

CONSERVATION COMMISSION — VEGETATION HEALTH

1995. Mr C.J. Tallentire to the Minister for Environment:

With regard to the Conservation Commission, I ask:

- (a) what percentage of Banksia woodland surrounding the Perth metropolitan area has been lost because of climate change in the past decade;
- (b) what percentage of tuart woodland has collapsed because of climate change in the past decade;
- (c) have exotic pine plantations collapsed because of changing climatic conditions;
- (d) what is the area of exotic pine plantations that have collapsed;
- (e) how much of the exotic pine plantation to the north of Perth have been destroyed because of climate change in the past decade;
- (f) in the northern jarrah forest, how many hectares of forest have collapsed;
- (g) how much have jarrah mortality rates increased in the past decade;
- (h) what has been the effect of these sudden and dramatic shifts in vegetation health, structure and function on associated flora and fauna, including many critically and endangered species, and how is the Commission addressing these problems; and
- (i) with Banksia and pine food resources becoming scarce, what impact is this having on the Carnaby's Black Cockatoo population in the Greater Perth Region and what is the Commission doing to address this problem?

**Mr A.P. Jacob replied:**

- (a)–(b) Vegetation health is affected by a wide range of factors. Declines in health have been observed in a variety of native forest and woodland species at some sites and these declines may, at least partially, be the result of the observed changes in climate. However, the extent of banksia or tuart woodland that has been impacted solely due to changes in climate is currently unknown.
- (c) The pine plantations to the north and east of Perth have been significantly affected by fire and drought events over the past 10 years. Climate change projections have forecast an increase in the incidence of weather conditions that would result in such events, however it is not possible to state whether these specific events were part of normal climatic variability or climate change.
- (d) Over the period of 2008 to 2010 the Perth region experienced its driest three-years on record. It is estimated that about 4,000 hectares of plantation suffered a high level of drought impact and a further large area was affected to a lesser extent. Bushfires have also affected a considerable area of plantation, including a large fire in January 2009 that destroyed more than 1,700 hectares of plantation.
- (e) Refer to question (d). It is not possible to state whether fire and drought related tree deaths are the result of long-term climate change.
- (f) The area of the northern jarrah forest ecosystems which experienced vegetation cover decline during 2004 to 2011 was around 2 900 hectares. This figure includes dispersed patches of around 500 hectares in forest available for timber production, where localised effects on the overstorey canopy was associated with shallow soils and rock outcrops. At a number of these sites, the drought-affected trees have shown signs of recovery.
- (g) Tree mortality rates vary markedly between jarrah forests of different age, structure, species composition and site conditions. Jarrah is a very resilient species, and aside from small individual patches where some drought effects occurred, no major shift in mortality rates has been recorded to date. The annual average mortality is between 0.1 to 0.2 trees per hectare per year in native forest ecosystems available for timber harvesting.
- (h) The Forest Management Plan 2014–2023 and other relevant management planning documents incorporate management activities that encompass a range of broad precautionary actions. Adaptive management will become increasingly important, enabling flexibility to respond as new information becomes available.
- (i) There are seasonal variations in food resources for Carnaby's cockatoo which can result in changes in the density and distribution of this species. Under the Forest Management Plan 2014–2023, changes to the department's native forest silviculture guidelines increase the number of mature marris retained in

areas subject to timber harvesting, for habitat and food resources for black cockatoos. Additionally, the Government is undertaking, with the Commonwealth, a Strategic assessment of the State's Perth and Peel Regions in accordance with section 146 of the Environment Protection and Biodiversity Conservation Act 1999.