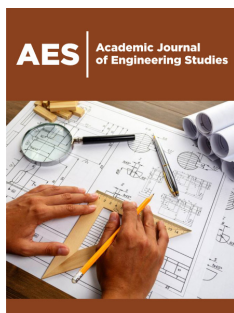


The UAE's Scorching Heat is the New Normal

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Opinion

Over the past century, temperatures across the UAE have risen by between 0.5 and 1 °C [1]. That figure, modest in isolation, is anything but modest in a region where the baseline is already among the most extreme on the planet. Projections now indicate that summer temperatures will rise by a further 2 to 3 °C between 2060 and 2079 [1], and by as much as 4.76 °C by the end of this century [2]. The Gulf region is warming faster than the global average, with sea surface temperatures increasing by 0.2 °C per decade [3]. On August 27, 2023, Al Shawamekh and Sweihan recorded 50.8 °C not a statistical outlier, but a preview of what is coming with greater frequency [1]. The question this summer is not whether the UAE is experiencing climate change. It is whether we are willing to confront, honestly and urgently, what that means for the millions of people who live and work here. The workers the skyline forgets at 4:30am on a construction site in Dubai's outer districts, a group of labourers from South Asia and East Africa begin their shift in the dark. They do this not because they prefer it, but because by 10am the heat will have become physiologically dangerous. By noon, it will be life threatening. These men and they are overwhelmingly men are the invisible architecture of the UAE's ambition. They build the towers, lay the roads, tend the gardens, and deliver the food that sustains one of the world's most dynamic urban economies. They do all of this in conditions that research now confirms will soon surpass critical heat stress thresholds [1]. Heat stress does not merely cause discomfort. It triggers cardiac events, organ failure, and heat stroke. It kills quietly, often without attribution, and disproportionately claims those who cannot afford to stop working. Energy efficiency and renewable energy interventions could significantly reduce premature mortality and healthcare facility burden in urban areas [4].

But policy ambition and on-the ground protection are not the same thing. The labourers starting their shifts before dawn this week are not waiting for a net-zero target. They are managing a present-tense crisis with whatever shade and water they can find. Climate action that does not centre the welfare of low-income and informal workers is not climate action. It is optics. A city that flooded in the desert Sixteen months ago, on April 16, 2024, Dubai experienced 254 millimetres of rainfall in less than 24 hours the heaviest in 75 years [1]. Highways became rivers. The airport, one of the world's busiest, was partially submerged. Residents of communities that had never flooded in living memory found their cars floating in car parks. The images circulated globally, many framed as curiosity rain in the desert. But for those who lived through it, the experience was neither curious nor amusing. It was frightening. And it was, in the clearest possible terms, a climate event: an intensification of rainfall driven by a warmer atmosphere holding more moisture, producing more extreme precipitation when storms do occur [1].

This is the paradox of climate change in the Gulf. The UAE faces not only more heat, but more climatic extremes across the board longer dry spells punctuated by more violent

rainfall events, more intense dust storms, more unpredictable seasonal patterns. Infrastructure built for the climate of the twentieth century is increasingly inadequate for the climate of the twenty first. The sea is not waiting for a policy paper Stand on the Corniche in Abu Dhabi on a summer evening and the Arabian Gulf appears timeless glittering, vast, indifferent to human urgency. It is not indifferent. It is rising. Approximately 85 per cent of the UAE's population and over 90 per cent of its critical infrastructure sit within several metres of the shoreline in low-lying coastal zones [3,5]. Desalination plants, power generation facilities, ports, and entire residential communities are exposed to a mean sea level rise projected at approximately 0.82 metres under moderate scenarios [1].

Under higher-end projections a 5-metre rise Abu Dhabi's shoreline could migrate inland by approximately 30 kilometres [3]. The economic costs of coastal adaptation strategies could reach between 5 and 10 per cent of GDP [1]. The human costs are not calculable in the same terms. They are measured in displaced communities, in fishing families whose harbours have shifted, in the quiet erosion of a way of life that has existed along these shores for generations. The fishermen of Fujairah and Umm Al Quwain are not reading sea-level projection reports. They are watching the water. And what they are seeing is changing. When the wells run dry Water is the foundational anxiety of desert civilisation, and in the UAE, it has never been more acute. The country is already among the most water-stressed in the world [6], drawing on non-renewable groundwater reserves that agriculture and rapid urbanisation are depleting at an accelerating rate [7]. At current consumption rates, groundwater reserves in Abu Dhabi could be exhausted within 50 years [2].

This summer, as air conditioners run at maximum capacity across the Emirates and desalination plants operate at peak load to meet demand, the energy-water feedback loop tightens further. Climate change is projected to reduce precipitation by between 21 and 38 per cent by 2050 and 2100 respectively [2], increasing dependence on energy-intensive desalination precisely as the imperative to reduce energy consumption grows [4]. The farmers of Al Ain tending date palms and vegetable plots in the shadow of Jebel Hafeet are drawing from aquifers that took millennia to fill and are being emptied in decades. There is no comfortable way to frame this. The UAE's water future is a national security issue, and it demands the same seriousness of purpose that the country has applied to its economic transformation. Ambition and accountability The UAE is not passive in the face of these realities. The commitment to net-zero emissions by 2050 [10], the Barakah nuclear energy plant, the Mohammed bin Rashid Al Maktoum Solar Park, the hydrogen economy ambitions, the hosting of COP28 these are not gestures.

They represent a genuine and significant reorientation of national energy and development strategy. But ambition and accountability are not the same thing, and this summer offers a useful test. The UAE is one of the world's highest per capita emitters of greenhouse gases [9]. It is also one of the countries most acutely exposed to

climate impacts [8]. That dual reality demands not guilt, but clarity a clear-eyed recognition that the pace of transition must accelerate, that the protection of vulnerable workers cannot wait for long-term targets, and that climate resilience must be embedded not only in national infrastructure plans but in the daily lives of the people who make this country function. The UAE has demonstrated, across five decades, a remarkable capacity to build what others said could not be built and to achieve what others said could not be achieved. The climate challenge is not beyond that capacity. What it requires is the same disciplined, long-term thinking that transformed a federation of fishing villages into a global hub applied now, with equal urgency, to the existential question of sustainability. This summer is not a metaphor The heat outside is not a metaphor for policy urgency. It is policy urgency, made physical, made personal, made impossible to ignore for anyone who has stepped outside this week. It is felt by the delivery driver completing his fifth run of the morning before the sun reaches its peak.

By the schoolchild whose playground has been closed because the asphalt surface temperature exceeds safe limits. Climate change is not a future problem for the UAE. It is a present reality, experienced with intensity every summer, and with growing frequency in every season. The response must match that reality not in the language of targets and timelines alone, but in the concrete, immediate protection of the people who have the least capacity to adapt and the most to lose. The UAE has built its reputation on turning vision into reality at speed. The climate crisis demands exactly that. Not next decade. This summer!

References

1. ElSergany M, Nurelhuda N, Osman H (2025) Climate Change in UAE: Evaluating mitigation effectiveness and social dimensions in adaptation strategies. Global Network Conference.
2. Almheiri A (2015) Is the United Arab Emirates capable to create a green and sustainable future.
3. Lavieren H, John B, David AF, Georgenes C, Elise M, et al. (2011) Managing the growing impacts of development on fragile coastal and marine ecosystems: Lessons from the Gulf.
4. Dougherty B, David NY, Jose EP, Andrew M, Daniel S, et al. (2019) The Energy-Water-Health Nexus Under Climate Change in the United Arab Emirates. Springer, pp. 131-180.
5. Alameri M, Wagle G (2011) Abu Dhabi efforts in facing global warming challenges through urban planning. Sustainable Development and Planning. WIT Transactions on Ecology and the Environment 150: 29-38.
6. ElMassah S, Eslam AH (2022) Can the Resource Curse for Well-Being Be Morphed into a Blessing? Sustainability 14(22): 15053.
7. International Monetary Fund. "United Arab Emirates 2023," IMF Country Report.
8. Jain R (2024) Building Climate Resilience Adaptation Strategies for Sustainable Development in the UAE. IGI Global. p. 18.
9. Shriya Subramanian (2024) Analyzing UAE's Carbon Footprint: Insights and Strategies for a Sustainable Tomorrow. International Journal of Science and Research. pp. 838-842.
10. Alazaizeh M (2025) Expert's Opinion on the UAE's Progress Toward SDG 13, Climate Action. IGI Global.