Safe Water: It's a Human Right, 2015.

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Already 2–3 billion people lack any access to safe drinking water and 884 million more are without sufficient access to a suitable water source, and yet, the situation could worsen still, (link**)**. Indeed, without significant changes, two-thirds of the world's population is expected to be living under "severe water stress conditions" by 2025, (link). Severe water stress is when there is less than 1,000 cubic meters of water available per person in a given year. This is an alarming prospect for the world's population.

A recently published article quotes the vice minister at the Ministry of Water Recourses in China who stated that about two-thirds of Chinese cities are "water needy" and nearly 300 million rural people lack access to safe drinking water, (link). In addition, the National Intelligence Council (NIC) reported in "**Global Trends 2030: Alternative Worlds**" that with regard to China, "climate change, urbanization trends and middle-class lifestyles will create huge water demand and crop shortages by 2030."

These issues can create big economic, health, and social problems. According to the Ministry of Supervision, about 60,000 premature deaths already are happening due to water pollution accidents annually. Therefore, experts say that the Chinese government should make more of an effort for the rational use of water and to control its pollution.

Water scarcity continues to pose the greatest challenge in the developing world. Although large infrastructure-intensive water systems are prevalent in industrialized countries, for many developing nations such systems are too expensive to install and operate. For example, the United States spends about US$29 billion every year (link) to maintain its water and wastewater plants and it is obvious that the developing world does not have the kind of money it takes to provide safe water for its population.

Climate change and impacts on safe water

In many countries climate change is another factor impacting safe water supplies. Water is a key medium through which climate change affects human populations and ecosystems, especially because of expected changes in water quality and quantity, notes the United Nations Expert on Human Rights, Water and Sanitation, (link). Indeed, in many regions of the world, changes to the supply and quality of freshwater resources resulting from climate change may endanger sustainable development, poverty reduction, and child mortality goals, the Intergovernmental Panel on Climate Change (IPCC) has warned, (link).

The IPCC stated that scientists predict nearly one-third of the planet's land surface will suffer due to extreme drought by the end of this century and 20% of the world population could be affected by severe

flooding by 2080. It is therefore essential to consider the direct effects of climate change on water resources as well as its indirect influences on other external drivers of change. Climate change amplifies pressure on governments to deal with the existing threats to the already fragile sustainability of freshwater resources — population growth, socioeconomic and technological changes, and the resulting rising demand for water.

There is considerable variation among the projections and scenarios concerning the impact of climate change on water resources. However, it is clear that it will increase water stress in already dry areas and will undermine water quality in areas flooded by rain or seawater. Also, rising water temperatures, both higher and lower groundwater levels, floods and droughts can all increase the threats from pathogens, chemical substances and radiological hazards in drinking water.

For example, flooding can cause overflows from sewage treatment plants into freshwater sources, which could contaminate certain food crops with pathogen-containing feces, (link). In addition, many scientists predict that sea-level rise can lead to saltwater interruption into groundwater drinking supplies, especially in low-lying, gently sloping coastal areas which will creates scarcity of safe water. On the other hand, droughts affecting agriculture can impact food production and might cause severe malnutrition, (link).

The right to clean water

Access to clean water was declared a human right on 28 July 2010 by the UN General Assembly (A/RES/64/292), receiving 122 votes in favour and zero votes against, (link). The right to water is also implicit in Article 11 of the International Covenant on Economic, Social and Cultural Rights as interpreted by the Committee on Economic, Social and Cultural Rights, which comments that, (link) “the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses”.

However, safe water is a vital human rights concern in urban slums worldwide. Rapidly growing urbanization and overcrowding increase already heavy demands for fresh water. The Asia-Pacific region is home to 60 percent of the world’s population but it possesses only 36 percent of Earth’s water resources. Water availability, allocation, and quality remain major issues in the Asian region. Access to safe drinking water is limited and water shortages can pose a real threat to the daily life and the health of communities.

For many of those who have access to water, it is either too expensive or not suitable for consumption and is often exposed to dangerous levels of biological contaminants and chemical pollutants. This is due in part to the inadequate management of urban, industrial, and agricultural wastewater.

Simply put, for many people water is not yet a human right within comprehension. In coming years, water challenges will increase significantly as because of population growth and rising incomes will lead to greater water consumption, as well as more waste. According to the UN World Water Development Report, (link), by 2050 at least one in four people are likely to live in a country affected by chronic or recurring shortages of fresh water.

Access to safe water should therefore no longer be seen as a service, but, since it is a human right, states and organizations must work towards using economic resources and technology to provide safe, clean,

accessible and affordable water, particularly in developing countries. Thus, it is urgent to think about the national and global water consumption policy for the decision-makers to tackle the future crisis. In addition, policy-driven researchers may introduce low cost solutions through public private partnerships.