

The following questions are based on the situations below.

Situation 1: A population of trout in a lake has significantly declined over the past year. The main source of food for the fish in this lake are aquatic insects. Due to poor climate conditions, there are significantly fewer insects and thus, not enough food to sustain the population of trout in the lake. Trout is a food supply for larger fish in the lake and without enough trout, other fish are negatively impacted in the lake.

14. What is the problem?

- a. Trout population has increased
- b. Insect population has increased
- c. Insect population has decreased
- d. Larger fish population has increased

15. What has caused the problem?

- a. Poor climate conditions
- b. Humans overfishing
- c. Pesticides being used on the insects
- d. Decreased water levels

16. How could humans alter carrying capacity so the trout population returns to its normal level?

- a. Humans could alter the carrying capacity by hunting the trout
- b. Humans could alter the carrying capacity by hunting the larger fish
- c. Humans could alter the carrying capacity by breeding the insects
- d. Humans could alter the carrying capacity by breeding the larger fish

Situation 2: The population of bullfrogs is growing out of control near a small pond. Its main predator, a snake species, was killed off by disease. Without this natural predator, the bullfrogs can thrive in and around the pond. The growing frog population is having a negative impact on the quality of the environment and other species living in the area.

17. What is the problem near the small pond?

- a. Bullfrog population is too small
- b. Bullfrog population is too large
- c. Snake population is too large
- d. Snake population is killing the bullfrogs

18. What has caused the problem?

- a. Natural Disaster wiped out the snake population
- b. Humans began hunting the snakes
- c. A disease killed all the snakes
- d. Snakes went to a different ecosystem

19. How could humans alter carrying capacity so the bullfrog population returns to its normal level?

- a. Humans could alter the carrying capacity by breeding bullfrogs
- b. Humans could alter the carrying capacity by hunting the snakes
- c. Humans could alter the carrying capacity by hunting the bullfrogs
- d. None of the above will help alter the carrying capacity

20. What is another possible solution to this problem? Explain why it will help alter the carrying capacity of the bullfrog population?