
Question 21 (12 marks)

- (a) Recommend ONE primary and ONE secondary geographical method that could be used to assist in the management of an ecosystem at risk that you have studied. 4

Ningaloo reef is a fringing reef, 300 km long, about 1200 km from Perth in Western Australia (23°S, 113°E). The region has been under threat from concerns such as tourism, and pollution from surrounding mines, as well as oil spills from ships running aground on the reef. A primary management method would be to better control tourist activities, & a secondary method is the creation of national parks.

- (b) Describe the effect of ONE natural and ONE human-induced change on an ecosystem at risk that you have studied. 4

One natural change that has occurred on the reef is the product of global warming, coral bleaching is slowly killing the coral which many of the marine life, most of which are endangered, rely on.

A human-induced change has been the introduction of sanctuary zones around the reef, in the past years the zones have grown from 10% to 31% of the reef. These zones

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are having a positive effect because it means the reef is better preserved & protected.

Question 21 (continued)

- (c) How could Cúc Phương National Park be managed to respond to human-induced changes which place the ecosystem at risk? In your answer, refer to the Sources on pages 2 and 3 of the Stimulus Booklet. 4

Cúc Phương National Park has already in the past suffered from neglect and despite ~~the~~ its change into a national park, as mentioned in source D, the continued poor management of tourism and degradation "offers little help for the future."

Sources C and E provide confronting evidence to the condition of Cúc Phương and for this condition to be reverted serious changes must be made, exclusion zones for tourists should be put in place to help

End of Question 21 give the forest time to fix itself, however this will not happen without aid from humans, such as the replanting of trees and further restoration efforts.