
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

In the ecosystem coastal sand dunes, the ^{primary} ~~one~~ method that can assist in the management is recording observations about the erosion & vegetation of the dunes. A secondary geographical method is to compare the present dunes to photos of the dunes 30-40 years ago in order to identify changes. These methods allow geographers to identify the damage ^{done} ~~done~~ to dunes & ^{can be used} to determine the correct management strategy (eg dune rehabilitation etc.)

- (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 is storm-induced waves on sand dunes. These waves can cause washovers & washouts which erodes the dunes and hence destroys the ecosystem functioning of the grasses & organisms in the dune system. A human-induced change is land reclamation & development which can remove entire dune systems & also remove supply & movement of sand from tidal flats. This can cause absolute destruction of the dunes.

Question 21 continues on page 10

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 can be managed in a conservative manner which involves active resource planning & reduced human impact on the ecosystem. In Source D, tourism is ^{partly managed} identified as a ^{issue which} ~~human~~ generated rubbish seen in source E & soil compaction in source C. By limiting the number of tourists allowed in the National Park & encouraging the tourists to recycle or to ^{dispose} ~~limit~~ rubbish accurately, human-induced changes can be minimised. This also creates an ecotourism which is based on ecological sustainability & can help manage the park.

End of Question 21