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Wicked Problem Essay: The Great Carp Crisis



In class, we are currently discussing the concept of a wicked problem. This problem is unlike most problems in that, it has a vague problem definition, its solution is undefined, it lacks a tangible endpoint, the problem is irreversible, the problem is unique, and the problem requires urgent attention. One wicked problem is the overpopulation of invasive carp species within the Missouri and Mississippi rivers. This essay will delve into the concept of invasive species, how the carp plays a part in the problem, and how these fit into the characteristics of a wicked problem.

First, we need to recognize what an invasive species is, and how they manage to get around the globe. The USDA National Invasive Species Information Center, (NISIC), describes an invasive species as a non-native, or alien species to a specific ecosystem, and whose

introduction is the direct, or indirect causation of harm in that ecosystem, with a particular emphasis on economic levels, environmental levels, or harm to human health. This states that species are invasive in an environment that is not where they hail from, living in an area where that species doesn't exist naturally. Invasive species are spread through human activities, that are, for the most part, released accidentally, such as invasive insects being brought along to different places via ship ballast, firewood, or transport crates, plants must be given enough time to overgrow and outcompete with native organisms, and even released house pets, such as cats, and common fish such as betta or goldfish can become invasive.

The impacts from these species are often devastating, from housecats wiping out whole bird species, to a goldfish passing on its non-native diseases to the native species of fish, and passing on those diseases, resulting in a mass killing of fish populations. Asian Carp specifically have managed to get out of closed fisheries and into the water via unnatural flooding events, which gave them the ability to overpopulate beyond normal breeding patterns, causing them to dominate and completely overtake the native populations of other fish. The Bighead Asian Carp and the Silver cause the most damage because they consistently eat all the plankton so fast that the other fishes can't ever get any. Because of how quickly they consume food, this also means that they can grow very fast, often growing to over 100 pounds.

This causes severe commotion to once peaceful lakes and fisheries and the native midwestern fish populations such as smallmouth bass and walleye forcing them out of their habitats. This also hurts the economic steadiness of systems surrounding the Mississippi River, such as Chicago, Missouri, Michigan, and Illinois, where the economy is based heavily on the tourism industry and sport fishing for some native fish such as the yellow perch and trout. Carp places these 7-billion-dollar industries in jeopardy because the native fish populations are the ones that get pushed out the most.

Invasive species have been introduced all over the world, including the Mississippi River, where the invasive carp population resides, they were introduced as a way for wastewater and sewage treatment, and to help fight against the other invasive populations such as algae, and foreign parasites in ponds and other canal systems, but because of flooding, the carp populations have managed to escape into the rivers and streams.

This plays into one of the characteristics of a wicked problem, which is that the problem is subtly vague. The problem has essentially the main point, being the overpopulation of the fish populations in the Mississippi and other midwestern lakes, but it never delves into the other economic pressures of the overpopulation as stated above. This makes the problem difficult to solve because it can't simply be solved by one solution alone. This means that energy is wasted to solve one part of the problem because it is the most evident while neglecting to acknowledge the other, smaller parts of the problem, which can easily grow into the magnitude of the previous problem, if not even more.

This leads to how the problem falls into another characteristic of the wicked problem, its solution is undefined, if there are multiple problems, there need to be multiple solutions, and oftentimes, we tend to focus on one main "savior" solution that we tend to idolize and put on a pedestal while ignoring all possible solutions. This causes a sense of disappointment when this idolized solution doesn't work the way people expected it to, if it works at all, such as a vaccine that does help with the disease but doesn't stop people from getting sick with the disease.

Because we always search for one solution, we tend to ignore or at least try to ignore that there might not be a solution at all in each problem, which leads to two characteristics of a wicked problem, there being no endpoint and that it's irreversible. I believe these go hand and hand in that, even if you can reduce the amount of carp within the fish populations, you will never fully be rid of them, making the problem irreversible, and eventually, the invasive carp

populations will pick up again, bringing the need to employ that same solution in question again and again, making the endpoint unreachable.

This problem can also fit into the final two aspects of a wicked problem, that being the problem is urgent and that unique. This type of problem has been put mostly on the back burner in the minds of media and has gained much less media attention over the last decade. The problem has been ignored because it is just so different, and somewhat irrelevant compared to other topics such as international affairs and wars. Still, the problem could be just as urgent as the previous two, but because of the lack of media traction, the problem isn't in the eyes and in the minds of the general populous.

This essay has touched on the concept of an invasive species, why the carp fit into this description, and how all of this falls into a wicked problem by comparing its 6 characteristics, I truly think that this problem is important and needs media attention because when it becomes out of control once again, eyes will be on it, and action will be taken, because, to be honest, who likes a carp infestation?

Works Cited

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