

Where there's smoke ... there's

It's hard to believe that air pollution could be a problem in the remote and sparingly populated spinifex country of Western Australia's tropical north. Yet in a bad year, the air quality in the Pilbara and Kimberley regions is far worse than on smoggy days in Sydney or Melbourne.

The managers of the north-west's major national park, Karijini, are well aware that the source of the problem is the huge fires that regularly occur in the area. They belch out so much smoke that they can block out the sun and even change local rainfall patterns. When good rains favour vigorous growth of the spinifex, lightning strikes in spring can ignite the dry grass and start fires that may spread rapidly on very wide fronts. In addition, graziers and Aboriginal peoples deliberately light many fires to promote new plant growth for grazing livestock and wild animals, and to stop the prickly spinifex grass from becoming too dense.

Under the right fire conditions, it's not uncommon for a blaze to travel up to 100 kilometres before it peters out or has to be put out.

The spring fires in the year 2000 were especially problematic in the Kimberley. Satellite images recorded more than 750 fires in September and October alone. They burnt 188 000 square kilometres—an area almost three times the size of Tasmania. In early October 2000, a series of very large fires burnt into, out of and around Karijini and vast areas of adjoining land. They threw up prodigious amounts of smoke and soot particles. Measurements of air quality taken at Lake Argyle, about 100 kilometres to the east, found that surface levels of particle density were roughly equivalent to a heavily polluted urban centre.

The smoke plume was enormous, spreading from Karijini north-west about 2 000 kilometres to Bali,

29. The first paragraph captures readers' attention by
- (A) providing an unusual fact about air quality.
 - (B) introducing them to remote regions of Australia.
 - (C) providing a challenging scenario about air quality.
 - (D) describing Australia's air pollution levels in bad years.
30. Which words from the text are synonyms?
- (A) 'sparingly' and 'prickly'
 - (B) 'belch' and 'burnt'
 - (C) 'vast' and 'prodigious'
 - (D) 'aloft' and 'emit'
31. Which of the following is used as a verb in the text?
- (A) 'strikes'
 - (B) 'fronts'
 - (C) 'light'
 - (D) 'blaze'
32. According to the text, which of the following is **NOT** a reason why people intentionally start fires in the Pilbara and Kimberley regions?
- (A) to control the density of spinifex
 - (B) to stop introduced weeds from taking over
 - (C) to promote new plant growth for native animals
 - (D) to assist new plant growth for grazing livestock

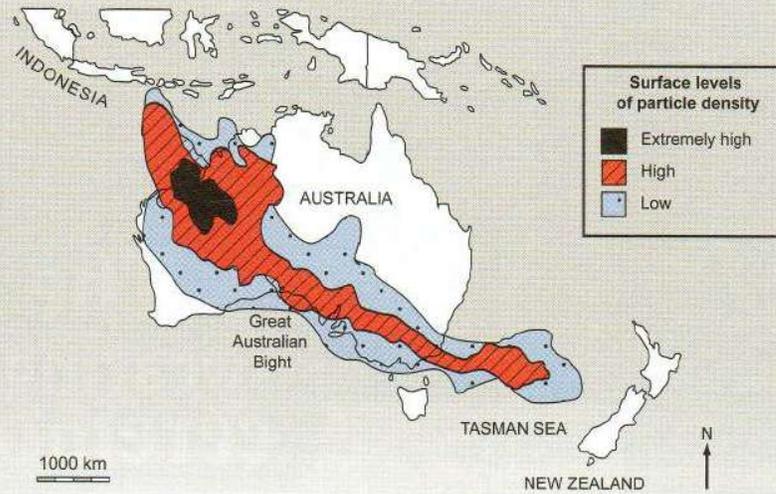
Australia

south nearly 3 300 kilometres to the Great Australian Bight and east another 2 700 kilometres to the Tasman Sea. In all, the plume covered an area of almost 2.5 million square kilometres—about one-third of Australia. The smoke cloud reached up to eight kilometres in altitude, almost as high as Mount Everest. It is thought that between 20 and 80 million tonnes of carbon were carried aloft in that cloud as carbon dioxide—the key greenhouse gas—with another 400 000 to 1.8 million tonnes of smoke. In context, that's about one per cent of the total smoke produced across the world each year—all in just that one plume.

Wildfires burn across more than 100 million hectares of Australia each year, but the area

burnt varies greatly from year to year. In wet years, there are few fires and the regrowth of vegetation can remove as much as 50 million tonnes of carbon dioxide from the atmosphere. But in hot dry years, such as 2003, major fires can release up to 190 million tonnes of carbon dioxide. For comparison, all of Australia's transport sources combined emit about 87 million tonnes of carbon dioxide each year.

Smoke from spring fires in 2000



33. The key on the map shows
- (A) the area subject to wildfire risk.
 - (B) the surface levels of smoke pollution.
 - (C) the extent of spring fires in 2000.
 - (D) the area affected by high altitude smoke.
34. What do the concluding sentences in the final two paragraphs have in common?
- (A) They act as topic sentences.
 - (B) They give alternative viewpoints.
 - (C) They summarise the paragraphs.
 - (D) They provide frames of reference.
35. According to the text, the area of Australia affected by wildfires in any year varies greatly depending on
- (A) the amount of rain received.
 - (B) the strength of prevailing winds.
 - (C) the annual fire management strategies.
 - (D) the area burnt by wildfires in previous years.
36. What would be the best alternative title for the text?
- (A) Smoke and greenhouse gas emissions in Australia
 - (B) No smoking! Keep Australians healthy
 - (C) Australia—smoke and mirrors
 - (D) Australia—a country on fire