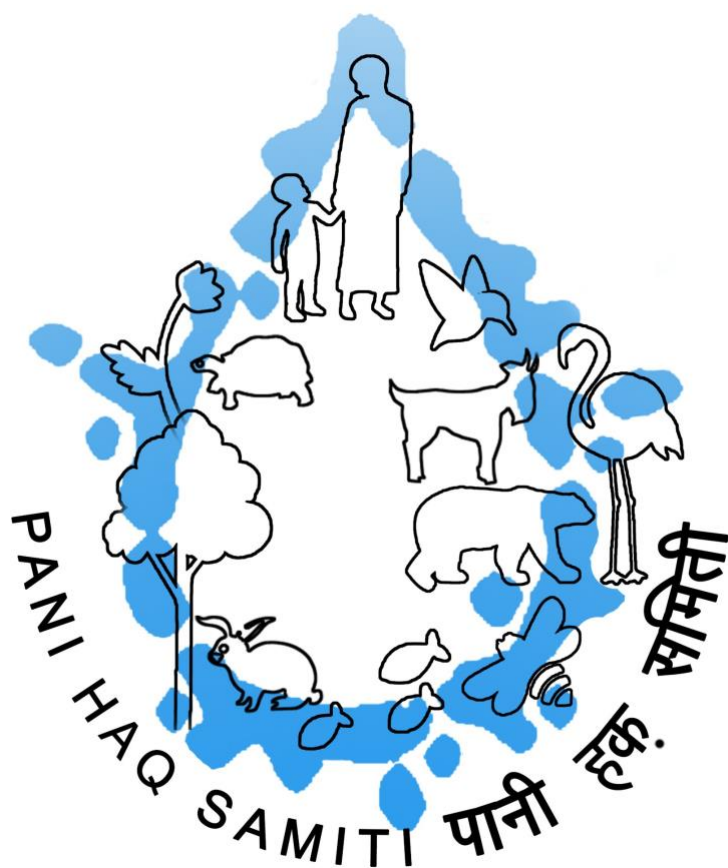


SESSION REPORT

Understanding Data Centres and Water in MMR

Notes from Learning Sessions held on 10–11 October 2026



Pani Haq Samiti

Mumbai · October 2026

Understanding Data Centres and Water in MMR

Notes from Learning Sessions, 10–11 October 2026

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This report draws on the knowledge and experience that these speakers generously shared with us:

- **Phani G**, Stop Vizag Data Centers campaign, <https://stopdirtydatacenters.org/>
- **Anand M**, independent investigative journalist, <https://www.offshorealert.com/profile/anand-mangnale/>
- **Deeksha Vanguru**, Fridays for Future India and Stop Vizag Data Centers campaign, <https://stopdirtydatacenters.org/>
- **Sushmita**, journalist and researcher on AI accountability: her reporting includes [The Guardian](#), [Tech Policy Press](#)
- **Radhika Jhaveri**, Let India Breathe, <https://www.letindiabreathe.org/>
- **Sachin Tiwale**, Ashoka Trust for Research in Ecology and the Environment (ATREE), <https://www.atree.org/profile/sachin-tiwale/>
- **T V Shah**, retired Hydraulic Engineer, The Hydraulic Engineer's Department of the Brihanmumbai Municipal Corporation (BMC)
- **Meghna Shetty and Rajesh Kadam**, Wake Up Thanekar, Instagram [@wakeup.thanekar](#)

We are equally grateful to everyone who took part over the two days: community organisers, researchers, students, journalists and residents. Their questions, experiences and resources shaped the discussion and much of this report.

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We encourage anyone drawing on this report to credit the speakers above as the source of the knowledge shared.

On 10 and 11 October 2026, we at Pani Haq Samiti (PHS) brought together eight speakers to help us understand the data centres coming to the Mumbai Metropolitan Region (MMR) and what they mean for water. Since 2010, PHS has fought for the right to water of people in settlements that the city refuses to connect to its municipal piped-water supply. Data centres are being invited to MMR, even as Maharashtra declares drought across 74% of the state, and cuts in drinking water supply are expected across the region. In this context, we started by learning and building our understanding of what these data centres are, the resources they demand, who decides their establishment, and what their claims rest on. We invited people who have studied, reported on or organised around data centres, and listened.

Day 1, 10 October: lessons from the campaign in Visakhapatnam (Vizag), and how to understand a data centre project well enough to engage in evidence-based advocacy.

Day 2, 11 October: the picture in MMR: why data centres are coming here, what they are used for, the state of our water, and how residents living next to a data centre construction site are responding.

Day 1 was held online, and Day 2 was hybrid, with participants convening at our office in Jogeshwari East. The sessions were conducted in Hindi, English, and Marathi; about 50 people attended each day, with many different people attending on both the days. This report is drawn from our own minutes.

Summary:

- **What are Data Centers?** Data centers are warehouses that hold hardware for supporting computing services and data storage. Although data centers have been around for a long time, what we are seeing currently, are attempts to build much larger, more energy intensive facilities that are primarily used for Artificial Intelligence, cloud storage.
- **Understanding the “hyperscale” of AI data centres is crucial to estimate their impact.** Older or “traditional” data centres drew 30 to 40 MW of energy. Those now proposed range from several hundred MW, such as the data centre in Thane at a reported [420 MW](#), to 1 GW and more, such as the Google–Adani project in Vizag, [which is expected to be the largest in the world](#).
- **They depend on thermal power and diesel generators.** [Despite claims of running on “green power”](#), renewable energy alone can't meet a round-the-clock load. In practice, they draw on coal-fired thermal power and on-site diesel, with efforts growing to build nuclear plants to power data centres. Their water demand extends to wherever that power is generated. Typically, each hyperscale data center roughly consumes electricity that would power 8,00,000 Indian households

- **Water is being diverted from people and farming.** Aside from the water requirements for electricity generation, data centres will likely demand large amounts of water to run their cooling mechanisms. In Vizag, campaigners estimate the planned data centres will use about half of the city's water demand in volume.
- **Clearances are being fast-tracked and information is difficult to access.** Projects are cleared under category B2, as if they were buildings or shopping complexes, circumventing the need for environmental and social impact assessments released to the public, or public hearings. Vizag approvals came in as little as 9 days.
- **Organised public information work and repression.** The Vizag campaign built a volunteer base through simple comparisons, photographs and published documents. Its Instagram account was suspended, and posts were taken down.
- **Residents nearby already bear the cost.** In Thane, people living next to a data centre site describe construction noise day and night.

Key Themes from the Sessions

The sections below bring together what we heard across both days, organised by themes.

01. What data centres are:

A data centre is a building full of computer servers that store and process data round the clock. India has had them for decades: the earlier ones stored information and documents, ran on ordinary processors and drew 30 to 40 MW (Phani; Anand). The data centres now coming up are AI data centres. Their dense computing capacity draws far more power, 1,000 to 1,500 MW for the largest, and they run 24 hours a day, 365 days a year (Phani). Many are planned as hyperscale clusters: one large site hosting the data centres of many companies. The companies behind them include Adani, Reliance, Hiranandani and Amazon (Anand). Hiranandani was among the earliest builders in India, and for years its data centres drew little public attention (Anand). Mumbai already hosts more data centres than anywhere else in India (Sushmita).

The language around them shapes how we see them. Work on artificial intelligence goes back to the 1950s, and the name itself serves as a marketing tactic, giving a technology the image of something living (Sushmita). This image creates a fascination that helps the technology spread (Radhika). While the “cloud” sounds ethereal; in reality it is hardware in large buildings, processing data and algorithms at scale (Sushmita).

The scale itself is the change. Data centres in Mumbai date back to the IT industry, at around 5 MW each; the push now is towards gigawatt scale (Sushmita). Driving it is a race

between the US and China, which India wants to join, signalled by the AI summit in Delhi in February 2026 and by announcements from Meta, Google and Microsoft. Over the past two years, communities in Europe, US including Spain, and in Chile have protested against data centres questioning the needs of this technology, its benefits and costs for the communities that house them. In India, the central government and states such as Andhra Pradesh are promoting them instead of building strong regulation mechanisms to safeguard people and the environment (Sushmita).

A useful way to understand any data centre is in two parts: what it takes in, and what it gives off (Ain, building on Phani). It takes **in power, water and land**, and gives off **heat, noise and air pollution/smoke**. Public concern is growing in step with the scale of resources these new data centres demand (Anand).

02. Power – Energy:

In response to the question of power demand, Google-Adani in Vizag claimed that their data centre will run on green and sustainable energy. Experience from around the world shows that this is a tall claim. A data centre needs to run 24 hours a day, 365 days a year, while solar generates only in daylight, with power generation peaking in the afternoon (Phani). Such a fluctuating power source is unsuitable for a data centre. Further, the sustainability claims of solar energy itself demand scrutiny. Even green energy carries an environmental and social cost (Phani). In Andhra Pradesh, Rajasthan and elsewhere, solar parks have already separated villages from their common and grazing lands. Solar panels also depend on mined minerals and last for just about 25 years, while plans for recycling them remain thin. In Andhra Pradesh, the government is promising pumped-storage hydropower to data centres. This energy, produced by large scale hydropower projects is being generated at the cost of thousands of hectares of inundated forests and adivasi lands.

In practice, data centres fall back on thermal and nuclear power. In the US and Europe, thermal and nuclear power plants are being built right next to data centre sites. Thermal power is expected to be the main fallback in India, increasing air pollution and contamination, while nuclear power demands uranium mining¹. Communities near thermal plants are already living with their effects and opposing them. Every new plant also needs transmission lines, substations and transformers, each with its own cost (Phani).

¹ Thermal power sources are considered as unclean sources of power because of their dependence on coal a non-renewable source of energy. They are also the least energy efficient and most polluting among all energy sources. While the shortcomings of nuclear power include long term safety, nuclear waste disposal and environmental effects

In Mumbai, filings before the electricity regulator show data centre power demand projected to rise several times over by 2027 (Sushmita). That power is coming largely from coal. Coal plants due to retire after three decades of operation are being kept running, and places like Mahul carry the burden. India speaks of an energy transition on global platforms claiming that it is achieving its solar energy generation targets far ahead of schedule, even as its coal use simultaneously increases. The data centre push turns that conversation on its head and the same companies that profited from coal, and then from green energy, are now promising data centres, often through energy deals with the government (Sushmita).

Diesel is used as a backup. Government agreements promise data centres uninterrupted power and water. When supply runs short, in summer or at peak demand, diesel generators take over. The standard practice is to store 24 hours of diesel on site: one 500 MW data centre site in Vizag plans underground tanks holding about 55 lakh litres. A single apartment generator during a power cut brings noise and smoke; data centres multiply this many times over. The generators are switched on at least once a day for testing, as the Amazon data centre in Thane also states. In the US and Europe, some operators run on diesel even when other supply is available, because it is cheaper and easier (Phani). In Vizag, the project was presented as running on green energy, while in practice it relies on coal and diesel, with purchased offsets used to call it green (Anand).

03. Water:

Every device that computes gives off heat; phones and laptops grow warm, and a fan cools a computer. Data centres consume thousands of megawatts and release heat on the same scale. The most common way to cool them is with water: loops of clean, drinking quality water (Sushmita) run through the building, absorb the heat and evaporate, thus creating a heat-island effect outside the data centre while cooling its chips inside. As this requires copious amounts of water, data centre companies claim to be switching to more water-sustainable methods, such as closed-loop cooling and air cooling. However, air cooling is more energy-intensive, just as running an AC in summer raises the electricity bill. That extra electricity comes from thermal plants, which use large amounts of water to generate it, so the water use simply shifts to the power plant (Phani).

In Vizag, the official estimates of the data centres' water needs have ranged from 3 to 5 TMC (Thousand million cubic feet). The campaign estimates about half of the city's supply, around 200 MLD (million litres per day). Groundwater is acknowledged to be unreliable, so water is being drawn from the canals of the Polavaram project. That multipurpose dam inundated Adivasi land, forests and hills, to supply water for farming and drinking water. This water is now also promised to data centres (Phani). Government

agreements with the companies commit to uninterrupted water supply (Phani), alongside water and land given as incentives (Deeksha).

The MMR covers 6,328 sq km, with about 2.36 crore people (Census 2011), 9 municipal corporations, 9 municipal councils and more than 1,000 villages. Its water comes from the Vaitarna and Ulhas river basins. Supply across the region stands at 5,427 MLD against a demand of 6,675 MLD, a shortage of about 1,249 MLD (MMRDA, 2021). Mumbai draws about 3,850 MLD from seven dams, six of them built, owned, and operated by the city, providing about 252 litres per person per day for domestic use. Since the 1980s, non-domestic use has stayed at or below about 10% of supply. Groundwater sits outside these accounts (Sachin).

The pressures are growing, uneven monsoons, climate change and El Niño are reducing the water available while demand rises. In Latur, residents have received water once in eight days (Anand). By preliminary estimates, data centres could take 13 to 20% of the water currently used for domestic purposes (Anand).

The response to the lack of water has long been new dams, and Mumbai's engineers have planned or built new dams almost continuously, often justified through narratives of water shortage constructed using higher percapita water supply standards (Sachin).

The projects now planned for the metropolitan region (as per MMRDA, 2021):

Upcoming project	Planned supply
Damanganga–Pinjal river link	2,451 MLD
Kalu dam	1,140 MLD
Pinjal dam	865 MLD
Gargai dam	440 MLD
Dehraji dam	255 MLD
Kondhane dam	250 MLD
Desalination plant	200 MLD
Poshir dam	12.34 TMC
Shilar dam	6.6 TMC

(MLD: million litres per day; TMC: thousand million cubic feet)

Each new dam carries its own cost for the people and forests where it is built; participants pointed to the ongoing struggle over Gargai dam. Developing further sources is growing harder in such an urbanised region. Recycling wastewater is the main alternative: Mumbai is in the process of building sewage treatment capacity, which

stands at about 2,464 MLD, of which about 1,232 MLD is planned to meet drinking water quality standards.

Mumbai does not need new dams (T V Shah). Each new source the city builds draws on water that other towns and villages depend on. Mumbai should take responsibility for its own water instead of taking other peoples', so that the region's other cities are not left thirsty. In the same vein, he proposed that treated wastewater should go to industries such as data centres (T V Shah). A participant responded that residents of Mumbai, Thane, Kalyan-Dombivli and Navi Mumbai already face shortages and rely on borewells. Treated sewage and desalinated water should go to industry, while freshwater stays reserved for people. Drinking water for citizens must come first, and that priority should be secured in writing (Meenakshi). There was a caution raised against arguing only for one's own water: middle-class and upper-caste neighbourhoods will continue to get their share, and the question is whose need will then go unmet? Environmental racism and casteism are real, she said, and everyone's water deserves equal protection (Radhika).

Data centre companies often say they will meet their water needs with recycled water or seawater, and each claim needs independent verification (Anand). One company's 2025 sustainability report says its data centres return more water than they use, through replenishment projects in several Indian states. Journalists have struggled to verify this, because RTI applies only to public bodies (Priyanka). Participants also raised the risk of toxins from electronic waste reaching groundwater, an area still awaiting policy (Meenakshi).

04. Land - How these projects are cleared:

In Vizag, the government allotted forest, hills, and people's land for data centres, including land fisherfolk depend on for their lives and work (Phani; Deeksha). The rules for classifying data centres remain unsettled. They are being approved under category B2, the category for building and construction projects. This places a data centre alongside a shopping complex and treats its emissions as those of an ordinary building. Under B2, state committees grant approval through appraisal alone, bypassing a full environmental impact assessment and a public hearing. A thermal power plant with a comparable load requires a year-long study, a public hearing, disclosure of its costs and a plan of remedial measures (Phani). In Vizag, the clearances were pushed through in nine days (Anand). Throughout, companies keep their actual water and energy demand, and the noise and heat they will emit, out of public view (Phani). Many countries require companies to disclose such details, and India is yet to follow (Sushmita).

According to the Vizag campaign's analysis, about Rs 22,000 crore of subsidy, including full GST and SGST waivers, water and land, is going to one of the world's largest

companies for about 1,700 jobs. The campaign asks who profits, and whether there are backdoor deals that explain this unsound economic decision. Costs fall on oppressed-caste and low-income farmers, fisherfolk and working-class neighbourhoods, whose residents have the fewest means to cope with added heat and are easiest to intimidate. Farmers there have been seeking land rights, compensation and jobs since 2024.

In MMR, data centres are coming up largely on industrial land allotted by MIDC. The rate at which MIDC allots this land deserves scrutiny: low-rate allotment to hyperscale companies can be challenged, since the government's role is to support small-scale industry, and every concession carries a cost to public revenue (Anand). Near the Thane site, residents report that property values have already fallen (Wake Up Thanekar). One company announced investments, such as Rs 20,000 crore claimed in one MoU, may far exceed what is actually spent.

Legal challenges are already under way. A clearance granted as if for a mall or building is open to challenge in the lower courts (Anand). In Vizag, petitions before the National Green Tribunal seek cancellation of the environmental clearances for three sites; they were filed in early September and have been admitted. In the Andhra Pradesh High Court, a public interest petition has led the court to allow construction to continue at the developer's own risk, subject to the final outcome. The campaign holds modest expectations of the NGT and is pursuing every legal avenue (Deeksha).

The Andhra Pradesh IT minister has said each state receives a data centre capacity quota, about 6.5 GW for Andhra Pradesh, yet existing data centres can expand beyond it, which leaves the quota open-ended (Deeksha). The Vizag campaign calls for a pause, a legally enforced moratorium on data center construction and an independent public study in the Indian context, so that people can decide together whether these data centres are affordable to the public and the environment. Campaigners also describe them as colonial projects, rejected in the West and relocated here, presented as inevitable development. Speakers also urged that data centres be recognised as large infrastructure projects and given the full scrutiny that status carries: an impact assessment, public consultation, and transparent disclosure of the land, water and power they will use.

05. Heat, noise and air

Data centres release heat with every cooling method and can create heat islands, with effects reported up to 4 km away (Phani; Deeksha). Fan noise is estimated at about 85 decibels within a 1 km radius, round the clock, with likely effects on mental health and on birds and animals. Research on AI data centres is still new, so the full effects are still being understood (Phani). In Thane, residents described construction continuing day and night at a site among residential towers (Wake Up Thanekar).

06. AI, data and democracy

Alongside understanding the environmental and social impacts of AI data centres, speakers also drew attention to concerns regarding who controls AI technology and how it is used. Data centres collect and use large amounts of data, much of it personal data, the management of which has far-reaching political impacts on democracy.

Describing a state of technofeudalism, speakers said that a handful of tech-companies today control the online social-media platforms on which citizens share documentation of their daily life and increasingly depend on for their livelihoods. They also brought attention to the phenomenon of “surveillance capitalism”, such that ordinary people’s data is collected and sold, not just to companies, but also to governments. A landmark study by Cambridge Analytica in 2018 showed how the selling of personal data to political parties can shape elections. Governments are among the main buyers of AI tools, including for tracking, profiling and targeting dissenters, which helps explain their reluctance to regulate it (Radhika). AI models and the data collected by them remain in the ownership of foreign companies, which weakens the claim that hosting data centres strengthens sovereignty (Deeksha). As a matter of grave concern, they also highlighted [the use of AI technology in enabling war crimes and genocide in Palestine](#).

07. How people have organised

In Vizag, residents began educating themselves once the projects were announced, building on earlier warnings from the Human Rights Forum. The campaign took shape in June 2026 (Phani; Deeksha). It turned complicated research findings into everyday comparisons and communicated it to the wider public. Abstract numbers and units such as “200 million litres a day” were translated as “half of Vizag’s water supply”; the energy demand was likened to that of the whole state; the noise hazard described as the experience of standing beside a diesel generator, day and night. Drone photographs of hills and forest being cleared struck a chord in a city known for its ecologically rich hills. The campaign now has around a 100 volunteers organising protests and awareness drives. It draws people with different concerns, from water and land to the environment and concern for democratic governance - and that breadth is its strength. Instances of state repression against this campaign include banning its Instagram page for a week, and using the new IT rules to remove informative posts. Campaigners have faced online trolling, yet people continue to organise and pursue cases in court (Phani; Deeksha).

In Thane, neighbours formed a campaign called ‘Wake Up Thanekar’ the day they learned of the Amazon data centre at Balkum. Its members include IT professionals, doctors and accountants, and it keeps a public record on social media. It asks the data centre to

move away from homes and raises questions about the jobs and profits these projects bring (Wake Up Thanekar).

08. How to build an evidence base.

Effective advocacy rests on specific, well-documented facts about a particular data centre project. Speakers advised that broad opposition carries less weight than a precise point: knowledge of how much water will be extracted, from which source, and at what cost to which communities. The Vizag campaign shows the value of this approach, building its case on narrow, verifiable findings about water, power and approvals (Anand).

Questions that open up any data centre project (Anand):

Question	What to find	Where to look
Who is behind it?	The exact company, not the group. Projects are held in special-purpose companies, for example AdaniConneX, which is partnered with Google in Vizag.	Ministry of Corporate Affairs filings: revenue, loans, ownership
Where exactly is it?	Survey number, taluka, GPS coordinates, nearest village	Land records, drawings and site plans
How big is it?	Capacity in MW, and from that the likely water, power and land footprint	Government orders, MoUs, clearance documents
What did the government promise?	Policy for MMR as a data centre hub; investment and job claims, including MoUs signed at Davos	Government Resolutions on the state GR portal and revenue department; MoU announcements
How was the land given?	Allotment rate, and how it compares with rates for small industries; revenue lost to the state	MIDC allotment records
How was it cleared?	Category used, dates, and whether the committee discussed the project at all	Minutes of the State Expert Appraisal Committee and State Environment Impact Assessment Authority; the national Parivesh portal
Where can it be challenged?	Forest cover, eco-sensitive zone, sanctuary or wildlife area, drought-prone area, affected communities	Land and forest records, clearance documents

Question	What to find	Where to look
Are the green claims true?	Whether "green energy" is real supply or purchased offsets	Company filings, MoUs, clearance documents

09. What we propose next

These two sessions were a beginning. They showed us how much information about the data centres coming to MMR remains outside public view, and how much can be learned when people who study, report on and live with these projects come together. Water in this region is already unequally shared, and every new demand on it is a question for public concern. We will continue to learn, to share what we find, and to work with communities, researchers and campaigners so that decisions about our water are made in the open, with consent of the people who depend on it. We invite everyone who took part, and everyone who reads this, to join us.

We propose to initiate a study of data centres and water in MMR, with others who wish to join. It will look at:

- how many data centres are operating and planned, where, and at what capacity;
- the water and power usage each has been sanctioned, and from where it will be sourced;
- whose land they occupy, and on what terms;
- how they were approved, and who was included in making decisions;
- what data they will store and process, who owns it, whether it can be sold, and what this means for claims that hosting data centres strengthens India's sovereignty;
- what all this means for MMR's water supply, and for settlements still denied legal access to water.
- how will heightened demand for electricity due to data center projects affect the provisioning of electricity to residents?

We will share what we learn as a public record on our website, and work with communities, researchers and campaigners so that decisions about our water are made in the open, with the people who depend on it. We invite everyone who took part, and everyone who reads this, to join us: write to panihaq@gmail.com.

Resources shared during the sessions

- Stop Dirty Data Centers: <https://stopdirtydatacenters.org/>
- The Guardian, *Mumbai data centres, coal and air pollution*: <https://www.theguardian.com/technology/2025/nov/24/mumbai-datacentres-coal-air-pollution>
- Tech Policy Press, *Mumbai's data center dreams run on coal and inequality*: <https://www.techpolicy.press/mumbais-data-center-dreams-run-on-coal-and-inequality/>
- SourceMaterial, *Amazon data centres' energy and water use*: <https://www.source-material.org/amazon-data-centres-energy-water-usage/>
- No Climate Results Found: <https://noclimateresultsfound.com/report/>
- Ketan Joshi's work, on Google's sustainability claims
- AI Resist List: <https://airesistlist.org>
- EU Artificial Intelligence Act: <https://artificialintelligenceact.eu/>
- Wake Up Thanekar on Instagram: @wakeup.thanekar

Additional resources

- MMRDA. (2021). *Final regional plan for Mumbai Metropolitan Region*: Mumbai Metropolitan Planning Committee, Mumbai Metropolitan Region Development Authority. <https://mmrda.maharashtra.gov.in/en/planning/regional-plan/final-rp-for-mmr#gsc.tab=0>
- Site Fight Guide: Stop Data centers
https://docs.google.com/document/d/143tA8XVh7de9MD2GBiKQ3BcMFqeonlqx7Esoly_olfQ/edit?tab=t.9tvjsz4902n6