

## Singapore's Senior Minister of State for Sustainability and the Environment Dr Amy Khor reviews the country's Energy and Water Efficiency goals

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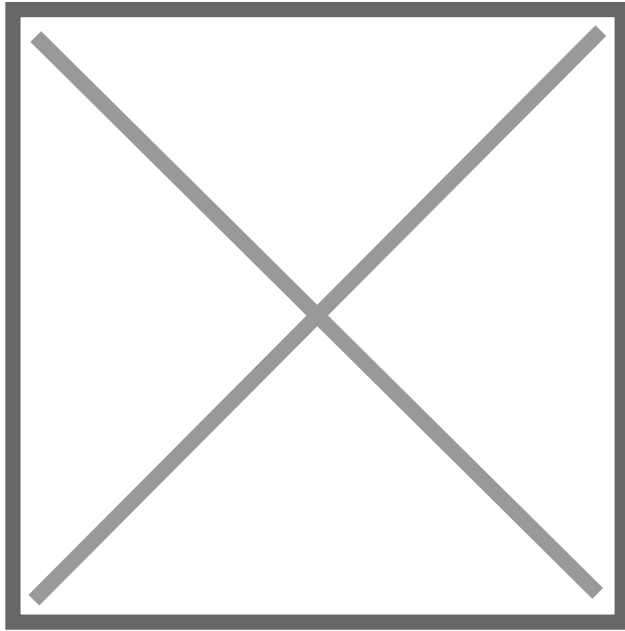
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To honour the "Global Earth Day", Singapore's **Senior Minister of State for Sustainability and the Environment Dr Amy Khor reviews the country's Energy and Water Efficiency goals**. On the inaugural Healthcare Sustainability Symposium on Energy and Water Efficiency, also focused on the healthcare industry's efforts in sustainability and achieving net zero emissions. A network of healthcare clusters and partners in Singapore were sharing knowledge, ideas, and insights to help make healthcare greener at the consortium. Singapore's goal of reaching net zero by 2050 was the major focus of the discussion.

### Addressing the impact of climate change



Singapore faces an existential threat from climate change. Climate change is particularly detrimental to Singapore, as it is a small, low-lying island city state. The Third National Climate Change Study (V3) was published by the Center for Climate Research Singapore, under the Meteorological Service Singapore, in January 2024. Singapore and Southeast Asia can expect higher temperatures, accelerating sea level rise, and more wet and dry extremes by the end of the century, according to the report. Globally, erratic weather patterns are also threatening our access to vital resources such as energy, food, and water. Singapore needs to take collective action to mitigate the effects of climate change and contribute to global efforts to reduce carbon emissions.

The effects of climate change go beyond the environment. In addition, it poses a threat to our health. Changing global temperatures and weather patterns lead to an increase in heat-related illnesses and vector-borne diseases such as dengue, further straining our healthcare system.

The healthcare sector contributes significantly to climate change. Globally, the healthcare industry produces more than 4.4 percent of the world's net climate emissions. In addition to being essential for maintaining public health, health services consume significant amounts of energy and water, as well as generating waste and pollution. Healthcare leaders and administrators are actively and urgently addressing this conundrum.

### **Primary ways that healthcare contributes to emissions**

Hospitals, clinics, and research laboratories consume vast amounts of energy for lighting, heating, ventilation, air conditioning, and operating medical equipment. In these facilities, energy requirements are often high because of 24-hour operations, specialized equipment, and strict environmental controls. Due to this, healthcare buildings contribute to greenhouse gas emissions, particularly if they use fossil fuels to generate electricity.

Additionally, healthcare facilities consume considerable amounts of water for various purposes, such as patient care, sanitation, cleaning, and facility maintenance. A higher water usage in our healthcare settings is also associated with water-intensive procedures like sterilisation, surgical operations, and medical research. As a result, energy consumption and greenhouse gas emissions can be further increased.

Building infrastructure is a third factor affecting energy consumption and greenhouse gas emissions in healthcare buildings. These buildings are typically large, complex structures that require specialized infrastructure. Moreover, older healthcare facilities may have inefficient infrastructure, further contributing to their environmental impact.

Waste management is a fourth area. The healthcare sector generates significant amounts of hazardous medical waste, pharmaceutical waste, and general waste. Health care's environmental footprint is compounded by the collection, transportation, treatment, and disposal of this waste.

In this sense, the healthcare sector plays a crucial role in mitigation, both as a sector that is affected by climate change and as one that contributes to it.

Singapore's journey towards greener healthcare requires a fundamental shift in mindset - its recognition that the health of our planet is inextricably linked to its health as a community. To achieve sustainability in healthcare, efforts could include energy-efficient and water-efficient facilities, waste reduction, sustainable sourcing of supplies, and even promoting preventive healthcare to reduce long-term healthcare costs and environmental impacts.

Likewise, Singapore's healthcare policy emphasizes preventive healthcare to promote a healthier population and higher quality of life. NUHS is pursuing many sustainability initiatives across the cluster, which include using an energy utility dashboard to track real-time energy and water consumption, which can lead to more efficient resource use and ultimately reduce our carbon footprint. A growing awareness of the impact of healthcare on the environment has led to the sector stepping up its efforts to mitigate its carbon footprint.

Singapore launched its Centre for Sustainable Medicine last month. It is the largest research center in the world dedicated to accelerating the net zero transition in healthcare and preparing future healthcare leaders to respond to climate change. A key focus would be to minimize the environmental impacts of pharmaceutical products throughout their lifecycles. As part of this effort, eco-friendly manufacturing processes will be developed, reducing waste will be reduced, ensuring medication disposal will be done responsibly, and alternative environmentally friendly treatments will be promoted.

The healthcare sector can be a societal leader in climate action. The way healthcare is delivered can be reassessed and recalibrated, and through continued collaboration with stakeholders and a steadfast commitment to bringing about positive change, we can pioneer solutions that improve patient outcomes and enhance environmental sustainability. **The National University Healthcare System and the healthcare clusters are to be commended for their dedication and efforts to establish more sustainable practices in healthcare.** The healthcare landscape will be shaped by Singapore's actions today, as well as a more sustainable, climate-resilient future for all. The health of our patients and communities depends on reducing our carbon footprint not just for the environment, but also for the environment.