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Water and Nature: Is nature the answer to the worlds water challenges?

“Cities around the world should prepare for running out of water, experts say” - *CNBC, 2018.*

“Water everywhere ... but how clean and for how long?” - *Post Bulletin Minnesota Newspaper, 2018.*

Statements from the daily headlines like these, show a need for discussing worldwide water challenges. As global population and urbanization increases, so does the strain on the already limited clean water supply. Water plays a vital role in our lives; as it is necessary for cooking, growth of plants and our bodies, which is 70% water. Whether its due to poor quality or scarce quantity, many people worldwide don't have access to potable water.

While nature plays a very important role in the purification water, there are other, more complex factors, which contribute to the contamination of water supply that will not allow nature to meet the challenge. Human factors like improper disposal of oil, or spills, severely impact nearby water supplies. A single drop of used motor oil can contaminate a million drops of clean water. While oils are biodegradable, it takes four weeks for 60% of even a very light crude to degrade. The body can only last three to four days without water therefore biodegradation is not a timely remediation alternative. In addition to this, lead and other non-biodegradable substance, require a HUMAN to use reverse osmosis, distillation or a carbon filter, to clean the water. This once again proves that nature is unable to meet the challenge.

Additionally, nature can't solve the worlds water challenges because some water issues are the result of human manipulation. Water privatization, when private corporations buy or operate public water utilities, is a major contributor to the worlds water issues. In 2012, Swiss journalist, Res Gehringer, released a film entitled “Bottled life: Nestle's Business with water” where he investigated the company's practices. He discovered that Nestle's pumping of water in Pakistan caused the nearby villages groundwater levels to fall dramatically, and the village fountain water to spew water that was not potable. This type of challenge requires government regulations and laws.

Air pollutants, which cause the formation of acid rain, to the atmosphere have also contaminated the water supply in the form of precipitation. Air pollutants emitted by coal-fired power plants include Sulfur oxides, hydrogen chloride, arsenic and lead. Carbon dioxide is the only toxic waste which trees/nature can remove, and they do so at a rate that is much less than

the rate at which we put it back into the atmosphere. Thus, leaving the other gases to contaminate precipitation.

Man made fertilizer, also creates water problems that nature cant solve, especially those that are nitrogen based. When fertilizer is washed into water sources it leads to eutrophication (increase in algae causing an increase in bacteria). The bacteria in the streams studied by scientificamerican.com only eliminated an average of 16 percent of the nitrogen pollution.

Had the earth been left the same as it was prior to the industrial age, there is a possibility that nature could have sufficed. However, we live in a time when modernization has contaminated nature and created issues far to complex for nature to solve on its own. If you think about, if nature were the answer to the worlds water problems, there would be no water problems today; now would it?

References

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