

4.1 Human Impact on the Hydrological Cycle

Human behaviour	Related impact	Possible solution
Wearing cotton	Cotton is a very thirsty plant, using more than 20000 litres for a single kilo of cotton	Fabric recycling, use of artificial fibre, and second-hand or outlet shopping all reduce the amount of new cotton harvested
Pesticide use	Pesticides and fertilisers enter groundwater and surface runoff.	Investing more in organic farming and alternative fertiliser
OVER water consumption	Agriculture counts for 70 percent of fresh water consumption (to grow plants) for our population and meat consumption animals need water. 22 percent for industrial uses. And 8 percent is left for our everyday life uses.	Reduce our consumption of meat and distribute our goods evenly across the globe so we don't over produce, Only produce what we need in all uses (everyday uses, agriculture)
Consuming meat	15,500 liters of water are required to produce 1 kilo of beef. Meat consumption is expected to double by 2050s due to population growth and demand.	Campaigns such as Meatless Monday, and development of meat substitutes like Quorn and tofu
Drinking water from open sources	People in undeveloped countries don't have access to clean drinking water and so women in families have to travel great distances to reach the nearest water source (eg. ponds, rivers). These are usually contaminated as they have been sitting in the open, allowing animal waste and dangerous bacteria to accumulate. Drinking this type of water can lead to severe diseases, and in	Organizations like Charity Water spend time raising awareness about the water crisis in undeveloped countries and encourage the public to invest in their projects. Their solution is to install water filtration systems near local villages, giving women the opportunity to spend their time on more important activities such as education.

	some cases death.	
Growing crops (agriculture)	Agriculture consumes 70% of the world's fresh water. In some places agriculture has even drained the groundwater supply.	If farmers apply micro-drip irrigation to their farmland they will be able to reduce their water consumption by 70-80%.
Urbanisation and population growth	20 percent and industrial water is discharged into the ocean. Polluting it. More people in developing countries moving to cities and this increases the demands for pipes etc. Growing population is leading to an increase in total water consumption.	Companies are finding ways to increase fresh water (spain, saudi arabia and singapore is decreasing its salinity to 30 percent by 2060 and united emirates) turning to di salinization refers to the removal of salts and minerals from a target substance, as in soil desalination , which is an issue for agriculture. The water industry is expecting to grow through companies that enable this type of water to happen.
Not updating water pipes resulting in water leaks	In london 28% is lost due to leaks and broken pipes. Old pipes also contain lead which contaminates drinking water.	Metering systems and advanced sensus can help without digging up entire city blocks
Domestic uses	When we shower sometimes we take too long, overusing the water. Same goes for the amount of times we wash dishes and keep the faucets on when they don't need to be.	By paying more attention to how much water we are using in our daily activities and how long we use it for, we can decrease the water waste.
Collecting contaminated water due to a lack of access to clean water (i'm not sure if this makes sense)	People living in poverty struggle to provide their families with water. Often women have to walk up to three hours to collect the families daily consumption of water. They collect this water from ponds or lakes nearby,	In small villages and towns, wells should be installed or families should be provided with filtration devices that clean their water. This would mean people would have more time to educate themselves or improve their quality

	however the water is exposed to other things such as animal feces and therefore the water is carries diseases, much of which affect babies in these families the most. These diseases can cause diarrhea, dehydration and even death	of life in other ways.
Growing need for water	Due to the lack of available fresh water, the global population will begin to worry about it by at least 2040. Globally, 70% of our available water is used for agriculture leaving a mere 8% for personal use for over 7 billion people.	There are many small ways in which people can contribute to the consumption and general use of less water. For example, being aware of your own water use and finding ways to reduce, such as taking shorter showers, turning the tap off etc.
Mining and mineral extraction	Often chemicals such as cyanide are used for gold mining in the Amazon rainforest and this makes water unfit for agriculture or for human consumption.	Making legislation on where and how mining can be carried out and what chemicals can be used that do not disturb the water cycle.
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