

Envision | Issue Statement Paper

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Issue and Topic

The ocean is humans most important resource. Despite humans needing the ocean to survive, we are still continuously polluting and ruining it. If humans don't cease polluting the ocean soon, there will be disastrous results.

Problem Statement

The ocean supplies humans with many resources. The ocean gives us food to eat, medicine to use, ways of transportation, water to use, plants that extract carbon dioxide from the air, plants that provide oxygen, and much more. Oceans are the reason humans can inhabit planet earth. While humans are using these resources from the oceans, we are also polluting the ocean. It is estimated that 80% of ocean pollution comes from land activities. 36% of this 80% comes from runoff. Runoff is when fluids travel on land by going downhill. While runoff is sometimes good, by shaping earths landscape and keeping rivers and streams full, it also causes runoff pollution by picking up oil, fertilizers, pesticides, and toxic fluids and then dumping them into the oceans.

Runoff causes 36% of pollution in the ocean. While humans are polluting the ocean, we are also tarnishing our most important resources that come from the ocean.

The problem that humans are causing is the pollution of the ocean, by the process of runoff from drains and rivers as waste. This type of pollution can make it extremely unsafe for plants and animals. The pollution can also make it unsafe for humans after rainstorms.

The problem of runoff pollution is affecting waters on a global scale. Cities around the world are contributing to the pollution that could be killing humans in the near future. Because there are cities around the globe, runoff pollution is happening across the world. Populations affected by runoff pollution can range from small insects all the way to humans. Consuming, or living in, oil, pesticides, or fertilizer would harm almost any living thing. If humans want to continue living on earth, we need to immediately stop pollution of the ocean by runoff. Stopping runoff pollution would reduce pollution in the ocean by about 36%! Also, if attention is brought to runoff pollution, smaller aspects of ocean pollution, such as oil spills, may be taken more seriously. If this 36% of pollution

is stopped, resources will become more plentiful and reliable, beaches and waters will become safer, and it will help restore the habitats of many animals.

Sustainable Solution

Description of Solution 1

The first solution we came up with is implementing a reverse osmosis plant. The reverse osmosis plants, which would be located on the shores of oceans, would take the toxic filled runoff, clean it through primary and secondary treatments, and release the clean water into the ocean safely. With this solution, runoff would still shape earth's landscape and cleanly go into the ocean.

For this solution to work, we would need certain partners and resources. One partner would be Pure Water Incorporated. Pure Water Inc. would help supply the necessary reverse osmosis plants, so the cleaning of runoff can actually happen. Along with Pure Water Inc., we would need construction workers to make areas for the reverse osmosis plants to be buried. Also, we would need technicians to make sure the reverse osmosis plants are fully functional.

With this plan, there would be a few challenges we would have to work around. The first challenge is the cost. The purchasing of many reverse osmosis plants would be costly, also we would have to pay all the workers who help in making and putting together the reverse osmosis plants. Another challenge may be convincing the owners to install the reverse osmosis system. While we know this will be a sustainable solution, other people may not believe it will help. Although, we strongly believe convincing people to use reverse osmosis plants will be easy.

The reverse osmosis plant timeline will not be lengthy. Installing a single reverse osmosis plant would only take around a week. With this in mind, to cover an entire shore would probably take around four months.

The impact of this great solution would be absolutely astounding. Stopping runoff pollution would decrease ocean pollution by 36%! This would improve animals' habitats, not poison animals' food and our food, it wouldn't kill or harm plants, it would make the water in the ocean cleaner, and would make beaches and waters safer to be around.

Action Requested

Action requested is for the federal government to pay for part of our reverse osmosis plan.

Description of Solution 2

Our second solution is green infrastructure; this is the process of planting many trees around big cities to absorb water. With this plan, the trees around the city will soak up the water and therefore result in less runoff. More benefits to this plan are increased

oxygen, less carbon dioxide in the air, more beautiful trees in cities, and more habitats for animals. This solution also doesn't have to be associated with some sort of company, it could just be something for community service, or you can just do it for fun!

This solution would be far less costly, all you need for this solution is trees, time, selfless people who care about their environment, and permission from the city possibly. Also, the timeline could be as long as you want! This can be a once a day thing for your entire life, or you can just do it for a couple months. Either way, you're making a difference.

Action Requested

Action requested is permission from the city you're planting in.

Research Sources

The sites used were wwf.panda.org, [national geographic](http://nationalgeographic.com), climateinterpreter.org, protectplanetoocean.org,