BIMUN

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OFFICIAL HANDBOOK

UNDP

Addressing the Impact of the Growing Use of Artificial Intelligence on Water Demand and Availability

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COMMITEE

overview

The United Nations Development Programme (UNDP) is the UN's global development network, which was founded on November 22, 1965, and its headquarters are in New York City. The UNDP has operations in about 170 countries and territories, and its purpose is to eliminate poverty, reduce inequalities, and make them stronger to withstand crises and shocks. As a key member of the UN development system, the UNDP assists countries in developing sustainable development strategies, enhancing institutional capacity, and achieving the SDGs, especially providing safe water and sanitation (SDG 6), industry, innovation, and infrastructure (SDG 9), and actions in connection with climate (SDG 13).

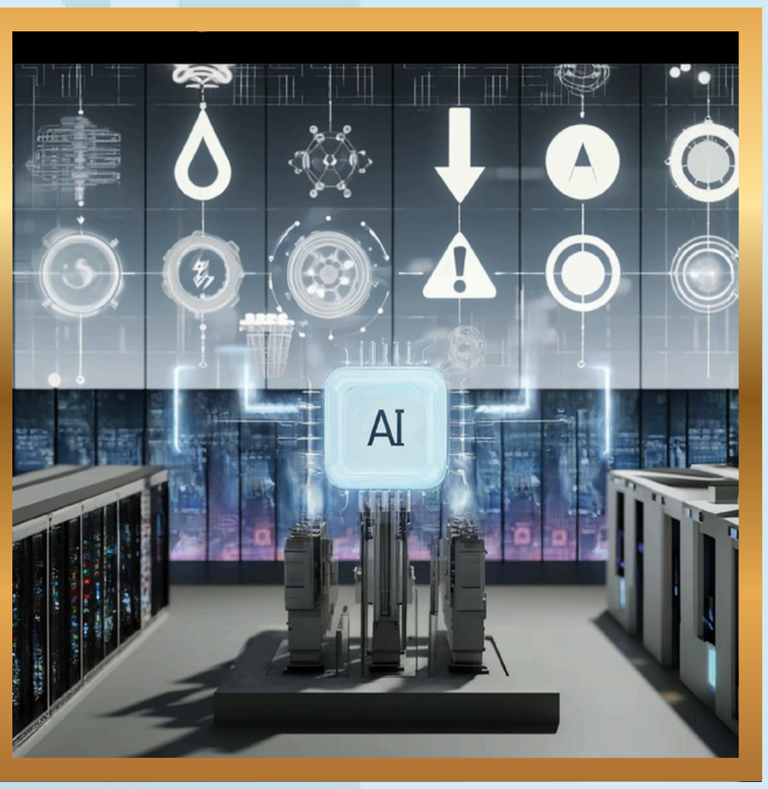
The UNDP, however, also operates within the technological aspects associated with developments such as the rapid change in artificial intelligence (AI). The UNDP focuses on the ability of AI to speed up the process of progress, but it also analyzes the impact of hidden resources. For example, the organization takes into consideration such factors as the huge amount of water that should be used for cooling data centers while examining the idea that AI pushes technological progress forward. The UNDP guarantees that the fast changes in technology do not violate the water supply rights of people, do not worsen the consequences of environmental injustice, and do not increase the global digital gap.

HISTORICAL *background*

The intersection between digital infrastructure and global resource use has changed significantly alongside the growth of cloud computing and machine learning. Traditionally, the environmental evaluations of the technology industry have been almost entirely limited to carbon dioxide emissions and power consumption. Data centers have earned condemnation from the industry for their dependence on fossil fuels and motivated technology companies to look into the use of renewable energy sources.



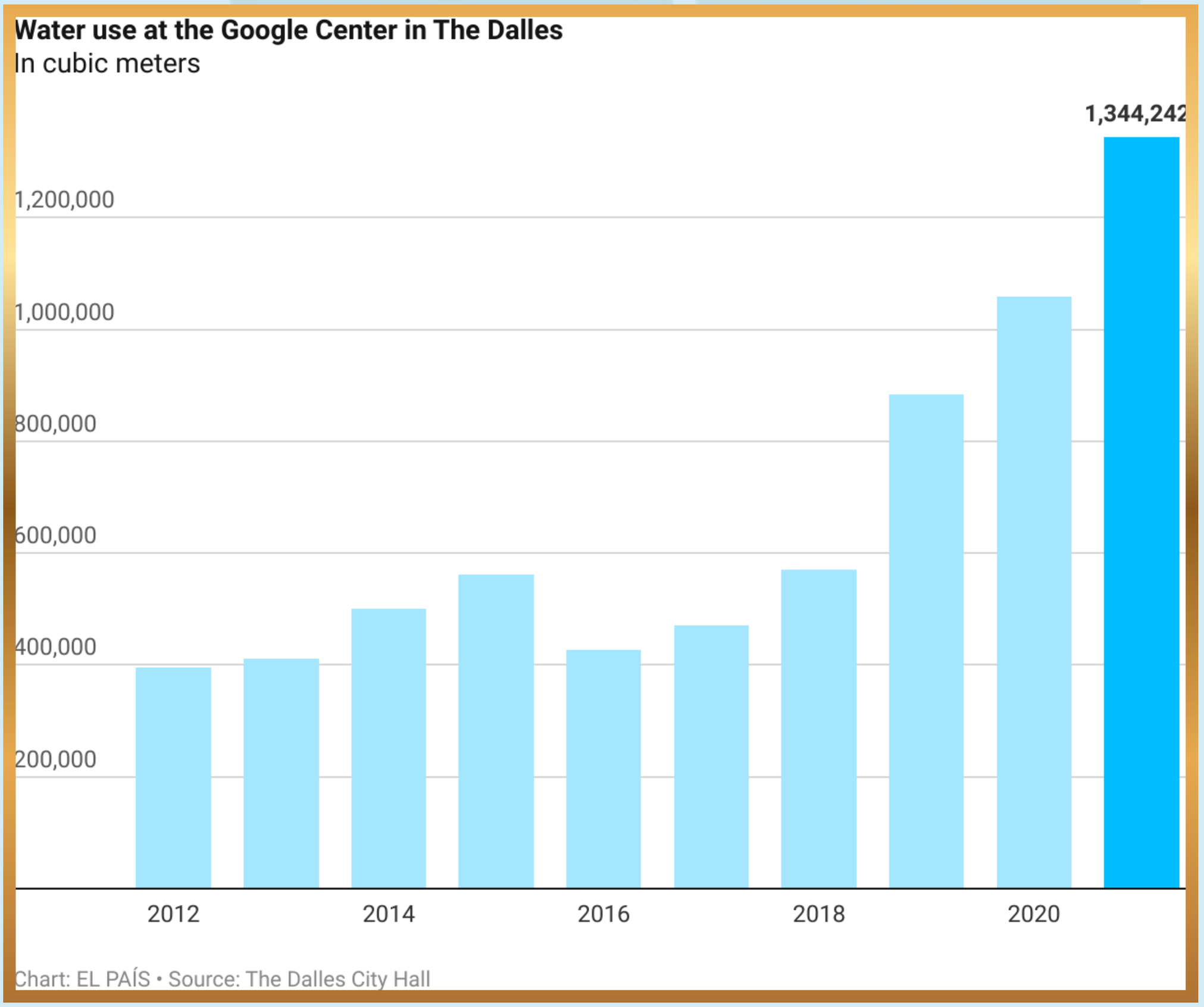




However, due to the rapid development of generative AI models, the resource model has changed. These models now use resources at a much larger scale because their parameter counts and user bases have grown. As a result, the physical infrastructure needed to develop and operate them has expanded internationally.

More technology centers are built in locations that have cheap power and tax breaks, ignoring local geological realities. There are historical examples, such as the fight against water intensive data centers taking place in drought like conditions in some parts of America and Europe, that show that digital infrastructure creates a serious social burden on water in certain areas..

By the mid-2020s, major institutional discoveries, including findings from the United Nations University, have highlighted the serious bias regarding the measurement of the sustainability of AI through carbon metrics. The studies have indicated that all computations leave a huge compounded water footprint created by evaporative cooling in server farms, linking digital policies with water management and sustainable development.



CURRENT *situation*

The emergence of artificial intelligence worldwide has resulted in the unprecedented demand for natural resources. UN scientific evaluations indicate that the global data centers supporting AI infrastructures are going to consume enormous amounts of water, amounting to trillions of liters, exceeding the annual water consumption of more than one billion people. In this regard, the resource-intensive nature of training large language models is well known, while the majority of the energy and water consumption comes from user prompting and inference.

This situation leads to serious bottlenecks in the local economy. For instance, hyperscale data centers can use a considerable quantity of water daily for the process of evaporative cooling tens of millions of gallons of water each day for evaporative cooling systems and they may use water from municipal water systems in places that are already water-stressed and face depletion of groundwater and long droughts.

Adding another layer to this issue is a marked geopolitical injustice because the AI systems are mostly located in a very small group of rich countries, while developing nations are usually the ones to suffer from the environmental side effects such as problems with municipal water sources and waste disposal. Therefore, in connection with all of this, the UNDP has to pursue the idea of relating global technological progress to boundaries set by Earth and the water resources belonging to people.

KEY AREAS *of debate*

- What role do international regulations have in preventing policies that solely address minimizing carbon emissions, causing the consumption of water due to ineffective cooling approaches?

- Which mandatory international regulations should be responsible for determining the location of water-dependent artificial intelligence data centers in areas that are exposed to drought and water shortage?

- To what extent should governments and institutions engage in imposing closed-circuit cooling systems, dry cooling technologies, or water recycling obligations on technological entities?

- What actions should developing states undertake in order to gain access to the benefits of artificial intelligence without turning into the countries that suffer from the consequences of international corporations' activities?

- What ways do the UNDP and its states have to make companies present clear data on the volume of water they use at the given moment?

DIFFERENT *perspectives*

- Developing nations claim that uncontrolled technology advancements jeopardize their basic right to utilize water, agricultural resources, and safeguard their local ecosystem. They urge higher international assessment standards of environmental impact, regulation of the contribution of corporations toward water offsetting, and technological help that would protect city water networks from excessive excesses on the part of industries.

- The home of the headquarters of many global corporations dealing with artificial intelligence, they focus on innovation-promoting practices, voluntary social accountability practiced by corporations, and effectiveness due to market forces. They call attention to the fact that excessive use of regulations that can hamper technological competitiveness is unnecessary in this case, and to the preference for the improvement of engineering solutions in the private sector to minimize the consumption of cooling water.

- Development specialists are convinced that modern technology should be compatible with the Sustainable Development Goals and cannot deprive local communities of the right to clean water for the purposes of global data processing.

DELEGATIONS *list*

- People’s Republic of China
- United States of America
- United Arab Emirates
- Kingdom of Saudi Arabia
- Republic of India
- Federative Republic of Brazil
- United Mexican States
- Oriental Republic of Uruguay
- Republic of South Africa
- Federal Republic of Germany
- Republic of Kenya
- Republic of Ireland
- Republic of Chile
- Islamic Republic of Iran
- Microsoft Corporation
- Alphabet Inc.
- Meta Platforms Inc.
- NVIDIA Corporation
- Oracle Corporation
- Amazon.com, Inc.

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