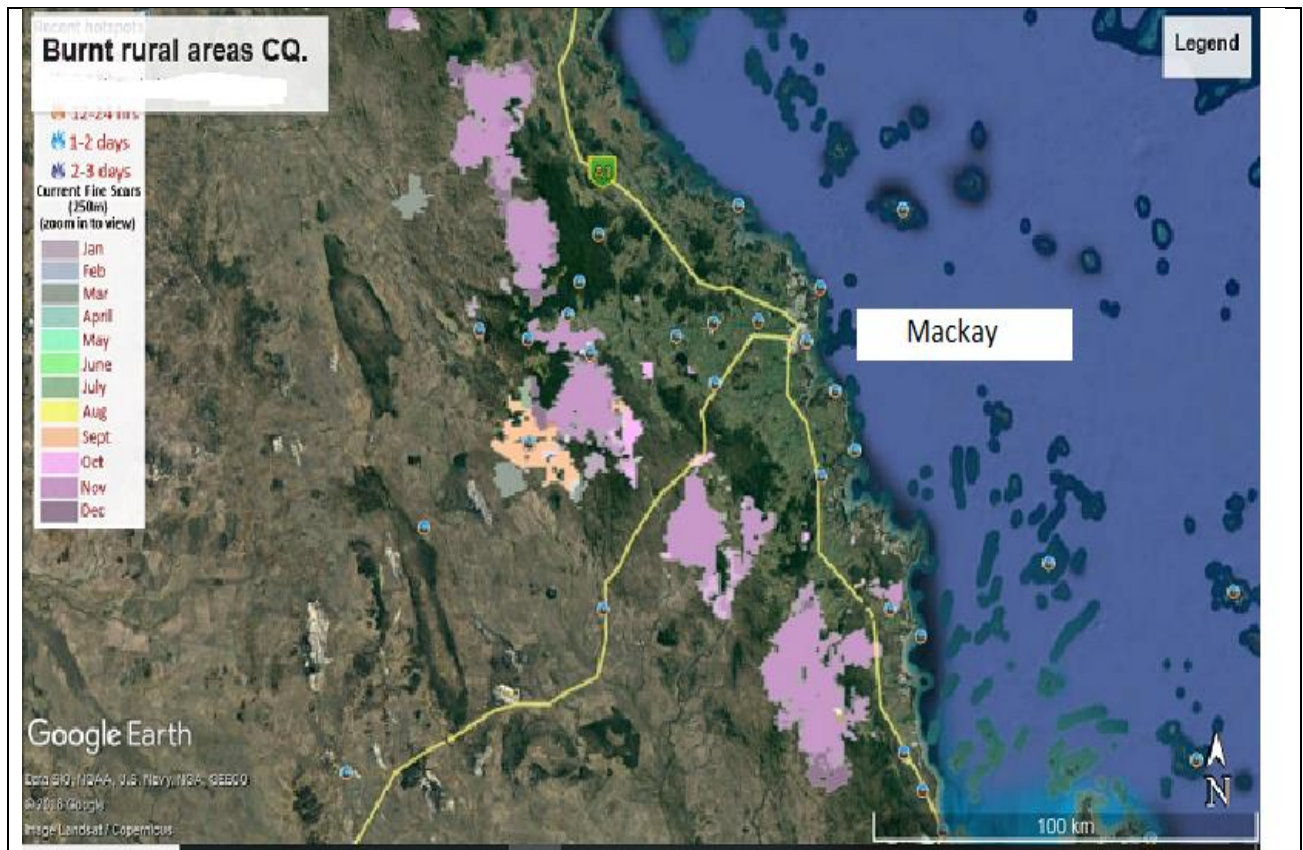


Figure 3 The scar mapping showing the range and extent of wildfires in central Queensland during September, October and November 2018.

(a) The role the agricultural sector has in working with emergency services and forestry management officials in managing fire risk.

Our family farm is actively involved in our local Rural Fire Brigade which is a small primary producer brigade whose membership shares similar forest grazing country. Our group is supported by the Rural Fire Service office in Mackay and we have a very good relationship with the members of this office.

It is noteworthy that part of the reason for the respect we as landowners have for this office is that the leadership team has been trained in active fire management in the Forestry Department. This office has a long history of leadership by personnel sourced from rural areas and who have a long history of active fire management.

Active fire management through fuel minimisation is paramount for our landowners. We encourage farm placement of slip-on units for our vehicles, chainsaw training, and utilise the internet resources such as Fire North and email to keep informed of fire movement. Working with forestry management officials suits our group. Working with Department of the Environment is not easy as they have no clear direction that educates on the value of fire. They are managed from Brisbane. They operate in "office hours" but proactive, preventative burn programs take place in cool seasons and the cool time of day, not often office hours.

Citations

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