



Committee: World Health

Question of: The World Water Crisis

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Introduction:

Water is the foundation of life, and the Number One resource everything depends on. But there is no other natural resource that became a pressing issue, both societal and geopolitical, as fast as water. The World Water Crisis is one of the largest humanitarian crises, which affects every continent and has also fired up political incidents, such as the dispute over water consumption between India and Pakistan. This conflict arose because of insufficient rainfall in some regions, which led to only half-full water reservoirs. Between India and Pakistan, states were arguing to open dams to provide more water for other states, leading to military provocation and civil disobedience.

The Water Crisis can be divided into three different categories: Water scarcity and insecurity, Water-related disasters such as floods and landslides, and Water sanitation and health. As explained in the example of the Indian-Pakistan dispute above, Water insecurity can lead to political arguments, and is prognosed to end in so called “Water wars” at some point if not tackled.

The Issue:

This is not only a problem between India and Pakistan, as 60% of the water in the world comes from river basins that cross international borders. For these cases, transboundary water agreements need to be put in place, with the aim to regulate and deal with increasingly unstable environmental and climatic conditions as well as the social and demographic changes of the global population.

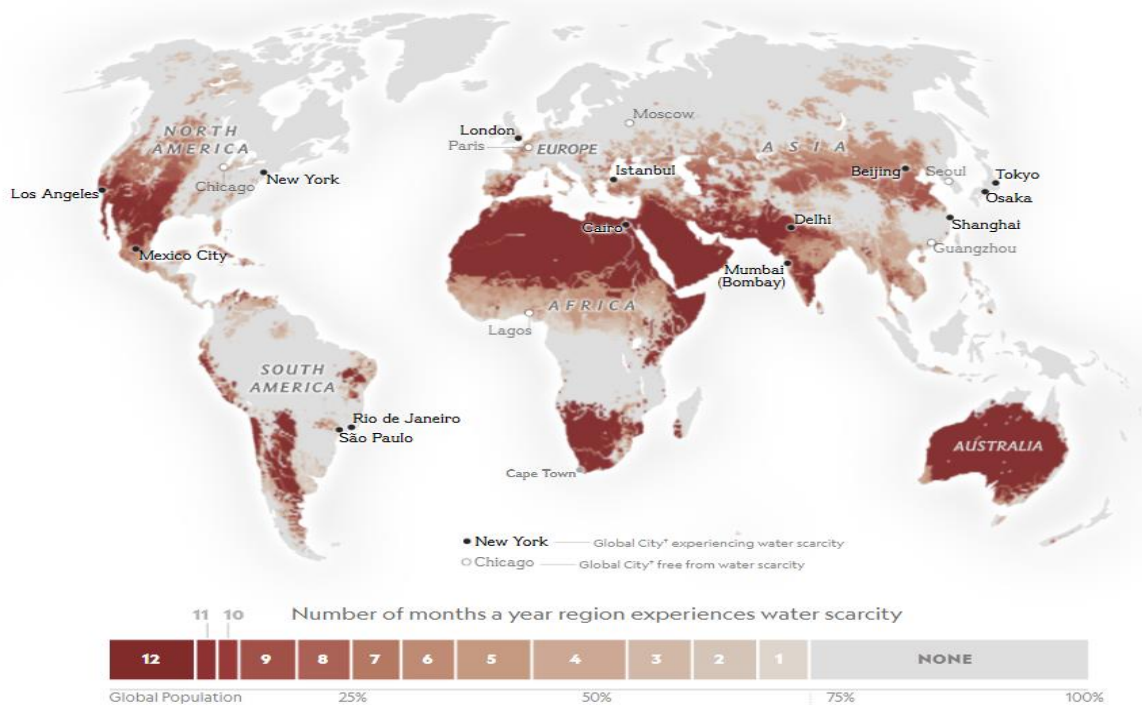
As climate change alters weather patterns, International disputes will be harder to settle, and meteorologists predict water shortages as a common problem in the future. Effective management of water, using technical interventions of natural flow, such as dams, is needed to save water and to let water flow where needed. Plus, issues such as water wastage in current systems, poor accountability and corruption in the water sector need to be tackled.

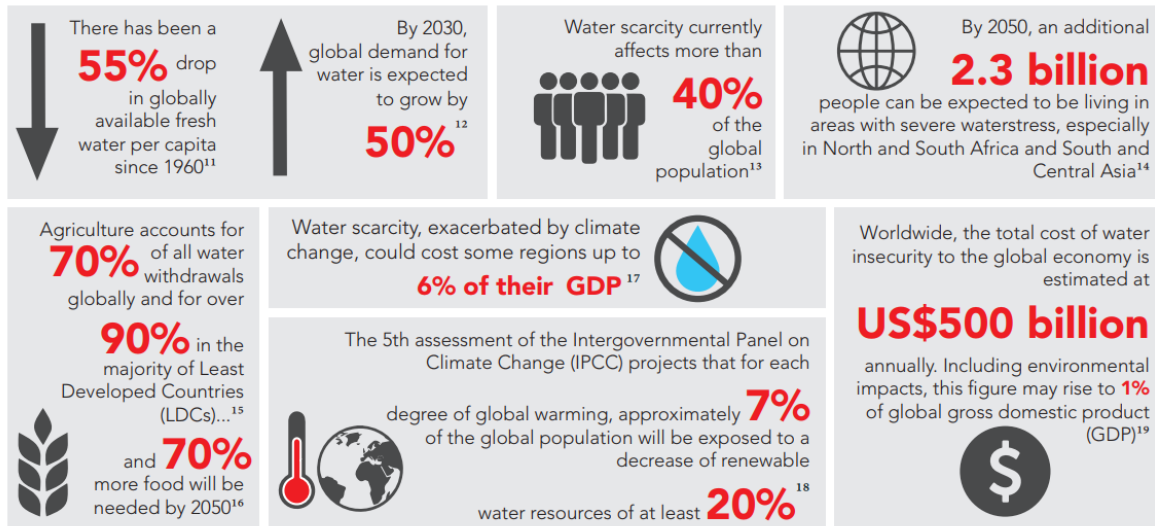
Water scarcity and insecurity

Often times, the proverb that water is plentiful and covers 70% of the planet, is cited to downplay the actual water scarcity. This assumption is simply not true: in fact, only 2.5% of all water is freshwater. In 2050, this resource needs to support a projected population of 9.7 billion, and over 40% of the world's population will live in water-stressed river basins. But not only is the population growing, meaning that more people depend on water, but also is the excessive use also increasing. The global population tripled in the 20th century, but the use of water increased six-fold. Until 2050, it is expected that water demands increase by 400% from manufacturing and 130% from households.

São Paulo, Brazil, a megacity of 20 million, had to shut down its water supply for 12 hours a day, forcing many industries and businesses to shut down. Barcelona, Spain, had to import water through tanker ships full of freshwater from France in 2008. 14 of 20 of the world's megacities are experiencing water scarcity of drought. Nearly half of the people that are experiencing severe water shortages for at least one month of the year are living in India and China.

Water-intensive crops are another issue that are using water which might have been used better in another way. Israel, a state with a lack of water has eliminated water-thirsty crops such as cotton and made improvements in water efficiency to free up more water for the population. California, which also has issues with droughts and water restrictions, also has plans to shift its agricultural production of water-thirsty crops to less water-using ones. Another plan is to increase the amount of reused wastewater, which is currently at 15%.



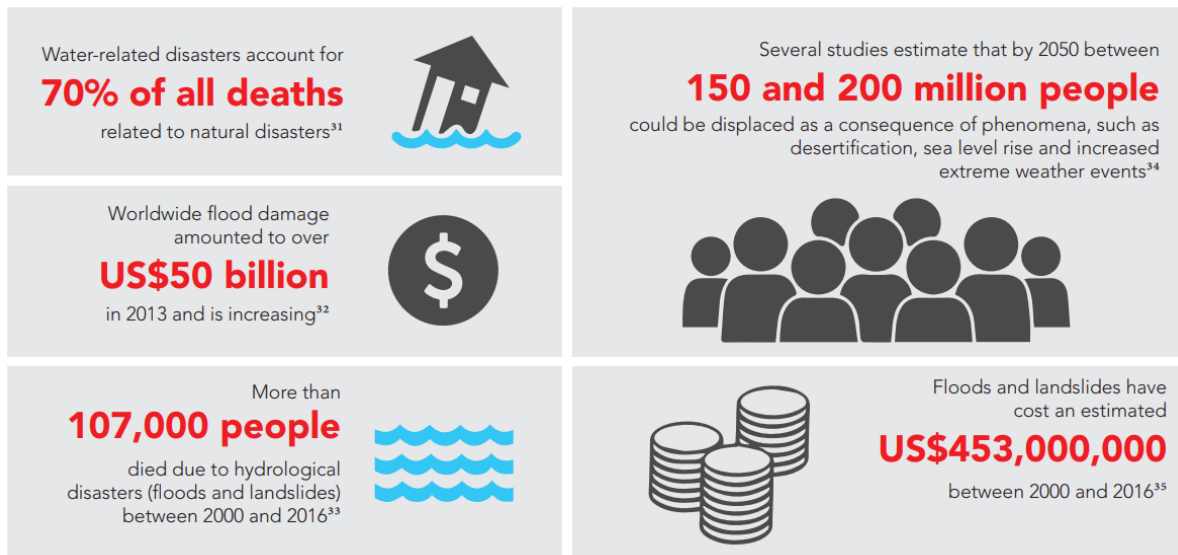


Political instability

As the predictions for water demand is increasing steadily, international competition to this limited resource is increasing as well. As it is the case in the dispute between India and Pakistan, the water source that is the topic of the dispute is an internationally shared river basin. In total, 60% of all surface fresh water comes from internationally shared river basins, and for that to work out between states cooperation is crucial. Cooperation and coordination of states is crucial, and the governments need to work hand in hand to ensure water availability for human, economic and environmental needs. For this, several hundred water agreements have been signed in the past, but they often leave out specific descriptions of how the agreement should work. The most famous and fundamental water agreement is the Indus Water Treaty.

Water related disasters

Hydrologic hazards, which include floods and other natural disasters related to water, are leading to significant numbers of deaths, injuries, and displacements. The statistics show a dangerous trend: up to 90% of all disasters worldwide are water-related, and floods have been the most frequent global natural disaster over the last two decades. Half of the recorded events in 2016 were related to flooding. While increasing from 3.7 billion to 6.9 billion from 1970 to 2010, the annual average population exposed to flood increased by 112% - from 33.3 to 70.4 million per year. This number is expected to increase until 2050 to 2 billion humans in danger of flood disasters, deforestation, loss of wetlands and rising sea levels.



Water sanitation and health

Almost all parts of the world have to deal with one problem: water, if even available, often is contaminated with any substance that either provides a high risk on health, or is poisonous for the environment. Although progress has been made in supplying drinking water to more and more people year by year, 663 million people still lack clean water. Many efforts have been made to improve the quality of the water but often, the water is unsafe, reliable, affordable or accessible with equity. 45 million people in Bangladesh only have access to water that contains high levels of arsenic, much greater than what the WHO standards allow.

Equity in access to sanitation and hygiene facilities is of particular concern. In many rural areas seven out of ten people live without access to these facilities, and a lack of these often disproportionately affects women and girls, which in consequence can suffer of health impacts. Diarrheal diseases which have long been associated with poor water quality and sanitation account for 1 in 9 child deaths worldwide. Additionally, diarrheal diseases also increase the need of water for the patient, which can often not be satisfied. Other illnesses such as schistosomiasis, trachoma and intestinal worms, which affect more than 1.5 billion people every year, are caused by poor water, sanitation and hygiene.

Not only households are affected, in low- and middle-income countries (LMICs), even schools, workplaces and health facilities lack water, sanitation and hygiene (WASH). In a 2015 survey of LMICs, 38% of health facilities did not have an improved water source, 35% did not have soap and water for handwashing and 19% did not have improved sanitation. Every two minutes, a child dies from a water-related disease, and one million people are killed by water, sanitation, and hygiene-related disease each year.



Key Events

| Event/Date | Explanation |
|------------|---|
| 1960 | Indus Water Treaty put in action, regulating the water situation between India and Pakistan. The treaty is regarded as the best of its kind until today. |
| 1981 | WaterAid, one of the biggest organisations to fight for better water supply, sanitation and hygiene is officially established on July 21 |
| 1983 | An extreme drought hits Africa, which effects population in large regions until today |
| 1993 | UN GA designates March 22 as the World Water Day to remind everyone of the situation and crises around the world, and to focus on clear water and improved sanitation |
| 2000 | At the Millennium Summit, the UN addressed the problem of the lack of water and sanitation and called upon all members states to ratify the Millennium Development Goals (MDGs), which aim to halve the number of people living without clean water by 2015 |
| 2002 | UN declares clean water a human right |
| 2010 | Access to decent toilets is declared a human right |
| 2030 | 40% gap between water demand and water available prognosed |

Previous Attempts to Solve the Issue

Water processing

As a coastal city, Cape Town in South Africa, hopes to solve its problem with water shortages by getting a new source of water: the ocean. The government built its first desalination plants, which extract the sea salt from the salt water and process it to fresh water. But this process is very energy intensive and expensive, so this is not a viable choice for LEDCs or some LMICs. Another way of gaining new freshwater would be to treat wastewater. This of course is only possible in countries and



areas with a sufficient sewerage. Cape Town reuses 5% of its wastewater, compared to Israel which reuses 85%.

Eliminating water-thirsty crops

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Improving transboundary cooperation

As far as transboundary conflicts are concerned, regional economic development and cultural preservation can all be strengthened by states cooperating of water. Instead of a trend towards war, water management can be viewed as a trend towards cooperation and peace. Many states are launching initiatives to avoid crises.

Possible Solutions

- Processing saltwater from oceans to freshwater using saltwater processing plants
- Processing wastewater to freshwater, which is common in Europe, but less common in other parts of the world
- Eliminating water-thirsty crops and finding better ways of plant irrigation

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