

Just AI, Just Land:

Socio-Environmental Implications of Data Centers on Communities



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Disclaimer

This report is intended as a public-awareness resource to support informed discussion of AI infrastructure, communities, and sustainable development. The information presented is based on publicly available sources, field interactions, and expert consultations.

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it creates opportunities to engage in critical conversations on technology, justice, and community rights alongside organisations and researchers from around the world.

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01 Introduction

The adoption of machine learning and artificial intelligence (AI) has been gradually reshaping the 21st century over the past few decades. However, the current scale at which AI is being integrated into everyday life is both striking and, for some, concerning. With the rise of AI agents and generative AI systems, these technologies are no longer confined to experimental or specialised domains. Instead, they are increasingly embedded in the routines of ordinary citizens and are becoming part of broader governance and institutional systems across sectors such as finance, education, healthcare, and others.

Historically, digital technologies have often been described as relatively “clean” or immaterial, being considered more virtual rather than physical. This understanding is now being challenged. The development and operation of advanced AI systems require substantial computational infrastructure, including high-performance hardware such as graphics processing units (GPUs). The training and inference of such units at scale demand large data centers, which in turn demand significant physical resources, including land, electricity, water, and labour for construction, operation, and cooling. These material requirements are particularly deeply consequential in contexts such as India, where such resources are already scarce for its own developmental needs.

Despite many concerns, India is increasingly positioning itself as a major destination for AI and data infrastructure investments. In doing so, policy approaches have largely focused on attracting capital and enabling the expansion of data center capacity. While this has contributed to what is being understood as

technological development and a door for investment flows, it also raises important questions regarding environmental sustainability, local resource availability, and the extent to which affected communities are meaningfully included in decision-making processes or have consented to having such infrastructures near their homes.



AWS Data Center in Begarikancha

Against this backdrop, this study examines in what ways such developments impact local communities, more specifically, what are the socio-environmental implications of data center expansion on local communities. Focusing on the state of Telangana, it draws on fieldwork in two villages, Mekaguda and Begarikancha, located in Rangareddy district. The study explores how the presence of nearby data centers influences local dynamics related to land, water, power, livelihoods, and community aspirations, with the aim of understanding the lived experiences and everyday negotiations shaped by this infrastructural expansion.

The report argues that data centers must be understood not simply as technological infrastructures, but as socio-ecological infrastructures and as sites of extraction as well as contested governance, where questions of land, resources, labor, and participation consistently intersect.



Microsoft Data Center, Mekaguda

02 Methodology

2.1 Research Method and Question

This study adopts a qualitative, exploratory research design using primary and secondary data to examine the socio-environmental and governance implications of data center expansion in Telangana, with a focus on Begarikancha and Mekaguda.

2.2 Data Collection

Primary data collection was conducted through six focus group discussions (FGDs) across the two sites. In Begarikancha, these included farmers, Panchayati Raj Institution (PRI) members, and diverse community stakeholders. In Mekaguda, FGDs were conducted with farmers, ASHA workers, panchayat representatives, and other community members.



ASHA Workers, Mekaguda

In addition, thirteen semi-structured interviews were conducted with a diverse group of respondents, including local residents, Anganwadi teachers, frontline health (ASHA) workers, activists, journalists, researchers, and experts in water, power, land, and information technology.

While FGDs foregrounded lived realities, the interviews provided in-depth insights and structural perspectives on issues such as resource allocation and governance, as well as historical and political dynamics in the region, the digital ecosystem, and policy processes shaping data center development. Primary data collection was complemented by secondary sources, including policy documents, reports, government portals, newspaper articles, and research studies, to examine the evolving policy landscape associated with the expansion of data centers.

2.3 Sampling

A purposive sampling approach was employed to ensure representation across diverse social positions and lived experiences. Participants were selected based on their direct or indirect engagement with the impacts of



DEF Team with Ramchandra, Panchayat Secretary, Mekaguda

data center expansion. This included farmers affected by land acquisition, workers employed in data centers, Panchayati Raj Institution (PRI) members, local health workers, agricultural activists, lawyers, representatives from different caste and social groups, local NGOs, Anganwadi workers, and journalists working on the issue at national and global levels. This approach enabled a more nuanced understanding of the differentiated impacts of data center expansion across social groups and contexts.

2.4 Data Analysis

A thematic analysis was conducted to identify the recurring patterns and themes emerging from the data collection, more specifically on land, water, energy, livelihoods and aspirations. The data was systematically transcribed from the local language and dialect to English and then organised into categories, which were then refined into broader themes. This process helped in identifying key patterns across the responses and understanding how different groups experience and perceive the impacts.

2.5 Conceptual Framework

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The climate crisis
is an outcome
of historical
inequality and the
loss of cultures,
nature, and
ways of being,
rooted in an
extractive model
of economic
development that
is exploitative,
racist, patriarchal,
and classist.”

To analyse the above questions, this study anchors interdisciplinary frameworks combining feminist political ecology (FPE) and data justice.

The climate crisis is an outcome of historical inequality and the loss of cultures, nature, and ways of being, rooted in an extractive model of economic development that is exploitative, racist, patriarchal, and classist. Using a feminist political ecology lens, the study highlights alternative narratives to the mainstream narrative of economic development that should be included in policy discussions. More specifically, taking the concept of “Earthcare,” the study argues that practices of care, as well as action, are important for transitioning to an economically and socially just society. It emphasises that even small narratives of

“

Even small narratives of resistance, care, and survival can produce tangible evidence, and that sharing these can help move towards positive ways of achieving planetary survival.

resistance, care, and survival can produce tangible evidence, and that sharing these can help move towards positive ways of achieving planetary survival (Harcourt, 2023).

The data justice framework extends this analysis by showing how digital infrastructures produce and reinforce structural inequalities. It draws attention to three interrelated dimensions: distribution (how the costs and benefits of infrastructure are allocated); participation (the extent to which affected communities are included in decision-making processes); and recognition (whose knowledge is acknowledged within governance systems).



DEF Team with Ramchandra, Panchayat Secretary, Mekaguda

2.6 Ethical Considerations and Limitations

The study followed established ethical research practices, including informed consent, confidentiality, and sensitivity to local power dynamics. Particular care was taken while engaging with marginalized communities, ensuring that participation was voluntary. As a qualitative study conducted across two sites, the findings are not statistically generalizable but provide context-rich, grounded insights into the impacts of data center expansion. The analysis is based on participant experiences and perceptions, which may be shaped by limited access to technical or institutional information.



DEF Team with Zilla Prashid High School Principal, Mekaguda

However, these perspectives remain critical in understanding lived realities and community knowledge. The study also faced constraints due to limited transparency and access to official data from the datacenters due to lack of transparency in showing the use of resources, particularly regarding water use, energy consumption, and environmental compliance. In addition, the research captures a specific moment within an ongoing process, and longer-term impacts require further investigation.

These limitations highlight the need for longitudinal and interdisciplinary research that integrates community perspectives with environmental, technical, and policy analysis.

2.7 Note on Use of AI Tools

Transcriptions of focus group discussions and interviews were transcribed manually and then structured using AI-assisted tools to maintain consistency between all scripts. These outputs were subsequently reviewed, cleaned, and validated by the research team to ensure fidelity to participants' meanings and contexts. AI tools were also used in a limited capacity to assist in copy editing some sections of the report to maintain linguistic coherence between the authors. All analyses, interpretations, and conclusions presented in this report are the result of independent research conducted by the authors.

Background

3.1 Global Expansion of Data Centers

As the world becomes increasingly digitalised, a significant rise in data generation and use across a variety of industries has been witnessed, leading to a rise in demand for data servers and data centers. This expansion is occurring at an unprecedented pace, with global data volumes projected to reach approximately 400 zettabytes (ZB) by 2028, nearly 2.7 times the levels in 2024 (IDC, 2025).

“Global race within countries to build, host and operate data centers, which is beginning to extensively reshape not just technology but also the dynamics of global, national and regional economies, capital investment, geopolitics, energy, competitiveness, and productivity.”

Consequently, there has been a global race within countries to build, host and operate data centers, which is beginning to extensively reshape not just technology but also the dynamics of global, national and regional economies, capital investment, geopolitics, energy, competitiveness, and productivity. As per the S&P Global 2025 report, the US and China are leading the data center market by collectively commanding over 60% of global capacity. On the other hand, actors across Europe, the Middle East and the Asia-Pacific are also racing to establish their own digital sovereignty (S&P Global, 2025).

3.2 India's Data Center Growth

Within this buildout race, India, being the world's fastest-growing economy and the Asia Pacific's second-largest data center market by power available to IT equipment, is increasingly trying to establish itself as a major global data center hub. When it comes to India's data center

capacity alone, it has grown significantly in recent years, nearly tripling since 2020 to reach approximately 1.5 GW, with projections estimating growth to around 6.5 GW by 2030 (Tripathi et al., 2026). Investment commitments in this sector have also increased sharply, reaching a cumulative USD 126 billion by the end of 2025, including USD 56.4 billion in 2025 alone. According to estimates by CBRE Group, these investments could grow by an additional 45 percent in 2026, potentially exceeding USD 180 billion (Fortune India, 2026).

India's Ministry of Electronics & Information Technology's draft "Data Centre Policy Document" further outlines strategies focusing on ease of doing business, data center economic zones as well as the promotion of domestic hardware and software to minimize reliance on outside markets (S&P Global, 2025).

Experts and reports highlight a variety of reasons behind this, most importantly the fact that despite hosting nearly 20% of the world's data, India only has 3% of global data center capacity (Deloitte 2025). Therefore, the demand for data infrastructure is rising at an unimaginable rate, with the current installed capacity of nearly 1.4 GW as of the second quarter of 2025 and is expected to reach 8 GW by 2030 (S&P Global, 2025). This escalation is not merely a result of the investments but also the supportive regulatory environment, the national-level incentives and the state subsidies that are driving the expansion process.

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Despite hosting nearly 20% of the world's data, India only has 3% of global data center capacity (Deloitte 2025)

3.3 State-Level Policy Landscape

While India still lacks a national-level data centre policy for data centre development, state governments have taken the lead in shaping the sector's growth. There is a similarity when it comes to state data centre policies in India, as most of them focus on attracting investment through subsidies, incentives, cheaper land, and reliable infrastructure. States like Uttar Pradesh and Karnataka mainly offer financial benefits

such as land subsidies, tax exemptions, and lower land costs to encourage companies to set up data centres. Maharashtra takes a slightly different approach by calling data centres an "essential service," which helps ensure continuous access to electricity and water. Tamil Nadu stands out by putting more emphasis on sustainability, such as requiring a minimum share of renewable energy and encouraging water recycling, while still providing water access (Indumugi, 2026). Overall, while many states talk about green energy and efficiency, most policies strongly focus on growth and investment, even though data centres require large amounts of a state's resources such as water, land and power. While still in draft, the Ministry of Electronics and IT, with its draft Data Centre Policy (2020), similarly aims to incentivise data centre development, while also proposing Data Centre Zones to streamline approvals and regulatory compliance (NITI Aayog, 2020).

3.4 Telangana's Data Center Expansion

Telangana is one of the most proactive states in India and was the first one to introduce a dedicated state-level data centre policy back in 2016. The policy supported the growth of the data centre ecosystem through a mix of regulatory relaxations, infrastructure support, and fiscal incentives to attract investment. At the regulatory level, data centres are exempt



from provisions under the Telangana Pollution Control Act (except large IT parks), statutory power cuts, and certain labour law inspections through self-certification. Furthermore, exemptions are also permitted from inspections under various Acts, notably the Maternity Benefit Act (1961), Contract Labour (Regulation & Abolition) Act (1970), Payment of Wages Act (1936), and Minimum Wages Act (1948) (Sen, 2025). By classifying the industry under “essential services”, the policy also ensures uninterrupted operations through dual grid power supply, subsidised electricity, lower-cost fuel for backup generators, and access to renewable energy, with expansion plans. Fiscal incentives include up to 50% rebates on building fees and subsidised land costs set by the Consultative Committee on Information Industry.

Overall, the policy focuses on easing business operations and ensuring resource availability to promote data centre expansion in the state. The state is increasingly pursuing a spatially driven digital infrastructure strategy through multiple initiatives such as AI City, Quantum City, Bharat Future City, and the Telangana Data Exchange. These developments reflect an effort to reorganise urban and peri-urban regions around emerging technologies, with the broader objective of positioning Hyderabad and its surrounding areas as a global hub for digital infrastructure and AI-led growth.

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At the Telangana Rising Global Summit in December 2025, where the state reported investment inflows of approximately ₹ 5.75 lakh crore.

Within this context, Telangana has secured significant investment commitments from major global technology firms, including Amazon Web Services (AWS), Microsoft, CtrlS, STT Global Data Centres, Yotta, and NTT Data, indicating growing consolidation of digital and data center infrastructures in the region. This was further reinforced at the Telangana Rising Global Summit in December 2025, where the state reported investment inflows of approximately ₹ 5.75 lakh crore, highlighting the scale of capital being mobilised toward its digital and infrastructure expansion agenda (The Hindu, 2025).

3.5 The Local Impact

Many of these developments are taking place in peripheral and rural areas such as Mekaguda and Begarikancha, which are being developed as future cities, with aspirations to transform them into global urban centres like New York and Dubai (Telangana Today, 2024). These recent developments have led to major changes in the said villages, including rising real estate prices, the arrival of new industries, and the redevelopment of the entire region.

At the same time, they have also generated growing tensions between the state’s development agendas and local community interests, particularly around land, livelihoods, and access to resources. These shifts also reflect deeper socio-spatial reconfigurations, where aspirations of “future city” and “AI city” development coexist with uneven benefits, increasing uncertainty and a lack of awareness about the datacenters for the residents. Many of these tensions and complexities, especially with regard to resource allocation and use, are discussed in the following section below.



Discussion and Findings

04

4.1 The Land Question

AI data centres require large, well-connected land parcels with access to reliable power, water, and high-speed fibre networks, with hyperscale facilities typically needing 10–50 acres depending on scalability (Sen, 2025). However, in the Indian context, this expansion dream is challenged by existing structural land problems such as high land prices in Tier-1 cities, complex acquisition processes, and fragmented zoning and environmental regulations in place. This reflects deeper tensions and complexities between the datacenter development frenzy and the existing land resource availability.

Land Footprint

When analysing resource requirements for data centres, attention is often primarily directed towards power and water footprint, given their continuous and high-intensity operational demands. However, emerging research is highlighting the significance of land as a critical and expanding component of data centre infrastructure. For instance, a 10 MW facility typically requires approximately 10 acres (435,600 square feet) of land to accommodate core infrastructure, redundancy systems, and future expansion (Swinhoe, 2024). Beyond individual facilities, the scale of land use becomes more pronounced at the national level as well. Recent estimates indicated that India hosts around 271 data centres as of January

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India hosts around 271 data centres as of January 2026, collectively occupying approximately 23 million square meters of land,

2026, collectively occupying approximately 23 million square meters of land, thereby highlighting the substantial amount of spatial footprint linked with data infrastructure development. These lands are not only being occupied in cities like Mumbai, Hyderabad, Chennai and Bengaluru, where land resources are limited, but are now also increasingly being established in tier 2 and 3 cities and towns, including villages, where land is primarily used for agrarian purposes.

Change in the Agrarian Economy

The coming of industries and commerce in Telangana has already impacted local communities, particularly farmers, in multiple ways in the last decade. The emergence of data centers leading to large-scale acquisition of land in these regions, where agriculture remains a risky yet active livelihood option, further intensifies the existing pressures, raising concerns about land use changes, resource competition, and the sustainability of farmers' livelihoods.

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The emergence of data centers leading to large-scale acquisition of land in these regions, where agriculture remains a risky yet active livelihood option, further intensifies the existing pressures,
According to experts, Telangana is already experiencing a steady decline in the cultivation of crops meant for local consumption, with a clear shift toward commercial crops, therefore compromising the state's food security. In addition, crop diversification is also diminishing. As Ravi Kanneganti of Rythu Swarajya Vedika points out, these trends indicate deeper structural changes in the agrarian system, with long-term implications for both farmers' resilience and regional sustainability:
In Telangana, there are no pulses. All the pulses have disappeared. There are no millets. There are no oilseeds. There are no vegetables either. There are only four crops. Pulses, oilseeds, millets and vegetables. They come from the other state of Telangana. While paddy is being produced, it is partly linked to the ethanol and liquor industries.
He further explained how more than 90% of

farmers are in debt, with their income being less than minimum wage set by the state, which is further complimented by the state not having an agricultural policy:

The state does not have an agriculture policy. Only industrial policy is available and, they didn't release state action plans for agriculture in every year. Up to 2021, they have. After that they haven't released. Second, due to climate crisis, there is no crop insurance in Telangana. Probably one and only state that doesn't have crop insurance. Thirdly, there is no scientific cropping pattern. Depending on the soil and environment, one agricultural university has designed it. But, the KCR government have put it aside and promoted paddy.

Nagaraju (2026) notes that declining crop diversification, increased use of chemical fertilizers, and socioeconomic changes are adding to the problems in Telangana's agrarian sector. These changes are linked to fewer people depending on farming, with only about 55% of rural and semi-urban populations still engaged in agriculture. Even though agriculture still employs around 47.34% of the workforce and contributed 15.8% to GSVA in 2023–24, its share has dropped from 17.0% in 2022–23. Landholdings have also shrunk from 1.00 hectare in 2015–16 to 0.89 hectares in 2021–22.

During the focus group discussion with farmers in Mekaguda, they explained and linked the issue of declining agriculture to the coming of the chemical industries and larger industrialisation in their village:

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Even though agriculture still employs around 47.34% of the workforce and contributed 15.8% to GSVA in 2023–24, its share has dropped from 17.0% in 2022–23.

Before industries, there was agriculture in this area. Now, there is Natco (a 25-year-old chemical-based industry). Everything is polluted. So, people shifted to dairy. Also, they have to go to the company for menial jobs.

They further linked these agricultural shifts to changes in cattle rearing and dairy production, noting that the region has already undergone multiple phases of economic transition. These successive transformations have had uneven impacts on local communities, in some cases contributing to discontent and resentment:

Now it is only cattle and dairy. Once Microsoft starts, there will be lot of usage. So, automatically, in the next 5 to 10 years, the water problem will be there. Anyways agriculture has reduced like 50%.

At the local level, farmers are increasingly becoming aware of the expansion of new industries, including data centers and their growing demand for critical resources such as water and electricity especially during summer months, which are essential for agricultural activities. Farmers expressed apprehension regarding the extent to which these resources may be diverted to industrial use, as well as the potential for increased pollution. The land question for data centers is even more complex, as it is closely tied to vulnerable communities and their livelihoods in the two villages.

Land Acquisition

While the classification of data centres as essential services has generated certain benefits to companies operating these facilities, but this has also attracted considerable criticism at both national and local levels, particularly regarding the rising real estate prices as well as land acquisition cases. In July 2023, 57 local residents filed a petition in the Telangana High Court against Microsoft and 35 other entities, alleging

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In July 2023, 57 local residents filed a petition in the Telangana High Court against Microsoft and 35 other entities, alleging illegal land encroachment beyond permitted boundaries

illegal land encroachment beyond permitted boundaries and improper disposal of industrial waste into a nearby lake. The petition also claimed groundwater contamination across five villages, affecting around 20,000 people, and sought government action to halt further encroachment by the companies involved (Land Conflict Watch, 2025).

During an interview, a farmer from Mekaguda, Pandureddy, one of the petitioners in the case, stated that he attempted to communicate to all relevant stakeholders that the process of land acquisition was unjust as he was also the village head at that time:

As a village president, I gave representation that time. I said, the land acquisition that you did was

illegal. In that, more than 6,000 to 10,000 gajalu sq yrd, will be disturbed. It could be water bodies or agriculture land. You are a big company here, right, so if you do the cross verification once, it won't disturb you and us. But they didn't listen. The first thing I tried was to complain to the local network. I complained to the Mandal Revenue, Collector. I complained to the Telangana State CS. I sent a mail to Microsoft and NATCO CEO. Later, I approached the High Court because they didn't care.



Pandu Reddy, former Community Head and one of the primary petitioners in the PIL

In another interview, it was highlighted that it is mostly the marginalized communities, particularly Scheduled Castes, Scheduled Tribes, and Other Backward Classes, that have been disproportionately affected by land acquisition process. It was highlighted that much of the land being acquired for data centres consists of assigned lands originally allotted by the government, which are legally non-transferable except back to the state. It was argued that the government is now reclaiming these lands through compensation mechanisms that do not reflect current market values, raising concerns about fairness and equity in the acquisition process. Mr Ramchandra Secretary Member of Communist Party of India (Marxist), Ranga Reddy district explained that:

Basically, SC, ST and OBC communities have lost the land. Here, in total 1400 acres of land acquisition happened, and mostly whoever didn't have any patta lands and basically assigned lands belonging to people have been taken. They have become landless poor people. Even the compensation was not given properly. It was not provided according to the 2013 act. At that time the land rate per acre is INR 1 crore per acre but they gave INR 7.9 lakhs. This is the compensation for loss. Because of this they can't even buy any land outside with that money. Because outside land costs 10 lakhs or 20 lakhs and more.

The issue was confirmed by the farmers in Begarikancha during a focus group discussion, where they highlighted the gap between compensation and the subsequent value of land once transferred for data center development:

We received INR 1,00,00,000
 { We received INR 7,70,000 for the land, while it was later sold for over INR 1,00,00,000 }

As India's land acquisition rules include "public purpose" laws that allow the government to acquire private land for projects benefiting the public, such as developments related to national security, infrastructure, or urban development. These laws are now applicable to AI data centers, which the government has stated are key to development and job creation (Bhattacharya, 2026). Telangana govt, in its 2016 policy had already clearly mentioned that land shall be provided at a subsidized cost as decided by CCITI and concerned ministers (Invest Telangana, 2026).

These developments show clear local tensions over land in Telangana. While the state is building new infrastructure corridors and projects, many local people report feeling displaced and betrayed by these changes. At the same time, land prices have risen sharply, by about five to six times in the last two years. Villages are increasingly being marketed in real estate terms, often emphasizing proximity to projects like the "200 ft Future City road," with rates in places like Meerkhanpet near the Begarikancha village, reportedly reaching around ₹ 5,000 per square foot. Overall, this reflects the growing commodification of rural land, while the communities and farmers pay the price for such developments. It also shows the fetishization of these villages, where rural spaces are increasingly reimagined as investment assets rather than agrarian communities, shaped primarily by narratives of infrastructure-led growth and future urban expansion.



Farmers and Dairy workers sharing experiences with crop and cattle loss, Mekaguda

4.2 The Power Question

The Power Footprint

Energy use within a typical data centre is broadly distributed across three primary functions. Approximately 40 percent of total electricity consumption is attributed to computational activities, including servers and processors responsible for data storage and processing. A similar proportion, around 40 percent, is required for cooling systems, which are essential for maintaining safe operating temperatures in high-density computing environments. The remaining 20 percent supports ancillary infrastructure, such as internal power distribution networks, data transmission and communication systems, power conditioning equipment, storage systems, and lighting.

“Between 2024 and 2030, data centre electricity use is expected to grow at an average annual rate of around 15 percent, a pace more than four times faster than the growth in electricity consumption across all other sectors (International Energy Agency, 2025)”

In terms of scale, data centre energy consumption varies significantly depending on size and capacity. Smaller facilities typically operate within a range of 5 to 10 megawatts (MW), whereas large hyperscale data centres, an increasingly dominant segment, often exceed 100 MW. At this scale, the annual electricity consumption of a single hyperscale facility can be comparable to the energy demand of approximately 350,000 to 400,000 electric vehicles, highlighting the substantial and growing energy footprint of modern digital infrastructure (Tata Consulting Engineers, 2026).

Global power consumption by data centres is projected to nearly double, reaching approximately 945 terawatt-hours (TWh) by 2030, equivalent to just under 3 percent of total global electricity demand. Between 2024 and 2030, data centre electricity use is expected to grow at an average annual rate of around 15 percent, a pace more than four times faster than the growth in electricity consumption across all other sectors (International Energy Agency, 2025).

The Power Incentive

Hyderabad has emerged as one of India's leading data center hubs, with an installed capacity of approximately 859 MW as of 2025 (Kumar, 2026). This growth is situated within a relatively robust but increasingly stressed power ecosystem. As of 2025, Telangana's total installed power generation capacity stood at approximately 20,981 MW, comprising a diversified mix of over 12,800 MW from thermal sources and more than 5,400 MW from renewables. At the same time, demand is rising rapidly, with the state recording a peak power demand of over 18,139 MW in 2026, reflecting growing industrial and digital infrastructure loads (Mahesh, 2026). In Hyderabad particularly, this has been enabled by a deliberate and coordinated policy push anchored in the Telangana Data Centres Policy, 2016. At its core, the policy addresses reliability risks by prioritizing uninterrupted power supply for data centers. The provision of dual power grid networks, combined with exemptions from statutory power cuts, effectively insulates these facilities from broader grid fluctuations. This creates a tiered system of access, where data centers are assured a higher degree of supply stability, thereby reducing operational uncertainty for investors.



Power grid at AWS Data Center, Begarikancha

Simultaneously, the policy intervenes in the cost structure of energy, a critical factor in location decisions. By enabling renewable energy procurement through open access mechanisms, supporting captive generation through solar and wind with streamlined approvals, and offering electricity at cost-of-generation rates, the state lowers long-term operational costs. Additional provisions, such as below-market fuel pricing for backup systems, further mitigate risks related to supply disruptions.

Beyond power provisioning, the policy integrates investment-oriented incentives to enhance overall competitiveness. These include subsidized land allocation, rebates of up to 50% on building fees, and targeted financial support such as lease subsidies, internet cost reimbursements, and R&D grants. The classification of data centers as “essential services” further reduces regulatory friction by easing compliance requirements and limiting routine inspections (Government of Telangana, Data Centres Policy, 2016). Taken together, the policy does not merely offer discrete incentives but constructs a coordinated ecosystem that addresses the three central concerns of data center investment: reliability, cost, and regulatory risk within a high-demand energy environment. While this development appears to be a win-win situation for investors, it presents a contrasting reality for local communities. For these communities, it reflects a pattern in which industrial interests are being prioritised over local needs.

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the policy does
not merely offer
discrete incentives
but constructs
a coordinated
ecosystem that
addresses the
three central
concerns of data
center investment:
reliability, cost,
and regulatory
risk within a high-
demand energy
environment.”

Mr Ravi, a local activist and member of Rythu Swarajya Vedika(RSV) explained this underlying tension:

Now, the entire industry has learnt only two things. One, they have to take subsidies from the government. To set up the industry. They have to buy land at a cheaper rate. They have to buy water at a cheaper rate. They have to buy power at a cheaper rate. This is a major policy in industrial policy. Telangana is in the first rank.

During an interview with an IT expert Mr. Rajshekhar P, Directing Council Member of Commons Collective questions the policy

incentives related to power, stating that in situations of resource scarcity, particularly power shortages, data centers supporting AI and digital infrastructure would be prioritized equally or even above essential community needs.

data

If data centers are treated as essential like milk or food, then in times of shortage, will they be given the same or even higher priority than basic needs of people?

shortage

The Rising Energy Demand

The expansion of data centers is expectedly increasing energy demand in the region, with the sector projected to grow at an annual rate of around 28% through 2031 (Hering G., 2025). This growth is expected to place additional pressure on an already tightening power supply-demand balance.

To manage this rising load, both the government and private sector are adopting a range of mitigation strategies. These include green power purchase agreements (PPAs) with companies such as Microsoft and Amazon, continued reliance on diesel-based backup systems, and emerging pilot initiatives in hydrogen-based energy solutions. Such approaches reflect attempts to balance rapid digital infrastructure growth with grid stability and sustainability concerns (Kumar, 2026). Government

support for this energy-intensive expansion is further reflected in large-scale investment commitments. For instance, Amazon Web Services (AWS) announced an investment of approximately ₹ 60,000 crore for data center development in Telangana at the World Economic Forum in January 2025 (Telangana State Portal, Amazon Investment Announcement, 2025). These developments highlight the state's "infrastructure-first" approach to digital economy expansion. However, they also raise critical questions around long-term energy sustainability, grid resilience, and the allocation of public resources to support private digital infrastructure.

Community Perspectives

Despite the scale of expansion, ground-level observations indicate no immediate increase in power shortages or outages in nearby communities. This suggests either effective load management or a time lag between infrastructure growth and localized grid stress. However, community concerns persist, particularly around perceived health risks such as radiation from nearby power infrastructure. These perceptions highlight the need for better communication, transparency, and community engagement as energy-intensive projects continue to expand.

During an interview, Uma Maheshwar, Principal of the Zilla Parishad High School in Mekaguda, noted:

power cuts

I have not observed any prolonged or significant power cuts in the region which happened after the coming of data centers.



DEF Team with Uma Maheshwar, Principal, Zilla Parishad High School

This suggests that, at present, the expansion of such infrastructure has not visibly disrupted local electricity supply. However, when discussing his perceptions of data centers, he highlighted a different kind of concern. He remarked that the term “data center” immediately evokes fears of radiation and its potential impact on community health:

We have not experienced any major power cuts, but when I hear about data centers, I feel they might emit radiation that could affect people's health.

This perception is not isolated. Concerns around “radiation” emerged as a recurring theme among villagers, despite limited understanding of what it entails or whether such risks are scientifically grounded. The persistence of these beliefs points to a gap in accessible information and underscores the need for greater awareness and community engagement around emerging digital infrastructure.

4.3 The Water Question

The Water Footprint

When it comes to water, India accounts for 18 per cent of the world's population but only 4 per cent of its water resources (World Bank, 2026). This figure becomes essential, as for AI data centers a substantial amount of water is needed particularly for evaporative and adiabatic cooling, which uses around 25.5 million litres of water in a 1 MW data centre annually. This is equivalent to the annual water consumption by 500 people as per Indian climate, with per person per day consumption being 135 litres (Mytton, 2021). Many Indian states and cities are already under warning that they may exhaust their groundwater resources by 2023, this includes Hyderabad as well (NITI Aayog, 2019). Telangana in general also experiences high water stress and water depletion levels, to an extent

that the state could face a ‘zero day’ water situation as early as 2034 (The Times of India, 2026). Sahana Goswami, a water expert at WRI, explained on this further:

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India accounts for 18 per cent of the world's population but only 4 per cent of its water resources (World Bank, 2026).

It's not that water will run out entirely, but the stress on supply will definitely increase. More vulnerable groups, especially those in informal settlements, are less likely to receive regular water, while even better-served areas may shift to alternate-day supply, something already common in summer but likely to become more acute. This makes it important to ask and understand how urban water systems will function when considering the impact of data centres.

While at the national level, the National Water Policy 2012, encourages sustainable use of water, but India still lacks specific directives for industries like data centers and how they should use water along with enforceable punishments. As a result, many data centers are still relying on groundwater and freshwater resources (Sen, 2025). An estimated 210 crore litres of water may be required annually to cool existing and upcoming data centres in and around Hyderabad (Deccan Chronicle, 2025).

Community Perspectives

The Rangareddy district, where Mekaguda and Begarikancha is located witnessed a significant groundwater depletion, with levels declining by -1.47 meters in 2025 (Telangana Today, 2025). While mission Bhagiratha scheme provides piped drinking water supply with 100 LPCD to every household, the scheme has also received some criticism for inconsistent maintenance and supply failures in certain pockets, which has forced communities to depend on borewells for water access, despite the known risks of high fluoride contamination in regions such as Nalgonda.

During one of the focus group discussions with farmers of Mekaguda, one member highlighted that:

"We already have water problems, due to borewells, the pipes are rusted. It is also because of water pollution due to chemicals produced by chemical industries. Now, in our village, all of us have pain in the legs. If you drink water, the pain in the legs will increase. The doctor nearby whom we visit often says that only people in this area have this issue."

water

While the water pollution is not a result of data centers in the vicinity, it is important to understand that the locals are already facing water issues when it comes to having fresh drinking water supply as well as concerns over ground water pollution due to the existence of other industries. The ASHA workers in Mekaguda also highlighted about the number of cases related to joint pain, respiratory issues, allergies, and chronic illness, as a result of water pollution, which has improved over the years now.

These accounts underscore the cumulative and layered nature of ecological stress in the many regions of India. It should be that data centres are not being introduced into environmentally intact or "pristine" landscapes; rather, they are being superimposed onto already industrialised and environmentally strained geographies. This additional layer of infrastructural demand further intensifies existing ecological vulnerabilities and resource pressures. From a feminist political ecology perspective, water must be understood as central to processes of social reproduction, including everyday activities such as cooking, cleaning, caregiving, and agricultural work. Consequently, any degradation or reallocation of water resources disproportionately affects those responsible for sustaining these reproductive labour systems, most often women.



Farmers and Diary workers sharing experiences with crop and cattle loss, Mekaguda

In Mekaguda, local communities have also raised concerns regarding groundwater extraction linked to data centre operations, however, these claims could not be independently verified in the case of Mekaguda. In contrast, a similar issue was formally documented in January 2026, when Microsoft in Noida was issued a notice by Uttar Pradesh authorities over alleged unauthorised groundwater extraction (Down To Earth, 2026). This indicates that concerns over groundwater use by large data centre facilities are not isolated, but part of a broader regulatory and environmental challenge emerging in different regions.

During an interview, Rohini Krishnamurthy, a Delhi-based journalist at Down To Earth, reflected on the challenges she encountered while seeking information from authorities regarding groundwater levels and data centre operations in north and south India. She shared that responses to basic questions, such as the number of data centres in operation, their sources of water, and the adequacy of standards governing reused water, were often unclear or inconsistent:

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Concerns over groundwater use by large data centre facilities are not isolated, but part of a broader regulatory and environmental challenge emerging in different regions.

How do you not know how many data centres are here and what is the source, you are talking about reused water, are there enough standards? They were all either confused or they did not have the answers. So, I was a bit taken aback by how the authorities do not know these things or they just intentionally do not tell you.

Another expert from Telangana, shared apprehension about ground water extraction by stating that:

The industries also put very deep rooted bore wells around 2000 feet, 3000 feet, like that. For farmers, 300 feet, 350 feet, or 400 feet bore wells are put. However, if once in the industrial area, deep bore wells are put, then the bore wells get dry. Who has to check them? Industry department, pollution control. These two have to be checked. Now these two are completely dead. What happens to the industries and their water usage? Once the industries get permission, they are left out. They run it as per their wish.



Water Body nearby AWS Data Center; With Begarikancha Panchayat Secretary

Regulatory Gap and Potential Solutions

Despite such concerns, under the Telangana state policy for data centres, firms are exempted from the purview of the Telangana Pollution Control Act. Furthermore, the policy also does not adequately address critical issues such as water sourcing constraints or the potential impacts on groundwater. This omission hints to a significant regulatory gap in managing the environmental implications of the data centers.

In the absence of stringent regulatory frameworks, companies continue to obtain environmental clearances despite local resistance. At the same time, firms have increasingly adopted strategies such as “water offsetting” to demonstrate environmental responsibility. Rohini Krishnamurthy, critically describes this practice as a myth:

There is a “water offsetting” myth. Amazon and Microsoft are heavily involved in it, with goals of achieving water neutrality. The idea is that if a company extracts a certain amount of water, it will “return” an equivalent amount to the community. Similar to carbon neutrality, this concept is applied to water. I visited a project in Bangalore where a lake is being rejuvenated, and Amazon

is using this as an offset for its water use in Mumbai and other locations where its data centres are situated. However, if water is extracted from Whitefield and the restoration is done in another state, it raises the question of how this actually benefits the local communities. It is a flawed concept, yet both Microsoft and Amazon have been adopting such practices.

However, the state is slowing planning and realising the rise in water demand in the coming years. As per a Deccan Chronicle report, the government plans to utilise a portion of the 1,100 million litres of grey water generated daily in Hyderabad to supply data centres. The proposed cost-sharing model suggests that central government funds may cover up to 25% of infrastructure costs, industries 50%, and the state the remaining share, with officials describing the arrangement as a “win-win” situation. However, this would require new supporting infrastructure, including pipelines and pumping stations, to transport treated water to emerging data centre clusters such as Bharat Future City (Deccan Chronicle, 2025).

Another IT expert from Telangana, Siddhartha Malempatti also reflects on the issue during an interview and notes that:

While for other industries water is used for circulation, but for data centers, water is used for consumption. Therefore, there should be more transparency from the industries end on their use and where do they get the resources from.

Therefore, interview insights help situate the local experiences within broader governance dynamics. There clearly appears to be a significant lack of transparency regarding water sourcing, extraction volumes, and regulatory oversight.

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Water offsetting is a flawed concept yet both Microsoft and Amazon have been adopting such practices.

4.4 The Livelihood and Aspiration Question

Scale and Nature of Employment

Upcoming data centers are often positioned as engines of economic growth; however, their employment generation patterns differ significantly from traditional industries. These facilities are highly capital-intensive and

automation-driven, which limits the scale of direct job creation.

While they involve substantial investments, the number of long-term jobs generated per facility remains relatively modest, typically amounting to only a few hundred positions. In contrast, a ₹ 10,000 crore manufacturing plant may generate around 10,000 jobs, whereas a data center of comparable investment yields far fewer employment opportunities. For example, Microsoft’s planned USD 1.81 billion data center in Hyderabad was expected to create approximately 300 jobs (Mordor Intelligence, Hyderabad Data Center Market Size, 2025). As a result, the employment impact of data centers is largely indirect, with greater effects seen in ancillary services and short-term construction activities rather than in sustained, large-scale job creation.

Aspirations and Perceptions in the Communities

The establishment of data centers and digital infrastructure raises strong aspirations among youth in nearby rural and semi-urban areas. These projects are seen as symbols of modernity and gateways to stable, well-paying jobs in the digital economy, often creating expectations of local employment and reduced migration. Dwelling on the question of employment opportunities arising from the Microsoft data center in Mekaguda and the surrounding region, Pandu Reddy, former Sarpanch (village head) of Mekaguda, observes:

Before thinking about villages like Mekaguda, we should first ask how many jobs will actually go to Telangana. If the state itself does not receive even ten jobs, then expecting even one job for a village becomes highly unlikely

However, these aspirations extend beyond income, reflecting desires for social mobility, dignity, and participation in a technology-driven future. At the same time, emerging realities around limited job creation are beginning to reshape these expectations. As Y. Shrinu, a dairy worker in Mekaguda, notes:

I had hoped to get an entry-level job, maybe as a security guard or helper when the data center came. But now, seeing how it actually operates, I understand that such opportunities are limited. That's why I turned towards the dairy business instead.

This highlights a growing gap between perceived opportunities and actual employment outcomes, influencing livelihood choices on the ground.



Angawadi center (Rural child-care and mother-care center) in Begarikancha built by AWS

Skills Mismatch and the Rural Employment Gap

Despite rising aspirations, a significant gap persists between the skills demanded by data center-related jobs and the capabilities of local youth. Technical roles typically require advanced training in areas such as networking, cloud computing, data management, and electrical systems, skills that are often not adequately developed in rural or semi-urban education systems. As a result, higher-skilled positions are frequently filled by candidates from urban areas or specialized institutions, limiting local participation in the most lucrative opportunities. Meanwhile, local youth are largely confined to low-skill, support-based roles. In Begarikancha, available jobs were largely restricted to low-wage roles:

Our people are working there as security guards or sanitation workers.

This mismatch highlights structural challenges: inadequate access to quality technical education, limited vocational training aligned with industry needs, and weak linkages between emerging infrastructure projects and local skill development ecosystems. Without targeted interventions such as localized training programs, industry partnerships, and digital literacy initiatives, the promise of inclusive growth through such infrastructure risks remaining unfulfilled.

4.5 Community Responses, Participation, and Democratic Exclusion

Governance emerges as a central concern across all discussions. Findings from the focus group discussions (FGDs) with members of Panchayati Raj institutions indicate that they experienced limited involvement in key decision-making processes, particularly in planning and land acquisition related to data center development in their regions. Participants consistently reported an absence of meaningful consultation, with ward members further highlighting a lack of foundational understanding of data center operations. This knowledge gap constrained their ability to effectively engage with or evaluate such projects.

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Participants consistently reported an absence of meaningful consultation, with ward members further highlighting a lack of foundational understanding of data center operations.

In addition, earlier sections have documented how researchers and journalists encountered significant barriers in accessing information on environmental compliance and patterns of resource use. These challenges point to systemic issues of transparency that extend beyond local governance structures.

Taken together, these observations suggest the presence of a dual form of exclusion. First, procedural exclusion is evident in the restricted participation of local representatives in formal decision-making processes. Second, epistemic exclusion manifests through limited access to critical knowledge and the marginalization of local expertise. These intertwined forms of exclusion serve to reinforce existing power asymmetries, ultimately constraining the

capacity of communities to meaningfully engage with, scrutinize, or contest large-scale infrastructure development.

Community responses to data center expansion are neither uniformly oppositional nor wholly supportive. Instead, they are marked by a complex and often contradictory sense of ambivalence. Participants across both Begarikancha and Mekaguda acknowledged certain visible benefits associated with infrastructure development, including improved road connectivity, better-built Anganwadi centers, and enhancements in local public facilities. These developments are often interpreted as signs of state attention and corporate presence, contributing to a perception of progress and inclusion within broader development trajectories.

However, these perceived benefits coexist with deeper concerns regarding land loss, water scarcity, declining agricultural viability, and uncertain livelihood prospects. Participants frequently articulated this tension, noting that while infrastructure improvements are tangible and immediate, their long-term implications remain unclear and potentially adverse. This produces a situation in which communities recognize development gains but remain apprehensive about their sustainability and distribution.



Community Workshop in Mekaguda

Importantly, this ambivalence is shaped by asymmetries in information and power. Limited access to clear and accessible information about data center operations, combined with the technical complexity of digital infrastructure, constrains the ability of communities to fully assess potential risks and benefits. As a result, acceptance is often conditional and provisional, rather than informed and participatory. This dynamic can be understood as a form of negotiated development, where communities engage with infrastructure projects within contexts of constrained choice, incomplete information, and uneven bargaining power. Rather than active consent or outright resistance, responses are mediated by necessity, uncertainty, and adaptation. From a data justice perspective, this reflects limitations in meaningful participation, where communities are included in development outcomes but excluded from decision-making processes.



Farmers engaged in discussion, sharing concerns and questions in Begarikancha

4.6 Anticipating the Future

Across both FGDs and interviews, participants consistently framed the impacts of data center expansion in terms of intergenerational consequences. Concerns were not limited to immediate changes in land ownership or employment but extended to questions about the long-term viability of livelihoods, the sustainability of natural resources, and the future of younger generations.

Farmers in Begarikancha expressed anxiety about the decline of agriculture as a viable occupation, noting that the loss of land and water resources reduces opportunities for future generations to engage in farming.

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The category of “affected communities” cannot be confined to those directly displaced or immediately impacted by land acquisition. Instead, it must also include those who are indirectly affected through changes in resource distribution, ecological conditions, and governance structures over time.

Similarly, in Mekaguda, participants highlighted how environmental degradation and livelihood uncertainty are shaping the prospects of youth, who face limited employment options and increasing dependence on precarious work. These concerns are further structured by existing inequalities. Access to education, land, and alternative employment opportunities varies significantly across caste, class, and gender, shaping how different groups experience and anticipate the future. For marginalized communities, the erosion of traditional livelihoods is not easily offset by entry into new economic sectors, particularly when these sectors require skills or resources that are not locally accessible.

4.7 Expanding the Category of “Affected Communities”

Furthermore, the emphasis on intergenerational impacts expands the analytical scope of the study. It suggests that the category of “affected communities” cannot be confined to those directly displaced or immediately impacted by land acquisition. Instead, it must also include

those who are indirectly affected through changes in resource distribution, ecological conditions, and governance structures over time.

This expanded understanding is particularly important in the context of data centers, whose resource demands, especially water and energy, extend beyond site-specific boundaries. The reallocation of these resources at regional and state levels generates ripple effects that influence broader populations, including those geographically distant from data center sites.

4.8 Toward Rights-Based Digital Infrastructure Governance

The analysis demonstrates that data center expansion is not merely a technological or economic process but a broader transformation of socio-ecological systems. These infrastructures reorganize land use, intensify pressure on water and energy resources, reshape livelihood systems, and reconfigure governance relationships between communities and the state.

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Across Begarikancha and Mekaguda, the findings reveal a consistent pattern: while data centers are promoted within policy narratives as engines of growth and innovation, their impacts are unevenly distributed. Benefits, such as infrastructure improvements and limited employment opportunities, are often selective and localized, while costs, particularly those related to land loss, water stress, ecological degradation, and livelihood disruption, are borne disproportionately by communities directly dependent on natural resources.

These perspectives point toward the need for a rights-based approach to digital infrastructure governance. Such an approach would require:

- Ecological sustainability, ensuring that infrastructure development does not exceed the carrying capacity of local environments or exacerbate existing resource stress

- Equitable distribution, addressing disparities in how costs and benefits are allocated across communities
- Meaningful participation, enabling affected communities to engage in decision-making processes in informed and substantive ways
- Recognition of community knowledge, valuing local experiences and ecological understanding as integral to governance

In this context, taking the concept of “Earthcare,” the study argues that practices of care, as well as action, are important for transitioning to an economically and socially just society. It emphasises that even small narratives of resistance, care, participation can produce tangible evidence, and that sharing these can help move towards positive ways of achieving planetary survival.



Mekaguda community exploring DEF's modules built for local learning

05 Conclusion

The expansion of data centers in Telangana reveals a clear tension in how digital development is unfolding. While these infrastructures are often presented as symbols of progress and drivers of AI-led growth, their presence is also felt in very material ways through increasing pressure on land, water, energy, and local livelihoods. In places like Begarikancha and Mekaguda, people are not experiencing digital infrastructure as something abstract or distant, but also as something that reshapes everyday life and future. What emerges from these experiences is that these outcomes are not predetermined. They are shaped by the decisions that are made, the voices that are included or excluded, and the power dynamics that determine whose needs are prioritized. For many residents, the benefits associated with development coexist with uncertainty about long-term costs, especially for agriculture, water access, and future generations.

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Bringing justice into AI governance therefore requires paying attention not only to data and algorithms, but also to the everyday realities of the communities who live alongside this infrastructure.

These local perspectives also point to a gap in broader conversations on AI governance. Much of the global discussion remains focused on innovation and regulation at a technical level, often far removed from the places where these systems actually depend on land, water, and energy. Bringing justice into AI governance therefore requires paying attention not only to data and algorithms, but also to the everyday realities of the communities who live alongside this infrastructure. Ultimately, building fair and sustainable digital futures depends on grounding global frameworks in these lived experiences. It means recognizing that people

affected by data centers are not just passive recipients of development, but active witnesses and stakeholders in how digital systems are built, sustained, and governed.



Community in Mekaguda engaging in dialogue on awareness, inclusion, and the local impacts of data centres.

Recommendations

The findings of this study demonstrate that data center expansion is not only a technological or economic process but a broader socio-ecological transformation that reshapes land, water, energy, livelihoods, and governance systems. Addressing these impacts requires a shift toward rights-based, transparent, and accountable governance frameworks that align digital infrastructure development with ecological sustainability and social justice.

“Mandate integrated and cumulative impact assessments across land, water, energy, and livelihoods, and incorporate socio-ecological thresholds into siting and approval decisions.”

1. Recognize Data Centers as Socio-Ecological Infrastructure

Policy frameworks must treat data centers as resource-intensive infrastructures with interconnected environmental and social impacts. Mandate integrated and cumulative impact assessments across land, water, energy, and livelihoods, and incorporate socio-ecological thresholds into siting and approval decisions.

2. Institutionalize Transparency and Public Disclosure

Ensure standardized, verifiable, and accessible information on data center operations. Disclose land acquisition details, compensation structures, and prior land use; report water use (sources, volumes, recycling) and energy consumption (demand, sourcing); and publish livelihood impacts, including employment quality and local hiring. Ensure disclosures are periodic, publicly accessible, and available in local

languages, with independent auditing mechanisms.

3. Strengthen Environmental and Labor Regulation

Ensure full regulatory oversight without exemptions. Remove exemptions from environmental and labor compliance frameworks, mandate adherence to environmental clearances and pollution control norms, and link approvals to enforceable environmental and social safeguards.

4. Ensure Equitable Land and Resource Governance

Address structural inequities in land acquisition and resource access. Develop compensation frameworks reflecting long-term value and livelihood loss, recognize informal and customary land rights, and protect commons, water bodies, and ecological resources from conversion.

“Remove exemptions from environmental and labor compliance frameworks, mandate adherence to environmental clearances and pollution control norms,”

5. Govern Water and Energy Use Sustainably

Manage critical resources to prevent local scarcity and inequitable access. Restrict siting in water-stressed regions, prioritize drinking water and agriculture, mandate water audits and recycling, promote low-water cooling technologies, ensure energy allocation does not compromise essential needs, incentivize renewable energy adoption, and assess grid impacts prior to approvals.

6. Enable Meaningful Community Participation

Move from token consultation to informed and substantive engagement. Mandate free, prior, and informed consent (FPIC), strengthen the role of Panchayati Raj Institutions in decision-making and oversight, and establish accessible and transparent grievance redressal mechanisms.

7. Integrate Local Knowledge and Build Capacity

Strengthen governance through inclusive knowledge systems and institutional capability. Incorporate community knowledge into planning and environmental assessments, develop participatory monitoring systems, and build capacity within government institutions to regulate socio-ecological impacts.

8. Ensure Corporate Accountability and Responsible Incentives

Align public support with measurable public outcomes. Review and rationalize subsidies, link incentives to environmental and social performance, require contributions to local development, and ensure transparency in public-private partnerships.

9. Support Livelihood Transitions and Economic Justice

Address long-term livelihood disruptions and inequality. Implement rehabilitation frameworks beyond one-time compensation, invest in accessible skill development, monitor local employment commitments, and provide income and social protection where livelihood loss is irreversible.

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Capture the full scope of infrastructure impacts by including indirect and resource-based effects and adopting lifecycle approaches to planning and evaluation.

10. Expand the Definition of Affected Communities

Capture the full scope of infrastructure impacts by including indirect and resource-based effects and adopting lifecycle approaches to planning and evaluation.

11. Adopt a Rights-Based Approach to Data Infrastructure Governance

Embed justice principles across all policy and regulatory systems by aligning governance with environmental justice and human rights frameworks, institutionalizing equity, participation, and recognition, strengthening accountability for state and corporate actors, and supporting interdisciplinary, long-term research for adaptive governance.

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