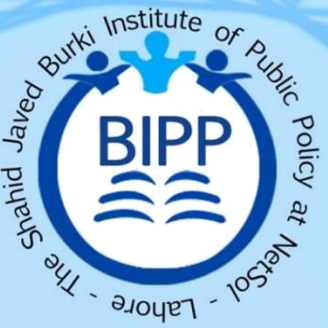

Issue Brief # IB-32-2025

December 12th, 2025

Climate Change and Emerging Technologies

Is AI Thirsty?

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by

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If we travel back in time to 3,000 B.C, we discover that *The Abacus* was the earliest device that accomplished arithmetic computations. This simple gadget, that was essentially an ancient quantum computing board with rods and beads to *Neuro-morphic computing*[1], human kind has come a long way. What seemed to be in the realm of mythical deities is being accomplished today by us at the touch of a button or through voice command. You hear a familiar track of music in a restaurant that jogs your memory but for the life of you, you cannot remember who composed it. In my case, when queried, Siri answered, that it was Yanni's "Santorini." Amazing? Definitely. Addicting? Absolutely!

The possibilities that emerging technologies offer quintessentially are limit less not just in the field of medicine, trade, commerce, space travel and beyond but in every sphere of life. IOT has transformed our homes, offices and modes of travel. New frontiers have emerged that human mind was incapable of fathoming in the not too distant past

Are we heading towards **Aldous Huxley's "Brave New World'** or the dystopian world of **Orwell's 1984**? The esteemed academics and intellectuals of this Annual Report have written in depth articles detailing the economic, social and political consequences of unchecked global warming. The fact that our delicate "*Blue Dot*" in

[1] Neuromorphic Computing is an approach to computing which mimics the way the human brain works. It entails designing hardware and software that simulate the neural and synaptic structures and functions of the brain to process information. *IBM.com accessed December 7 2025.*

the cosmos (Dr. Carl Sagan: “Pale Blue Dot: A Vision of the Human Future in Space) is heating up and may become inhospitable for human habitation is real. As a consequence of disturbing the natural rhythms of nature, we invite natural calamities such as floods, earth quakes and not to mention new diseases as permafrost melts and releases contagions that human beings have never encountered and have no immunity against. These could potentially wipe out the entire human race and upset the eco-system.

Despite the fact that geological research has been studied since 1891, a systematic and scientific research on “human influence on climate” commenced formally in the 1970s. Global data that records precipitation and temperature has helped us compare how intercontinental and worldwide weather patterns effect our surroundings. By comparing the findings carried out earlier we find that the Global Average Temperature has risen more than 1-2 degrees Celsius since the last century. This is according to a report by NASA (https://science.nasa.gov). Unfortunately, this website has not been updated due to, “lack of federal government’s funding."

Now is perhaps the best time to analyse the effect on climate as a result of our dependency on the latest technology. Quantum Computers and Large Language Models (LLMs) operate at very low temperatures almost near absolute zero (_273.15 degrees Celsius) to maintain, the “delicate quantum state (qubits) necessary for computation.” (Google).

As many are aware the fires that engulfed Los Angeles in 2025, resulted in massive destruction and extensive devastation. It spanned several hectors of land and destroyed thousands of buildings and structures while claiming many lives. It took more than three weeks to extinguish the fires but smaller fires continued well into February. There were many conspiracy theories regarding the origin of this inferno, starting with the sighting of a 29-year-old disgruntled man who allegedly started it, to many other reasons caused by unstable climate conditions and baseless accusations that the fires were caused by directed energy weapons or that these were started to clear land for “Smart Cities.” Nevertheless, drought condition, strong winds from the Pacific rekindled the still glowing embers. Scientists believe that global warming was indeed a major contributing factor. **“Hydroclimate Whiplash”** is linked to extreme swings between wet and dry weather.

The other contributing factor that is concerning too is that water from the fire hydrants was diverted to cool Data Centers causing them to run dry. But the fact remains that due to several factors discussed above, the local infrastructure got overwhelmed. As we know, the Quantum Computers have to be kept at a, "hundredth of a degree above absolute Zero" this is because '*qubits'* that power these machines are, "extremely fragile." Any temperature above this or "thermal energy causes these qubits to lose their quantum state." This makes them worthless for computation. This is not easy, there are many steps that are carefully checked by engineers. It is called a, "Sophisticated muti-staged operation." From, Cryogenics and refrigeration to a very advanced "multi-layered system against heat….to create an incredibly cold, quiet environment that qubits need to function."

So yes, metaphorically you can say, "Ai is thirsty."

On a more cautionary note, we have to be mindful about the ever expanding AI apps that according to Google is more than 70,000. Despite the fact that Google is not technically an AI at the moment but has its own dedicated version of AI research and development which is part of *Google DeepMind* is worth noting. Here arises, the profound question about multilayered technological responsibility. Aldous Huxley and other philosophers and scientists had sounded a warning about something called the "**wisdom-gap."** The thesis being that while our technology has grown exponentially (nuclear weapons, AI intelligence, bio-technology, genetic engineering, surveillance technology, social media and Algorithmic manipulation), our moral, ethical, spiritual and religious maturity has not kept pace. The analogy of a child playing with a safety catch off on an automatic weapon is chillingly true in our case. Human kind today is like a child with many guns such as; (a) the AI gun (b) the bio-engineering gun (c) the climate gun, not to mention countless other physical, psychological and societal hazards that can arise from lack of foresight or misuse.

Modern, 21st century futurists like Dr. Kaku, while encouraging the fast-paced technological developments warn about the mental and psychological hazards in not just their research papers but also in main stream media. Netflix aired two shows that are worth mentioning here; one is a 2023 movie produced by none other than the former president Barak Hussain Obama and first lady Michelle Obama. It is based on

a bestselling novel of the same name as the movie: **Leave the World Behind**. The movie tells the story of a family's vacation in a luxurious rental home to escape the hustle and bustle of modern interconnected urban life. It turns into a nightmare as a cyber-attack knocks out all their devices and life as they knew it comes to an abrupt end; It warns us that the delicate ecosystem built on, "trust and technology can erode quietly, leaving behind raw human nature fearful, tribal and vulnerable." (DeepSeek. AI).

The second show worth mentioning is a critically acclaimed British crime drama *Adolescence* that portrays a 13-14-year boy who is accused of murdering his class fellow. It explores themes of on-line radicalization and the psychological impressions on young minds. The British h PM, Sir Keir Starmer (himself a former long serving Director of Public Prosecutions) took notice of it and it was discussed in the UK Parliament. It sparked a 'national debate" making "parents, educators and politicians" to discuss "on line safety and youth mental health." This was an on line incident, just imagine what an unregulated access to AI can possibly do….

The well-known professor, futurist and theoretical physicist, Dr. Micha Kaku, has advised caution about AI, labelling it as a "double-edged sword." While it presents unimaginable opportunities for "human development" yet, it also carries risks if left unchecked. He has also pointed out the importance of AI for the development and good for humanity and that is why there must be, "*guard rails"* to avoid apocalypse_ like scenario.

Ultimately, this short article underscores the fact that the need for prudence and human dominance over technology is essential. As we stand at the 'precipice of this new era", we have to decide if we will allow AI, which is essentially a tool to define the, "parameters of our experience or will it define our purpose."

Yes, we know that AI is not just metaphorically, but literally, thirsty.

Unchecked Quantum advancement is a risk; we must learn to be the over-lords of our creation, not the other way round.