Mahidol University
Faculty of Environment and Resource Studies
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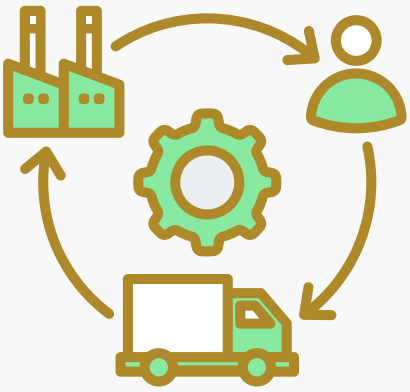
ENVI MAHIDOL Top Priority

Towards Sustainable Health Care Supply Chain: Advancing Low Carbon and Climate Resilient Systems

Background

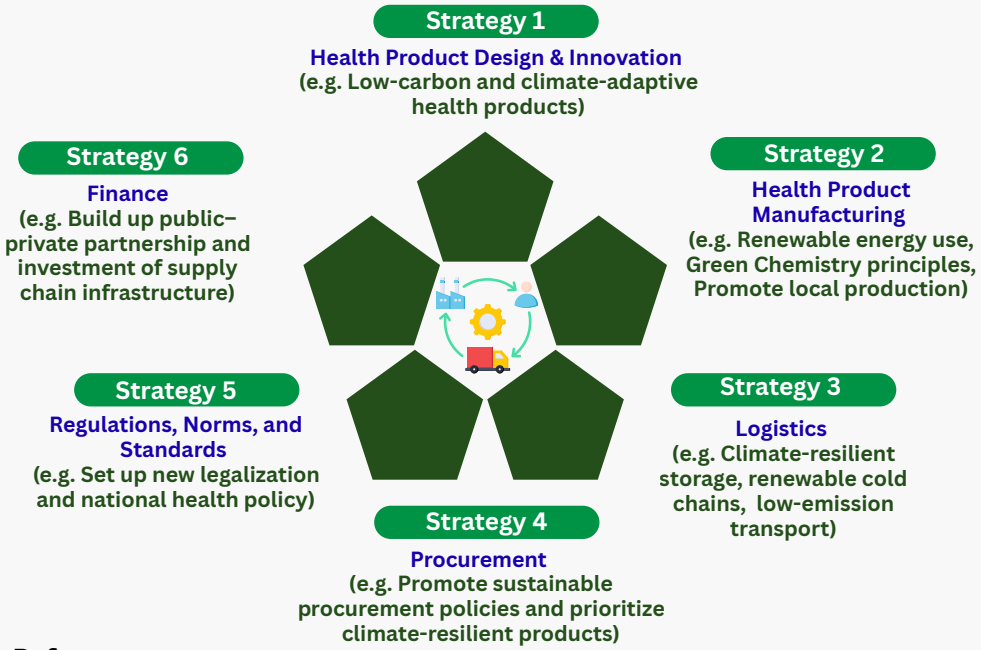
Health systems rely heavily on both local and global supply chains for energy, infrastructure, and essential goods. This reliance makes people more vulnerable to climate risks, but it also opens up chances to use low-carbon and climate-resilient approaches. Many current supply chain systems lack the capacity to protect medical products safely when the environment changes. More than 71% of all health sector emissions come from Scope 3 emissions, which mostly come from health care supply chains. Another 12% come from purchased energy (Scope 2). This means that up to 83% of the global health sector's climate footprint comes from supply chains [1]. To cut down on greenhouse gas emissions and make sure that health services continue, it is important to strengthen low-carbon, climate-resilient health care supply chains.



Systemic Gaps Limiting Low-Carbon Health Care Supply Chains

1. Health products prioritize clinical necessity, efficacy, and safety, while sustainability is considered a secondary factor.
2. The regulatory and reporting framework for climate-resilient and sustainable medical products and devices is inconsistent and underdeveloped.
3. The level of commitment to supply chain transition does not align with the potential economic, health, and environmental advantages that could be achieved [2].

To address these systemic gaps, **ADB's working paper, Low-Carbon, Climate-Resilient Health Care Supply Chains,** identifies **six integrated strategies and 20 priority actions** to advance decarbonization and climate resilience across health care supply chains [2].



Policy-Relevant Insights from Previous Assessments in Thailand

These strategic priorities are very important for Thailand as the previous assessments show that health care facilities and supply systems are becoming more vulnerable to climate change. The Green Viability and Climate Vulnerability Assessments in Healthcare-related Facilities in Thailand, conducted by UNFPA and FHI 360, show that healthcare facilities are at high risk from climate change, which could affect the quality of care and the continuity of services. That assessment conducted in hospitals and community health centers in Rayong, Chiang Mai, and Pathum Thani underscores the critical necessity for climate-resilient health infrastructure, enhanced emergency preparedness, and adaptive healthcare supply chains [3]. These findings hihglight the importance of incorporating climate resilience and low-carbon strategies into Thailand's health supply chain governance and investment planning.

References

[1] Karliner J, Roschnik S, Boyd R, Ashby B, Steele K, Guinto R. *Global road map for health care decarbonization: a navigational tool for achieving zero emissions with climate resilience and health equity*. Health Care Without Harm; Arup; 2021.
[2] Karliner J, Pouille J, Bretin V, Beyeler N, Clark W, Lindley M, Manyari D, Picon R, Riley B, Arora D, Banzon EP, Coghlan B. *Low-carbon, climate-resilient health care supply chains: high-level health care climate action principle #3*. Sustainable Development Working Papers. Manila: Asian Development Bank; 2025 Dec. doi:10.22617/WPS250466-2.
[3] Sudhipongpracha T. *Green viability and climate vulnerability assessments in healthcare-related facilities in Thailand: preliminary assessment report*. Bangkok: United Nations Population Fund (UNFPA) Thailand; Family Health International (FHI 360); 2023. Available from: https://thailand.unfpa.org/sites/default/files/pub-pdf/gva_cva_assessment_report_2023.pdf