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**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development**

Written statement* submitted by Human Rights Advocates Inc., a non-governmental organization in special consultative status

The Secretary-General has received the following written statement which is circulated in accordance with Economic and Social Council resolution 1996/31.

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* Issued as received, in the language(s) of submission only.



Combating the Water Crisis to Ensure a Sustainable Environment

I. Introduction

If left unchecked, water scarcity and pollution will be detrimental to the human race in the next 100 years. Not only should countries enact water management programs and initiatives in their constitutions, they also need to realize that failure to address the situation would be catastrophic. The Human Rights Council (HRC) must recognize that water should also be discussed in the context of human rights and the environment, even though there is already a mandate included in the right to water. Water scarcity and pollution is a problem faced by developed and developing countries that are affected by numerous waterborne diseases caused by contaminated water.

As such, it is important for the HRC to recognize and engage world leaders towards addressing water scarcity and pollution¹ because water is an integral part of achieving a healthy sustainable environment. Water remains the core of any sustainable development initiative and is not only critical for food production, but also for human survival, socio-economic development, energy, and healthy ecosystems. At the same time, water is the heart of any link between the environment and the society.

II. Water Deterioration, Infrastructure and Destruction

Many countries under the Millennium Development Goals (MDGs) allocated systems and structures that typically failed in addressing water scarcity challenges. Even though over 70,000 hand pumps are under construction in many African countries, a study by the World Health Organization discovered that over 40 percent across 22 countries were not functioning.² The situation represented a loss of approximately US \$1.5 and \$1.8 billion in business investments.³ Developing countries approximate US \$50 million daily losses attributed to water scarcity largely due to a population of 250 million people.⁴

III. Water and Agriculture

Agriculture takes in large volumes of water compared to other water consumers leading to inefficiencies. Water scarcity and pollution has a direct effect on agricultural production. Scarcity of water and contamination of water points to low food harvests.⁵ The International Water Management Institute argues that agriculture contributes to over 100 percent of food production. With over 70 percent of water going to agricultural use, industrial and domestic uses are in high competition for the limited water resources remaining.⁶ Approximately one third of global food is either wasted or lost, translating into large volumes of wasted water.⁷

IV. Current Environmental Crisis

Lack of water aggravates the environment with constant soil salinization, poor management of water resources, a fragile ecosystem, and limited agricultural resources. As such,

¹ Vörösmarty, C. J., Hoekstra, A. Y., Bunn, S. E., Conway, D., & Gupta, J. Fresh water goes global. *Science*, 478-479 (2015).

² Id. at 479.

³ Boulos, P. F. Smart water network modeling for sustainable and resilient infrastructure. *Water Resources Management*, 3177-3188 (2017).

⁴ Supra note 1.

⁵ Id.

⁶ Kleijn, D., & van Zuijlen, G. J., The conservation effects of meadow bird agreements on farmland in Zeeland, The Netherlands, in the period 1989–1995. *Biological Conservation*, 445 (2004).

⁷ Han, D., Currell, M. J., & Cao, G. Deep challenges for China's war on water pollution. *Environmental Pollution*, 1224. (2016).

sustainable water management has a direct effect on the effective use of water and land resource planning, productivity and conservation.⁸ In addition, drought is often associated with unpredictable food production, diminished water resources, severity in water scarcity, and minimized capability of the ecosystem. Further, the quality of water is not appropriate for agricultural use due to pollutions.⁹ Following are examples of current environmental water crisis.

A. Water Pollution

1. The Flint Water Crisis

The Flint water crisis in Michigan is a result of poor decision making and environmental injustice. The tragedy started in 2014 when the city's administration changed the region's drinking water supply to the Flint River from the Detroit system. The move negatively impacted environmental conservation efforts and caused a severe water crisis. The water, which is discolored, foul-smelling and bad-tasting is used by many households and has gradually started causing skin complications, hair loss, and stomach problems.¹⁰

2. Syria's Water Crisis

Water control and scarcity has been the center of the long-standing conflict in the Syrian Arab Republic. From damaged environmental sources to diseases and a decrease in food production the country has grappled with a number of issues pertaining to water scarcity and pollution.¹¹

Rebel groups have emerged to take control of water sources thus weaponizing water in the country. When rebels overran government forces in 2012 and captured the Tishrin hydroelectric dam on the Euphrates River, large amounts of water went to waste with many locals missing out on the precious commodity.¹² The Syrian government, in turn, contaminated the water and later bombed the source further making the water crisis in the area worse.¹³

B. Unsustainable Farming Methods

1. China

Agriculture is the core economy of China, especially in the North. However, the country's water sources are located in the South.¹⁴ Nevertheless, by the year 2014, the Northern parts of the country held approximately two-thirds of the country's agriculture which was only supported by a small percentage of water. With over 20 percent of the global population, China only has 7 percent of usable water. China has failed in their attempts to introduce modern farming methods such as reinforcing the artificial economy and encouraging water-intensive agricultural and industrial use thus promoting insatiable demand for the commodity.¹⁵

2. California's Drought

California's drought is a recurring climatic condition. According to climatic statistics, the period between 2011 and 2015 was the worst in the region's history since the drought was

⁸ Pellicer-Martínez, F., & Martínez-Paz, J. M., The Water Footprint as an indicator of environmental sustainability in water use at the river basin level. *Science of the Total Environment*, 561-574 (2016).

⁹ Han, D., supra note 7 at 1222.

¹⁰ Butler, L. J., Scammell, M.K. & Benson, E.B. The Flint, Michigan, water crisis: a case study in regulatory failure and environmental injustice. *Environmental Justice*, 95 (2016).

¹¹ Wichelns, D., Volumetric water footprints, applied in a global context, do not provide insight regarding water scarcity or water quality degradation. *Ecological indicators*, 420-426 (2017).

¹² Hoekstra, A. Y. A critique on the water-scarcity weighted water footprint in LCA. *Ecological indicators*, 66, 564-573 (2016).

¹³ Wichelns, D. supra note 11 at 423.

¹⁴ Galli, A., Wiedmann, T., Ercin, E., Knoblauch, D., Ewing, B., & Giljum, Integrating ecological, carbon and water footprint into a "footprint family" of indicators: definition and role in tracking human pressure on the planet. *Ecological indicators*, 101 (2012).

¹⁵ Id.

first recorded in 1895. The highest climatic temperatures were recorded in 2014 and 2015 in the northern regions where the water supply originates, which contributed more to the severe drought and water deficit.¹⁶ The Federal government allocated \$3 billion towards addressing the situation that gradually degenerated into a severe water and drought crisis.¹⁷ Although businesses and agriculture are badly affected by California's drought, suburban areas suffer the most.

C. Successful Water Management Measures

1. Netherlands

The Netherlands has in place strategic measures of high technology that has enabled it to conserve and protect its waters and water resources.¹⁸ About 430 municipalities have the responsibility of overseeing the water boards and sewer.¹⁹ Numerous ministries take responsibility for policy-making concerning water usage, agricultural water, farming methods, and wastewater bodies.²⁰ The Netherlands has been successful in its water management due to the policies and frameworks of management put in place within the constitution and by individual administrations.²¹

2. Norway

Norway citizens have access to clean drinking water that is free from contamination. The country's national and local administration has put in place measures and practices that have reduced the levels of heavy metals, pesticides, pollutants and unwanted substances low.²²

V. Recommendations

Human Rights Advocates (HRA) urges the Council to:

1. Request the Special Rapporteur to continue to address water issues as they relate to the environment, including the following:
 - a. Improve water infrastructures, including pumps, diversion, treating, building, and delivering safe drinking water to the population;
 - b. Improve modern farming methods for agricultural practices such as the use of surface water intakes and modern irrigation methods.
 - c. Involve civil society in the discussion regarding the impact of water and the environment including water conservation, drought mitigation, climate change and improvement on water catchment, rainwater harvesting, and water equity.
2. Urge States Parties to pay special attention to contamination of water as it relates to the environment.

¹⁶ Mann, M. E., & Gleick, P. H., Climate change and California drought in the 21st century. *Proceedings of the National Academy of Sciences*, 3858-3859 (2015).

¹⁷ Cheng, L., Hoerling, M., AghaKouchak, A., Livneh, B., Quan, X. W., & Eischeid, J., How has human-induced climate change affected California drought risk?. *Journal of Climate*, 114 (2016).

¹⁸ Mekonnen, M. M., & Hoekstra, A. Y., A global assessment of the water footprint of farm animal products. *Ecosystems*, 401-415 (2012).

¹⁹ Supra note 6, at 446.

²⁰ Supra note 14, at 109.

²¹ Supra note 6, at 447.

²² Koop, S. H., & van Leeuwen, C. J., The challenges of water, waste and climate change in cities. *Environment, development and sustainability*, 385-418 (2017).