

Past-paper walk-through

Human Impacts on Wetlands and Mangroves ■ 8.4

eXercise

Questions in this set

- 2025 Set 2 Q1
- 2021 Set 2 Q2
- 2019 Q1
- 2017 Q1
- 2015 Q1

Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- **//** separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = “or words to that effect” – the wording need not match.

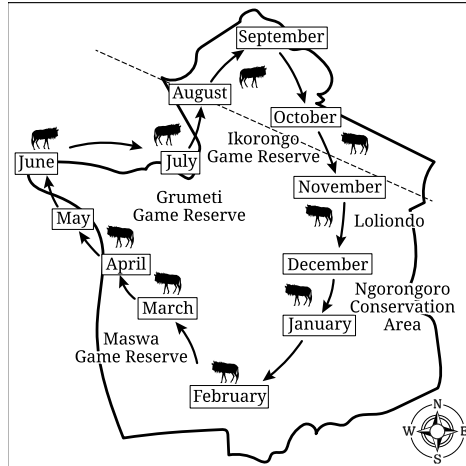
Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(a) Based on the data in the graph, **identify** the number of Common Tern breeding pairs in 1995.

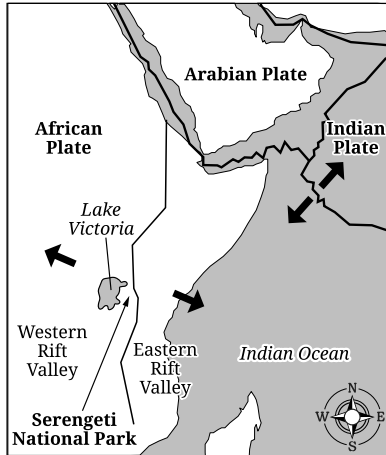
Question 1



Question 1

Year	Increase in Sea Level (m)	Location A	Location B	Location C	Location D
1	0.05	1	5	3	4
2	0.08	2	4	3	6
3	0.10	6	7	5	5
4	0.12	5	7	7	7
5	0.15	7	8	9	8

Question 1



Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(b) Based on the data in the graph, **describe** the trend in the number of Common Tern breeding pairs from 1995 to 2008.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(c) A group of students hypothesized that sea level rise will lead to an increase in Common Tern populations. **Describe** one way that the data in the graph refute this hypothesis.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(d) Explain how climate change can lead to sea level rise.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(e)(i) Wading birds are a group of large-bodied birds that inhabit coastal wetlands all over the world.

Researchers monitored the number of wading bird species at four coastal locations experiencing rising sea levels over a 5-year period. The data are shown in the following table.

Sea Level Rise and Number of Wading Bird Species at Four Coastal Locations

Year	Increase in Sea Level (m)	Location A	Location B	Location C	Location D
1	0.05	1	5	3	4
2	0.08	2	4	3	6
3	0.10	6	7	5	5
4	0.12	5	7	7	7
5	0.15	7	8	9	8

Question 1

i. **Identify** a hypothesis that researchers are likely investigating in the wading bird study.

(e)(ii) ii. **Identify** the dependent variable in this study.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(f) One year after the completion of the study of wading bird species described in Part E, locations A and B experienced an increase in the concentration of PCBs, known to be a persistent organic pollutant, running off into the water.

If the researchers repeated their study, **explain** how this environmental change could affect the results of the study.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(g) Describe a regulating ecosystem service that can be provided by wetlands.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(h) Since 1990, there has been an increase in urbanization around the coastal wetlands that wading bird communities inhabit. Most of these bird species eat fish and locate prey visually while walking through shallow water. An increase in sediment was discovered in a wetland located near an urban area.

Explain how increased sediment might lead to a change in the size of the wading bird populations.

Question 1

2025 Set 2 ■ Q1

Respond to parts A, B, C, D, E, F, G, H, and I, and all subparts.

(i) Describe an environmental problem, other than an increase in sediment, that can occur in wetlands that is associated with increased urbanization and development.

Solution 1

(a)

Mark scheme

- 1400. This is the number of Common Tern breeding pairs read directly from the graph in 1995. 1 point for identifying 1400 (or a value clearly consistent with reading the graph at 1995).

Solution 1

(b)

Mark scheme

- The number of breeding pairs varies year to year but shows an overall decrease from 1995 to 2008 (equivalently: the number of breeding pairs decreases over this period). 1 point for correctly describing the overall downward trend.

Solution 1

(c)

Mark scheme

- The data refute the hypothesis because they show the opposite relationship: the data suggest that a rise in sea level is associated with a decrease in the number of breeding pairs, i.e. as sea level rises, fewer breeding pairs will likely lead to smaller populations (not the increase the students hypothesized). 1 point for describing this inverse relationship.

Solution 1

(d)

Mark scheme

- Climate change leads to sea level rise because increasing global temperatures cause melting of glaciers/land-based ice sheets, which adds water to the oceans, and/or because increasing global temperatures cause thermal expansion of ocean water. 1 point for either mechanism.

Solution 1

(e)(i)

Mark scheme

- A reasonable hypothesis for the wading bird study: if sea level rises, wading bird diversity/species richness will decrease (or will increase; or sea level rise will/will not affect wading bird diversity/species richness; or wading bird diversity/species richness is correlated with sea level rise). 1 point for stating a testable if/then (or correlational) hypothesis relating sea level rise to wading bird species richness/diversity.

Solution 1

(e)(ii)

Mark scheme

- The dependent variable is the number of wading bird species (species richness of wading birds) at each location. 1 point for identifying species richness/number of wading bird species as the measured (dependent) variable.

Solution 1

(f)

Mark scheme

- If PCB concentration increased at locations A and B, repeating the study would likely show a decrease in wading birds, because PCBs (a persistent organic pollutant) biomagnify/concentrate in higher trophic levels, can bioaccumulate in fatty tissue, are toxic and can kill or sicken birds when ingested, and/or cause eggshell thinning, developmental deformities, or reproductive problems. 1 point for any one valid PCB mechanism linked to a decline in wading birds.

Solution 1

(g)

Mark scheme

- A regulating ecosystem service provided by wetlands: wetlands filter/purify/improve water quality; wetlands provide flood regulation/erosion control; or wetlands store/sequester carbon. 1 point for any one correct regulating service.

Solution 1

(h)

Mark scheme

- Increased sediment (turbidity) can reduce the ability of wading birds, which locate prey visually, to see prey/food/fish, reducing their hunting success; sediment can also negatively impact organisms in lower trophic levels (e.g., reducing light infiltration decreases primary producers), which reduces food/energy available to the wading birds and could shrink their population size. 1 point for a valid mechanism linking increased sediment to a change in wading bird population size.

Solution 1

(i) Mark scheme

- An environmental problem (other than increased sediment) linked to urbanization/development near wetlands: construction projects reducing/fragmenting wetland habitat; runoff of fertilizers/wastewater effluent causing eutrophication (decreasing dissolved oxygen and killing fish); runoff of litter killing animals via ingestion/entanglement; more impervious surfaces (roads/buildings/sidewalks/parking lots) increasing flooding; runoff of heavy metals/pesticides killing or weakening organisms; noise/light pollution disrupting hunting, migration, or behavior; oil runoff blocking light and preventing photosynthesis; or increased water use lowering groundwater and drying up wetlands. 1 point for any one valid problem.

Question 2

2021 Set 2 ■ Q2

Biodiversity around the world is changing as a result of anthropogenic influences. [World map titled “GLOBAL AMPHIBIAN SPECIES RICHNESS”, drawn in an oval (Robinson-style) projection with latitude lines labeled 60° , 30° , 0° , 30° , 60° (top to bottom) and longitude lines labeled 180° , 120° , 60° , 0° , 60° , 120° , 180° (left to right). A legend “Number of species” shows four shading categories: diagonal hatching = 0-20 species; light gray = 21-50 species; medium gray = 51-100 species; black = 101-136 species. The map shows the darkest shading (101-136 species, highest richness) concentrated in a band along the equator (0°) in South America (the Amazon basin) and a small patch in central Africa; medium-gray shading (51-100 species) in a broader band around the tropics in South America, Central America, sub-Saharan Africa, and parts of Southeast Asia/South Asia (e.g., India, Myanmar/Thailand region); lighter shading (21-50 species) in a band through central Africa and parts of South America;

Question 2

and diagonal-hatch shading (0-20 species, lowest richness) at higher latitudes including North America, Europe, northern Asia/Russia, and most of Australia.]

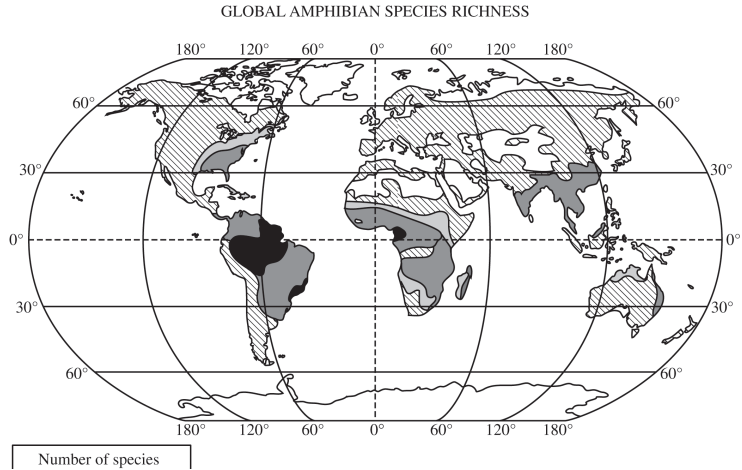
(a)(i) The map represents species richness of amphibians around the globe. Use the map to answer the following questions.

Identify the latitudinal range with the greatest amphibian species richness.

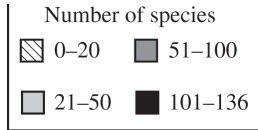
(a)(ii) Identify what biome this range most likely represents.

(a)(iii) Describe one reason amphibian species richness would tend to be highest in this region.

Question 2



Question 2



Question 2

2021 Set 2 ■ Q2

Biodiversity around the world is changing as a result of anthropogenic influences.

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Question 2

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(b) There are many environmental threats facing amphibians today, such as deforestation. Describe one possible anthropogenic reason for deforestation.

Question 2

2021 Set 2 ■ Q2

Biodiversity around the world is changing as a result of anthropogenic influences.

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Question 2

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(c)(i) Many factors influence biodiversity.

Explain how the species richness of an ecosystem influences its response to environmental stressors.

(c)(ii) Explain why amphibian biodiversity is declining globally, other than from deforestation.

Question 2

2021 Set 2 ■ Q2

Biodiversity around the world is changing as a result of anthropogenic influences.

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Question 2

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(d)(i) Currently, wildlife species are going extinct at an alarming rate. To combat this threat, governments around the world have enacted legislation and signed treaties to protect species threatened by extinction.

Identify one specific piece of legislation that has been designed to protect species threatened by extinction.

(d)(ii) Explain how the requirements of the legislation identified in part (d)(i) specifically protect species threatened by extinction.

Question 2

2021 Set 2 ■ Q2

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Question 2

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(e)(i) A town is considering selling an undeveloped parcel of land along its border for residential developments. The square parcel of land consists of approximately 30% wetland and 70% pasture. The wetland runs through the middle of the property for its entire width and is home to three native frog species.

Propose a viable solution that will result in the protection of the native frog species while still allowing for maximum profit of the property development.

(e)(ii) Justify the solution proposed in (e)(i) by describing a potential advantage of the plan, other than frog protection.

Solution 2

(a)(i)

Mark scheme

- The greatest amphibian species richness occurs in the latitudinal range between the Tropic of Cancer and the Tropic of Capricorn (equivalently, roughly 30 degrees N to 30 degrees S, or more narrowly about 10 degrees N to 15 degrees S).

(a)(ii)

Mark scheme

- This latitudinal range most likely represents the tropical rainforest biome.

Solution 2

(a)(iii)

Mark scheme

- Amphibian species richness tends to be highest here because year-round rainfall and warm temperatures are the preferred conditions for amphibians, and greater biodiversity/higher net primary productivity (NPP) provides more habitat, food sources, and niches.

Solution 2

(b)

Mark scheme

- A possible anthropogenic reason for deforestation is human demand for agriculture, housing, firewood, or other forest products (e.g., medicine, food, lumber).

Solution 2

(c)(i)

Mark scheme

- An ecosystem with greater species richness/diversity is more resilient/resistant to environmental stressors, because even if some species are harmed, other species will survive and help restore/stabilize the ecosystem.

Solution 2

(c)(ii) Mark scheme

- Amphibian biodiversity is declining globally (aside from deforestation) for reasons such as: increasing water pollution (pharmaceutical pollution harming reproduction, pesticide pollution absorbed through the skin being toxic, endocrine disruptors such as atrazine altering reproductive development); pesticide use reducing insect food sources; microclimatic changes from global climate change (warmer/drier conditions, loss of wetlands) reducing available habitat; illegal amphibian trafficking removing individuals from populations; introduced invasive species competing for niche space; habitat fragmentation limiting range and access to resources; or fungal infections such as chytridiomycosis causing skin to dry out so amphibians cannot breathe. Any one such reason earns the point.

Solution 2

(d)(i)

Mark scheme

- One specific piece of legislation designed to protect species threatened by extinction: the Endangered Species Act (ESA), the Convention on International Trade in Endangered Species (CITES), or the Lacey Act.

Solution 2

(d)(ii) Mark scheme

- Explanation depends on the legislation named in (d)(i). ESA: lists endangered/threatened plant and animal species and prevents them from being killed or harmed; designates/protects critical habitat to promote survival and recovery; creates plans to restore populations to healthy sizes; identifies species as threatened before they become endangered. CITES: a global agreement that protects endangered/threatened plants and animals (including goods such as ivory, shark fins, or rhinoceros' horns) by banning/regulating their trade. Lacey Act: prohibits the trade of wildlife, fish, and plants that have been illegally taken, possessed, transported, or sold.

Solution 2

(e)(i)

Mark scheme

- A viable solution: move/transplant the frog populations to an adjacent undeveloped area before development; designate a portion of the wetland as a park/preserve; build wildlife corridors (land or bridges) across a portion of the wetland; restrict development within a minimum setback away from the wetland; or group/cluster the buildings together (build up, not out) to leave the wetland undisturbed.

Solution 2

(e)(ii) Mark scheme

- Justification depends on the solution proposed in (e)(i). Move/transplant frogs: only a one-time disruption during removal rather than continued disruption (e.g., population growth, fertilizer/pesticide use), and the developer gets the maximum amount of usable land. Park/preserve: more food and space availability increases wildlife survival rates; a nearby park/preserve is an educational/environmental draw that may let the developer charge higher rents; the wetland has aesthetic value for residents; and the preserved wetland helps prevent flooding. Wildlife corridors: other species are less affected by habitat fragmentation and can keep moving for food, shelter, and reproduction. Setback: creates a buffer zone that filters runoff into the wetland and adds resident privacy. Clustered/grouped

Solution 2

development: species are less affected by multiple habitat fragments because the apartments are developed in groups while wetlands are preserved.

Question 1

2019 ■ Q1

The piping plover is a globally threatened species, with perhaps as few as 2,000 nesting pairs remaining in the Atlantic population of these migratory shorebirds. Plovers were nearly hunted to extinction in the nineteenth century.

Plovers prefer to nest and search for food on open sandy beaches between sparsely vegetated sand dunes. Washovers, where sand is washed up from the beach and buries vegetated areas during big storms, are also important to plovers because they provide moist and undisturbed habitat for plover adults and their chicks. Ecologists with the Elliott Oceanographic Institute mapped the distribution of plover nests during two seasonal surveys of nesting sites over a ten-year period on Assateague Island. This is a barrier island, a long, narrow island running parallel to the Atlantic coast of Virginia.

SPRING PIPING PLOVER NESTING SITES ON ASSATEAGUE ISLAND, VIRGINIA

Question 1

[Two side-by-side maps of the barrier island Assateague Island, Virginia, labelled “1999” and “2009”, each showing the shoreline with symbols marking piping plover nest locations. A small inset locator map at left shows Maryland and Virginia with Chincoteague Bay, the Atlantic Ocean, and a compass rose (N, S, E, W), with a box indicating the zoomed-in region of Assateague Island. Legend: hatched/dotted pattern = Unvegetated sand; light gray = Sparsely vegetated sand; dark gray = Densely vegetated sand; open circle (o) = Piping plover nest. The 1999 map shows nests scattered mainly in the unvegetated/sparsely vegetated (lighter) areas along the shoreline, with relatively little densely vegetated (dark gray) area. The 2009 map shows a similar shoreline but with a much larger area of densely vegetated (dark gray) sand covering the interior of the island, and nests still concentrated in the narrower band of unvegetated/sparsely vegetated sand along the coast.]

Question 1

Approximately 40% of the United States population resides in coastal areas, such as areas near Assateague Island, where sea level rise and shoreline erosion is occurring.

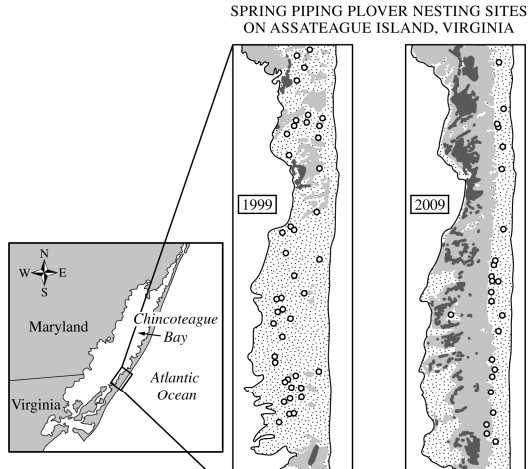
(a)(i) Use the maps provided to answer the following questions.

Identify the preferred nesting habitat for piping plovers.

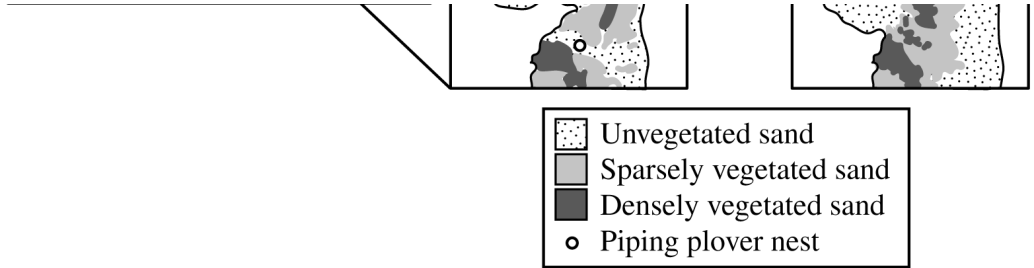
(a)(ii) Describe the change in the number of piping plover nests on Assateague Island between 1999 and 2009.

(a)(iii) Describe one likely reason for the change in the number of piping plover nests between 1999 and 2009.

Question 1



Question 1



Question 1

2019 ■ Q1

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Approximately 40% of the United States population resides in coastal areas, such as areas near Assateague Island, where sea level rise and shoreline erosion is occurring.

(b)(i) Coastal species are affected by more than just natural events.

Question 1

Special beach restrictions can help piping plovers during nesting season. Describe one restriction that could reasonably be implemented to help prevent the destruction of plover nests by human actions.

(b)(ii) In addition to providing habitat for piping plovers, barrier islands (and closely related landforms) are important for other reasons. Explain one way that these features help to preserve and protect the environment in coastal regions.

(b)(iii) Identify one human action that directly threatens coastal habitats and describe one impact on species, other than the piping plover, that use the habitat.

Question 1

2019 ■ Q1

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SPRING PIPING PLOVER NESTING SITES ON ASSATEAGUE ISLAND, VIRGINIA

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Approximately 40% of the United States population resides in coastal areas, such as areas near Assateague Island, where sea level rise and shoreline erosion is occurring.

(c) Identify one economic impact on coastal communities that has resulted from rising sea levels.

Question 1

2019 ■ Q1

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Approximately 40% of the United States population resides in coastal areas, such as areas near Assateague Island, where sea level rise and shoreline erosion is occurring.

(d) Describe TWO methods that may be used locally to protect coastal communities from rising sea levels.

Solution 1

(a)(i)

Mark scheme

- Preferred nesting habitat for piping plovers: unvegetated sand / sandy areas / open sandy beaches / washovers. Full credit for identifying any one of these habitat types.

Solution 1

(a)(ii)

Mark scheme

- The number of piping plover nests decreased by almost half (about 43%) between 1999 and 2009 — from 44 nests in 1999 to 25 nests in 2009 (a decrease of 19 nests). Full credit for correctly describing this decrease (exact numbers not required).

Solution 1

(a)(iii)

Mark scheme

- One likely reason: the preferred nesting habitat (unvegetated sand) was reduced — either because of a decrease in unvegetated sandy areas, or because of an increase in vegetation/revegetation of the island. Full credit for identifying either cause of habitat loss.

Solution 1

(b)(i)

Mark scheme

- One reasonable restriction to prevent destruction of plover nests by human actions, e.g.: post warning signs/fencing/barrier tape/boardwalks around the nesting area; place wire enclosures/other barriers over active nests; limit specified recreational activity on beaches with plover nests (prohibit kite flying, fireworks, etc.); implement motor vehicle restrictions (limit times, size of vehicles, raking, etc.); require pets to remain indoors or on leashes. Full credit for any one reasonable restriction.

Solution 1

(b)(ii)

Mark scheme

- One way barrier islands help preserve/protect the coastal environment, e.g.: they block/buffer wind and/or waves, mitigating beach erosion; they reduce storm surge, protecting the interior coastline from flooding; they block/buffer waves and create wetland ecosystems/pools that serve as habitat for many species (fish, turtles, migratory birds); they trap sediments/pollutants in wetland habitats/marsh grasses, filtering the water. Full credit for any one correct explanation.

Solution 1

(b)(iii) Mark scheme

- 2 points — 1 point for identifying a human action that directly threatens coastal habitats, 1 point for describing a matching impact on a coastal species other than the piping plover. Acceptable paired examples: Tourism/Recreation → beachgoers step on/crush nests, unleashed pets disrupt nesting/survival, vehicles disrupt nesting/survival, litter attracts predators/harbors pathogens, sunscreen washes off and is toxic to coral/marine organisms; Coastal Development → loss of suitable habitat, noise/light pollution disrupts nesting/migration/survival, food/garbage attracts predators/harbors pathogens; Littering/Solid Waste Disposal → species get tangled in trash, or ingest trash which fills/blocks the respiratory/digestive tract; Offshore Oil Drilling → spilled oil coats coastal marine organisms impacting

Solution 1

survival, or is toxic if ingested; Commercial Fishing → dredging/trawling destroys coral/habitat for bottom-dwelling organisms, overharvesting decreases populations, species get trapped in fishing gear. Award 1 point for a valid human action, 1 point for a correctly linked impact on a non-plover species.

Solution 1

(c) Mark scheme

- One economic impact on coastal communities from rising sea levels, e.g.: decrease of tourist revenue; decrease of property value; increase in damage to property/land/infrastructure requiring repair or replacement; increase in insurance costs; loss of agricultural land or aquaculture operations resulting in financial loss; loss of fish nurseries in wetland areas leading to less revenue for commercial fisheries; increase in jobs in infrastructure/construction to repair damaged structures/properties; increase in costs associated with preventative measures (building sea walls, raising buildings, etc.). Full credit for any one valid economic impact.

Solution 1

(d) Mark scheme

- Describe TWO methods that may be used locally to protect coastal communities from rising sea levels, 1 point per correct distinct method (max 2), e.g.: raise structures to reduce/prevent water damage; move/build structures back from the beach (setbacks) to reduce/prevent water damage; install pumps to reduce flooding; build structures such as sea walls to protect the area from wave action/storm surge/flooding/erosion; plant vegetation along the shoreline to decrease erosion; replenish sand to address erosion problems or increase beach width; build jetties/groins to act as a barrier from waves.

Question 1

2017 ■ Q1

Read the following article from the Fremont Daily Times and answer the questions that follow.

[Newspaper clipping, headed “Fremont Daily Times”, article title “Scientists Discuss Threats from Plastic Pollution”:] In testimony before the United States Senate Committee on Environment and Public Works, Dr. Duke Ewoldsen, an eminent toxicologist, discussed a new water pollutant that threatens aquatic life: microbeads. Ewoldsen noted that while posing a different threat than more conventional water pollutants such as nitrates, phosphates and PCBs, tiny beads of plastic contained in many products, especially cosmetics, now threaten plankton and small fish that ingest the particles because they mistake them for food. The microbeads cannot be digested and can fill or block the digestive tracts of the fish, leading to starvation. In addition, surfaces of these small spheres can adsorb organic pollutants such as PCBs and dioxin.

Question 1

When asked about steps to reduce this threat, Ewoldsen noted that the beads are so small that they are not easily removed by wastewater treatment plants and thus often enter aquatic ecosystems in wastewater discharges.

(a) Describe TWO effects that ingesting microbeads has on aquatic organisms.

Fremont Daily Times

Scientists Discuss Threats from Plastic Pollution

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Question 1

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(b) Dr. Ewoldsen states that nitrates pose different threats to aquatic ecosystems than microbeads do. Describe how nitrate levels can negatively affect water quality in some aquatic ecosystems.

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(c)(i) While wastewater treatment plants are ineffective at removing microbeads, they are very effective at removing large pieces of plastic waste and other pollutants. Identify one way large pieces of plastic are removed from wastewater during primary treatment.

(c)(ii) Prior to discharge, wastewater is often disinfected. Identify one technique commonly used to disinfect wastewater.

(c)(iii) Sludge or biosolids produced during the wastewater treatment process can be spread on agricultural fields. Identify one advantage and one disadvantage of this practice.

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When asked about steps to reduce this threat, Ewoldsen noted that the beads are so small that they are not easily removed by wastewater treatment plants and thus often enter aquatic ecosystems in wastewater discharges.

(d)(i) Coastal ecosystems are threatened by other human activities in addition to wastewater disposal. Mangrove swamps are one such threatened ecosystem.

Provide one reason why mangrove trees are being removed by humans.

(d)(ii) Identify one ecosystem service provided by intact mangrove ecosystems.

Question 1

2015 ■ Q1

Read the article below and answer the questions that follow.

[Newspaper clipping: “The Floridian Daily”, dated May 21, 2013]

The small community located on the edge of the magnificent wetlands of Florida’s Everglades was the site of a press conference today where Governor Gayle Moss announced that the restoration of the Everglades is successfully underway. She noted that the Everglades ecosystem has suffered threats to its water quality, water quantity, and habitats in recent decades. Moss noted that intensive urban and agricultural development in adjacent areas has diverted substantial amounts of freshwater resources and impaired water quality. Governor Moss then emphasized that the preservation and enhancement of the Everglades, key goals of the restoration program, are absolutely essential for the continued environmental and economic health of the state. She closed the press conference by saying, “The Everglades is a gem not only for Florida but for

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the entire world. Each of us has the responsibility to do our part to preserve this magnificent resource.”

(a) Describe how TWO human activities, other than those that result in anthropogenic climate change, have resulted in a decrease in the amount of freshwater flowing into the Everglades ecosystem.

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The Floridian Daily

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only for Florida but for the entire world. Each of us has the responsibility to do our part to preserve this magnificent resource.”

(b) In addition to water quantity problems, the Everglades is faced with a variety of water quality issues. For example, phosphorus concentrations in the Everglades have increased since the 1960s.

(b)(i) Describe how one specific human activity contributes to increased phosphorus levels in the Everglades.

(b)(ii) Explain one way in which an increase in phosphorus levels can adversely affect the Everglades ecosystem.

(b)(iii) Describe one step that could be taken to reduce phosphorus inputs from the activity you identified in part (i).

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(c) Climate change could have a variety of impacts on water quantity, water quality, and habitat. For EACH of these three factors, identify and describe one specific example of an impact on the Everglades likely to result from climate change.

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(d) The article states that Governor Moss believes that the “preservation and enhancement of the Everglades, key goals of the restoration program, are absolutely essential for the continued environmental and economic health of the state.”

(d)(i) Describe one way that restoring water quantity and water quality in the Everglades is expected to improve the structure and function of the ecosystem.

(d)(ii) Describe one way that restoring the Everglades is expected to provide economic benefits to Florida.