

PRESCRIBED BURNING

3357. Hon Diane Evers to the Minister for Environment:

I refer to the Minister for Environment's response (Ref: 62-22987) to Petition No. 161, prescribed burning practices in Western Australia, particularly the Minister's comment that "The prescribed burning program undertaken by the Department of Biodiversity, Conservation and Attractions (DBCA) is supported by peer reviewed research", and I ask:

- (a) please table or provide the references for the latest peer-reviewed scientific research that the DBCA has used in policy development and implementation in relation to each of the following issues:
 - (i) traditional owners and their knowledge of cultural fire practices and how these practices can assist in guiding the use of fire in the context of today's landscapes in Western Australia, including key areas of complementarity and difference between contemporary prescribed burning practices and cultural burning practices;
 - (ii) the relationship between fuel load and rate of spread in forest bushfires;
 - (iii) the role of living plants in forests as drivers of bushfire spread and severity;
 - (iv) the development and maintenance of a mosaic of recently burnt and long-unburnt areas of vegetation;
 - (v) the efficacy of prescribed burning in Western Australia (and other relevant regions) in:
 - (A) mitigating bushfire risk;
 - (B) protecting significant infrastructure; and
 - (C) protecting biodiversity;
 - (vi) the impact of prescribed burning in Western Australia on:
 - (A) hydrological systems;
 - (B) human health and safety; and
 - (C) soil microbiota, including bacteria and fungi (pathogenic and non-pathogenic);
 - (vii) the medium to long-term effects of prescribed burning on the risk of bushfire, and:
 - (A) the identification and classification of "young", "regrowth", "mature" and "long-unburnt" forest;
 - (B) methods for empirically measuring historical fire regimes; and
 - (C) the impact of self-thinning on forest understorey on bushfire risk in the short, medium and long term;
 - (viii) the most effective prescribed burning regime in terms of the burn season, fire intensities and interval between fires;
 - (ix) world's best practice evaluation methods and KPIs used to determine how "successful" a prescribed burn is;
 - (x) research on the psychology of decision-making and policy development, including:
 - (A) public attitudes to bushfires and bushfire risk mitigation;
 - (B) the influence of government department internal culture on policy development and implementation, particularly in relation to incumbent policies and technologies;
 - (C) the role of knowledge brokers in collating and interpreting science to facilitate its adoption and identify needs; and
 - (D) the design of research and decision making bodies to avoid ingroup-outgroup divisions where ideas are more likely to be accepted or rejected for social rather than scientific reasons;
 - (xi) approaches to increasing transparency in decision making in relation to bushfire risk and prescribed burning; and
 - (xii) the impact of funding on the nature and findings of scientific research and its application in policy?

Hon Stephen Dawson replied:

The Department of Biodiversity, Conservation and Attractions (DBCA) has the responsibility of balancing the impacts of prescribed burning on biodiversity against the need to protect communities from the damaging impacts

of bushfires. In doing this, an evidence and risk-based approach is used, that is underpinned by peer reviewed research and detailed planning that can often take several years. One of the published papers that supports this approach is a 2009 study in the south-west forests undertaken by Dr Matthias Boer and others that examined the historical occurrence of bushfire and prescribed fire over a 50-year period to quantify the impact of prescribed burning on the incidence, extent and size distribution of bushfires. This study determined that prescribed fire treatments had a significant effect on reducing the incidence and size of bushfires up to six years after treatment.

The State Government, through relevant agencies, maintains strong links to industry research through organisations such as CSIRO and the Bushfire and Natural Hazards Cooperative Research Centre. DBCA also maintains an active fire research program with a statewide focus building on knowledge gained over more than 50 years through long-term studies and monitoring. To ensure that DBCA's bushfire suppression and mitigation programs are informed by contemporary research, it also engages collaboratively with a range of organisations with scientific expertise relevant to bushfire science and biodiversity conservation. The importance of appropriately targeted bushfire mitigation was also recently reinforced in the recommendations of the Royal Commission into Natural Disaster Arrangements that resulted from those bushfires.

The McGowan Government is committed to engaging with traditional owners in helping to share (two-way learning), connect and learn from Aboriginal people's connection to country. These relationships have helped grow our knowledge of cultural fire practices and how these principles can assist in guiding the use of fire in the context of today's landscapes. State Government initiatives such as the Aboriginal Ranger Program are assisting Aboriginal people to re-connect to their country and to learn and share knowledge on cultural fire management practices and participate in contemporary prescribed burning with DBCA. Further, DBCA has formal joint management arrangements with traditional owner groups over 2,570,110 hectares of the conservation estate.