

Review of: "Climate Change and Sustainability: A Comparative Case Study"

Aman Srivastava¹

¹ Indian Institute of Technology Kharagpur

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The present comparative case study on climate change and sustainability explores the different approaches taken by Sweden and India [1]. The paper provides a thorough examination of how these two nations, with vastly different economic and social landscapes, tackle the global issue of climate change. The study's findings offer future insights for policymakers, international organizations, and other countries seeking sustainable solutions. Different countries need tailored approaches to sustainability based on their unique contexts. Both Sweden and India can benefit from sharing knowledge and collaborating on sustainability initiatives. Raising public awareness and fostering engagement are crucial for successful sustainability policies [2][3].

The comparative case study on climate change and sustainability in Sweden and India opens up several avenues for future research, particularly concerning the role of AI and ML in urban climate adaptation and sustainable development [4][5][6][7]. The study of AI-ML potential in urban climate adaptation across global continents suggests that these technologies can provide context-specific solutions for urban areas [8]. It further emphasizes the importance of international collaboration and knowledge sharing to promote AI-ML in climate change adaptation. The potential for AI-ML to drive sustainable development is substantial and thus indicates the need for robust policy frameworks to ensure the successful integration of these technologies in climate adaptation. Future research could explore how Sweden's advanced AI technologies can be adapted to different urban settings in India, considering their unique climate challenges and demographic differences. Additionally, future research should focus on creating adaptive, collaborative, and sustainable AI-ML applications that align with the goals of both Sweden's advanced sustainability model and India's need for balanced economic growth and environmental conservation.

In light of the comparative case study on climate change and sustainability in Sweden and India, future research could delve into the following aspects, drawing on the insights from the work on assessing global-scale synergy between adaptation, mitigation, and sustainable development for projected climate change [9]. The study indicates that a combined approach to adaptation and mitigation is crucial for addressing climate change's long-term impacts. Future research should explore how Sweden and India can synergize their adaptation and mitigation strategies, considering their distinct socio-economic contexts. This might involve developing policies that encourage renewable energy adoption, energy efficiency, and carbon sequestration, along with adaptive practices like resilient infrastructure [10] and sustainable agriculture [11]. Overall, aligning these insights with the comparative case study can help identify holistic and adaptable strategies for climate change and sustainability. By focusing on the synergy between adaptation, mitigation, and

sustainable development, future research can contribute to a more resilient and sustainable future [12][13][14].

References

- [^] [Dr Ashwini Sonawane, Sureka KR. \(2023\). *Climate Change and Sustainability: A Comparative Case Study*. Qeios. doi:10.32388/NA0VB8.](#)
- [^] [Farzaneh Shaikh Khatibi, Aysin Dedekorkut-Howes, Michael Howes, Elnaz Torabi. \(2021\). *Can public awareness, knowledge and engagement improve climate change adaptation policies?*. *Discov Sustain*, vol. 2 \(1\). doi:10.1007/s43621-021-00024-z.](#)
- [^] [C. Wamsler, B. Wickenberg, H. Hanson, J. Alkan Olsson, et al. \(2020\). *Environmental and climate policy integration: Targeted strategies for overcoming barriers to nature-based solutions and climate change adaptation*. *Journal of Cleaner Production*, vol. 247, 119154. doi:10.1016/j.jclepro.2019.119154.](#)
- [^] [Shubham Kumar, Aman Srivastava, Rajib Maity. \(2024\). *Modeling climate change impacts on vector-borne disease using machine learning models: Case study of Visceral leishmaniasis \(Kala-azar\) from Indian state of Bihar*. *Expert Systems with Applications*, vol. 237, 121490. doi:10.1016/j.eswa.2023.121490.](#)
- [^] [Adil Masood, Mohammed Majeed Hameed, Aman Srivastava, Quoc Bao Pham, et al. \(2023\). *Improving PM2.5 prediction in New Delhi using a hybrid extreme learning machine coupled with snake optimization algorithm*. *Sci Rep*, vol. 13 \(1\). doi:10.1038/s41598-023-47492-z.](#)
- [^] [Ahmed Elbeltagi, Aman Srivastava, Penghan Li, Jiawen Jiang, et al. \(2023\). *Forecasting actual evapotranspiration without climate data based on stacked integration of DNN and meta-heuristic models across China from 1958 to 2021*. *Journal of Environmental Management*, vol. 345, 118697. doi:10.1016/j.jenvman.2023.118697.](#)
- [^] [Ahmed Elbeltagi, Aman Srivastava, Jinsong Deng, Zhibin Li, et al. \(2023\). *Forecasting vapor pressure deficit for agricultural water management using machine learning in semi-arid environments*. *Agricultural Water Management*, vol. 283, 108302. doi:10.1016/j.agwat.2023.108302.](#)
- [^] [Aman Srivastava, Rajib Maity. \(2023\). *Assessing the Potential of AI-ML in Urban Climate Change Adaptation and Sustainable Development*. *Sustainability*, vol. 15 \(23\), 16461. doi:10.3390/su152316461.](#)
- [^] [Aman Srivastava, Rajib Maity, Venkappayya R. Desai. \(2022\). *Assessing Global-Scale Synergy Between Adaptation, Mitigation, and Sustainable Development for Projected Climate Change*. doi:10.1007/978-3-031-15501-7_2.](#)
- [^] [Aditya Dhanuka, Aman Srivastava, Leena Khadke, Nand Lal Kushwaha. \(2023\). *Smart Geometric Design of Highways Using HTML Programming for Sustainable and Climate Resilient Cities*. doi:10.1007/978-3-031-24767-5_39.](#)
- [^] [Aman Srivastava, Shubham Jain, Rajib Maity, Venkappayya R. Desai. \(2022\). *Demystifying artificial intelligence amidst sustainable agricultural water management*. doi:10.1016/b978-0-323-91910-4.00002-9.](#)
- [^] [Şiir Kılıç, Goran Krajačić, Neven Duić, Marc A. Rosen, et al. \(2022\). *Effective mitigation of climate change with sustainable development of energy, water and environment systems*. *Energy Conversion and Management*, vol. 269, 116146. doi:10.1016/j.enconman.2022.116146.](#)
- [^] [Kashif Abbass, Muhammad Zeeshan Qasim, Huaming Song, Muntasir Murshed, et al. \(2022\). *A review of the global climate change impacts, adaptation, and sustainable mitigation measures*. *Environ Sci Pollut Res*, vol. 29 \(28\), 42539-](#)

42559. doi:10.1007/s11356-022-19718-6.

14. [^] Abdul-Lateef Balogun, Danny Marks, Richa Sharma, Himanshu Shekhar, et al. (2020) Assessing the Potentials of Digitalization as a Tool for Climate Change Adaptation and Sustainable Development in Urban Centres. *Sustainable Cities and Society*, vol. 53 , 101888. doi:10.1016/j.scs.2019.101888.