

**Committee:** Environmental Commission

**Question:** Introducing new policies and systems with the use of technology in order to preserve the depleting water resources.

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**Position:** Deputy Chair



## INTRODUCTION

Dear Delegates,

The topic which will be debated upon is of great importance since it involves major countries and could lead to disastrous events. Nowadays, we are facing a very serious problem regarding sanitation which has had a negative impact on peoples' health and well-being. There is not enough water resources which brings about dehydration and lack of freshwater for everyday needs such as agriculture, and the growing of our own food. The existing water resources are polluted and not preserved, leading to dehydration and sickness of a plethora of people in several areas of the world. Thus, we need to take immediate measurements and take advantage of the fully advanced technology in order to improve the situation in countries facing this issue, including Congo, Pakistan, Ghana and Nepal, and find alternative solutions to preserve the depleting water resources. Therefore, we have seen improvement in the past few years, while some NGOs and countries with strong economies have been able to develop desalination and wastewater purification, but what's known is that we've got a long way to go until we achieve our goal, being sustaining the water resources to the fullest. Many countries have the opportunity to use technology to preserve the water resources, and thrive economically, but are not taking advantage of it. Furthermore, through extensive research and looking into the study guide, you will be able to extend your knowledge on the topic, while find where your delegation stands, and work together with other delegations so as to come up with ideas and compose a strong resolution. If you have any questions, don't hesitate to ask me via email. [gotsopouloufay@gmail.com](mailto:gotsopouloufay@gmail.com)

Best of luck, Faye Gotsopoulou.

## DEFINITIONS OF KEY TERMS

### Water Scarcity

Lack of access to water. This can be scarcity in availability due to physical shortage, or scarcity in access due to the failure of institutions to ensure a regular supply or due to a lack of adequate infrastructure.<sup>1</sup>

### Water Conservation

Water conservation refers to the preservation, control and development of water resources, both surface and groundwater, and prevention of pollution.<sup>2</sup>

### Wastewater Treatment

Wastewater treatment is the process of converting wastewater, which is no longer suitable for use, to bilge water, which can be discharged back into the environment.<sup>3</sup>

### Water Purification

Water purification is the removal of contaminants from raw water to produce drinking water that is pure enough for human consumption or for industrial use.<sup>4</sup>

### Desalination

Desalination refers to any of several processes that remove the excess salt and other minerals from water in order to obtain fresh water suitable for animal consumption or irrigation, and if almost all of the salt is removed, for human consumption, sometimes producing table salt as a by-product.<sup>5</sup>

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<sup>1</sup> UN-Water. "Scarcity: UN-Water." UN, [www.unwater.org/water-facts/scarcity/](http://www.unwater.org/water-facts/scarcity/).

<sup>2</sup> OECD Statistics Directorate. *OECD Glossary of Statistical Terms - Water Conservation Definition*, [stats.oecd.org/glossary/detail.asp?ID=2903](http://stats.oecd.org/glossary/detail.asp?ID=2903).

<sup>3</sup> Rinkesh. "What Is Wastewater Treatment and Process of Wastewater Treatment." *Conserve Energy Future*, 25 Dec. 2016, [www.conserve-energy-future.com/process-of-wastewater-treatment.php](http://www.conserve-energy-future.com/process-of-wastewater-treatment.php).

<sup>4</sup> "Water Purification." *ScienceDaily*, ScienceDaily, [www.sciencedaily.com/terms/water\\_purification.htm](http://www.sciencedaily.com/terms/water_purification.htm).

<sup>5</sup> "Desalination." *ScienceDaily*, ScienceDaily, [www.sciencedaily.com/terms/desalination.htm](http://www.sciencedaily.com/terms/desalination.htm).

## TIMELINE

Date	Description of Events
1997	The first and only intergovernmental conference devoted exclusively to water, The Mar del Plata United Nations Conference.
1980	It led the UN General Assembly to proclaim the Declaration of the International Drinking Water Supply and Sanitation Decade.
1992	The idea of forming a world water council was first proposed in 1992 at the UN's International Conference on Environment and Development in Dublin and at the Rio de Janeiro Earth Summit.
1994	The International Water Resources Association (IWRA) organized a special session on the topic in its Eighth World Water Congress held in Cairo in November 1994, which resulted in a resolution to create the World Water Council and a committee to accomplish the preparatory work for this task. Consensus was established around the need for the creation of a common umbrella organization to unite the disparate, fragmented, and ineffectual efforts in global water management.
1995	The Founding Committee of the World Water Council was formed and convened its first meeting in Montreal, Canada, in March 1995, and again in Bari, Italy, in September, 1995. These two meetings defined the mission and objectives of the World Water Council.
1996	The World Water Council was legally incorporated and its headquarters established in Marseille, France.
1998	The World Water Council, in cooperation with the Government of France, participated in organizing the International Conference on Water and Sustainable Development in Paris.
2000	The 2nd World Water Forum was successfully held in The Netherlands. The results of the Vision were presented to some 5,700 participants from all parts of the world.
2003	The 3rd World Water Forum took place in Kyoto, Shiga and Osaka, Japan. Following up on its commitments from the 2nd Forum, the WWC launched the World Water Actions report, an inventory of over 3,000 local water actions. This Forum was the largest water conference yet, gathering 24,000 participants. A Ministerial Conference was held in parallel and brought together 130 Ministers. Participants made hundreds of commitments to action, and each session organiser was asked to state what concrete output would follow his or her respective session.
2006	The 4th World Water Forum was held in Mexico City, gathering some 20,000 people from throughout the world who participated in 206 working sessions, under the theme "Local actions for a global challenge."
2009	Over 30,000 participants from 182 countries took part in the 5th World Water Forum in Istanbul, Turkey. More than 400 organizations prepared together over 100 sessions organized according to 6 themes, 7 regional reports and 5 high-level panels, in line with the precept of "Bridging Divides for Water."
2015	The World Water Council became a founding partner of the Financial Times Water Summit.

2019	IWA Conference on Algal Technologies and Stabilization Ponds for Wastewater Treatment and Resource Recovery
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## TOPIC DISCUSSION

More than a billion of people, at the moment, lack access to freshwater. This can lead to very serious waterborne diseases, including Cholera, Guinea worm disease, Typhoid, and Dysentery which have led to more than 3.4 million deaths just this past year. However, this issue does not only result in health problems, but it can also bring about global conflict as well as food shortages. When two countries share the same water resources, things can become controversial when the resources become depleting, and that could threaten the UN security. Furthermore, the increasing lack of freshwater makes harvesting and producing food harder, and already, agriculture is in need of double the size of the already existing freshwater to fulfill the demands. If the situation is not changed, by 2025, half of the population will be living in areas with contaminated water, or areas with a huge lack of it. Thus, it's easy to understand that if the appropriate countermeasures are not taken, the results can be catastrophic both in diplomatic relations and in nations' economies. Most importantly, millions of lives are put at risk.

Already, countries are making process while taking advantage of the technological means provided. Israel, recycles 85% of its wastewater while earns more than 2 billion dollars a year by exporting it to other countries. Many other countries such as the United Kingdom and Saudi Arabia desalinate water and put the wastewater treatment in use while helping both themselves and other countries. However, a few countries' efforts are not enough to end a global issue, which concerns more than a billion of the population. Thus, through advances in technology, water could be transmitted in factories and machines that would recycle and purify wastewater and separate the toxic substances and chemicals out of wastewater. All in all, technology is the best way to achieve the limitation of these problems, but it must be set in use as soon as possible.

## **Causes**

First and foremost, overpopulation has brought about the excessive demand of water, so all the water in the world is not enough to fulfil the thirst and needs of 7,53 billion people. Another very important factor is the raising pollution which has infected lakes, rivers and seas and has brought toxic chemicals in water that could be used as drinkable water, or even in agriculture and everyday needs of the population. At the moment, we could have so many more water resources, but we have chosen to pollute them through littering the coasts, and the air with toxic gases. Furthermore, the excessive heat, due to global warming and climate change, has caused water to evaporate in a high level. Last but not least, deforestation has a major role in the lack of (clean) water resources while deforestation in its large scale lowers the capacity of the soil and brings the difficulty of it to retain the water, which affects the water table. All in all, what has brought about this problem are both acts of the man, which may have serious consequences in the environmental state but also the excessive demands of billions of humans.

## **Possible Solutions**

In order to solve this issue, some already-existing solutions must be put into service, while some countries have to take advantage of the means they are provided.

The wastewater treatment is a way to not only provide freshwater for the needs of nations, but also, already existing water will be recycled and used more than once. This method can be applied through water filtration systems which will clear out the dirt, chemicals and dangerous substances from the polluted water.

Furthermore, desalination is also a very productive and smart idea. 71% of the Earth is made of water, of which 96% is salt water. Therefore, producing clear and fresh water through this source would provide enough water for all needs, including agriculture and potable water for consumption. 50% of today's drinkable water comes from the sea. However, you must think

of the drawbacks as well and think twice before coming to conclusions. With brine, we mean the leftovers of the desalination process, which are mostly a super saturation of salt. Brine is usually thrown back into the ocean, which causes environmental problems. Ocean species and plants aren't adjusted to the immediate change of salinity, thus there is a dramatic decrease of oxygen in the seas, causing those species to suffocate. Thus, it consumes a large amount of energy.

Of course, it is not easy for those methods to be applied without financial assistance. NGOs, already existing or even the creation of them, could benefit the process while their purpose would be to financially support the achievement of our target. Unfortunately, it's not only expensive but also difficult to do, too much to even be worth it.

It's of utmost importance to put the technology provided to us in use, so as to help not only ourselves, but also other countries, less developed or not, since the situation is nearly out of control

## **MAJOR COUNTRIES & ORGANIZATIONS INVOLVED**

### **Saudi Arabia**

The Saudi government has benefited greatly from water scarcity over the past few decades, since it is now the largest producer of desalinated water in the world. Since 1928, when the desalination industry started, there has been a significant improvement in production. At the moment, there are more than 31 desalination plants in Saudi Arabia, with a budget of 24.3 million dollars, while more desalination plants are under construction, and will be set to use by 2020.

### **Israel**

With 90% of its water being reused, Israel is, at the moment, the single country which reuses most of its water. Through this, Israel has not only managed to survive through hardship and water scarcity, but it has also managed to thrive, and use the recycled water to develop business and economic opportunities. Israel is also known to use the recycled water in agricultural irrigation.

### **The Republic of Korea**

South Korea is a country known for suffering from drought and difficult weather conditions. However, they have learned to take advantage of the rainy days by harvesting rainwater, not for potable applications, but for other everyday needs. Although they are facing serious water challenges, they have managed to succeed economically through fighting drought and water shortage, thus setting an example for other struggling countries. A monsoon in South Korea, just in 3 months can collect up to a year's worth of water. In some areas, this water goes through treatment to become potable. Countries with high rainfall should seek to replicate South Korea's example.



## **South Africa**

In 2018, Cape Town, a South African city, nearly ran out of water. This can be seen as an example for how citizens of a member-state can deal with impending water scarcity. The city was just 90 days away from turning off the taps, and the situation had gotten out of hand. Thankfully, the citizens, understanding the importance of the situation became water-wise and dealt with it in the best way possible. The use of recycled water, also known as greywater, came to reality. Very strict restrictions were applied, such as the banning of pools, washing cars and fountains, and the citizens were encouraged to take 2 minute showers and use as little water as possible every day.

## **SUKRITI**

SUKRITI is a Non- Governmental Organization fighting against water pollution globally. Focusing on all ages and groups, they are trying to limit water pollution and rejuvenate water bodies. This, they do through the cleaning of sewage streams and water bodies, in an eco-friendly manner, treating wastewater to a reusable effluent level.

## **IDA (International Desalination Association)**

The IDA is an NGO serving members, including corporations, individuals and other NGOs, in over 60 countries for more than 45 years. It is committed to the development and promotion of the appropriate use of desalination, the reusing of water, water purification, control of water pollution, water treatment and other water technology. There are currently over 4,000 members, and the IDA is now officially affiliated with the UN.



## UN INVOLVEMENT

### Resolution 64/292

On the 29<sup>th</sup> of July, 2010, the UN General Assembly recognized the human right to sanitation and to clear water through the resolution 64/292. This resolution supported the use of safe, clean, physically accessible and sufficient water for all human beings. <sup>6</sup>

### General Comment No. 15

In November 2002, the Committee on Economic, Social and Cultural Rights adopted General Comment No. 15. Article I.1 states that "The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights".<sup>7</sup>

### UN water

UN water's purpose is to coordinate the efforts of UN committees and organizations working on water and sanitation issues. They support UN Member States to sustainably manage water and sanitation by informing policies, monitoring and reporting, but also inspiring and supporting.

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<sup>6</sup> [https://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/64/292](https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/64/292)

<sup>7</sup> <https://www.refworld.org/pdfid/4538838d11.pdf>

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