Environment & Ecology · GS - III

The spread of cordgrass across New Zealand's tidal mudflats highlights the unintended ecological consequences of human interventions in wetlands. Discuss the impacts of invasive alien species on wetland ecosystems and suggest suitable management measures. (150 words, 10 marks)

EXAM YEAR	PAPER	SUBJECT
Daily Practice 10/10/2026	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Explain habitat alteration, biodiversity loss and disruption of tidal ecosystems; suggest prevention, early detection, scientific eradication, ecological restoration and continuous monitoring.

Model Answer

Wetlands are ecologically important ecosystems that support biodiversity, regulate water flows and provide feeding and breeding grounds for numerous species. However, human interventions, such as introducing cordgrass for grazing and land reclamation in New Zealand, can produce unintended ecological consequences when introduced species spread uncontrollably.

Ecological impacts: Invasive cordgrass can form dense vegetation across tidal mudflats, displacing native plants and altering habitats used by migratory birds and other wildlife. It may change sediment deposition, tidal water movement and nutrient cycling. Such changes can reduce biodiversity and affect ecosystem services. Its eradication can also impose substantial long-term financial and administrative costs.

Management measures: Governments should undertake environmental risk assessments before introducing non-native species, strengthen biosecurity measures and establish early-warning systems. Invasion hotspots require scientifically planned eradication or containment, followed by native habitat restoration. Community participation,

research and long-term ecological monitoring are also essential.

Conclusion: Wetland conservation requires a precautionary approach that prioritises ecological integrity over short-term economic gains and ensures that land-management interventions remain scientifically informed and sustainable.

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