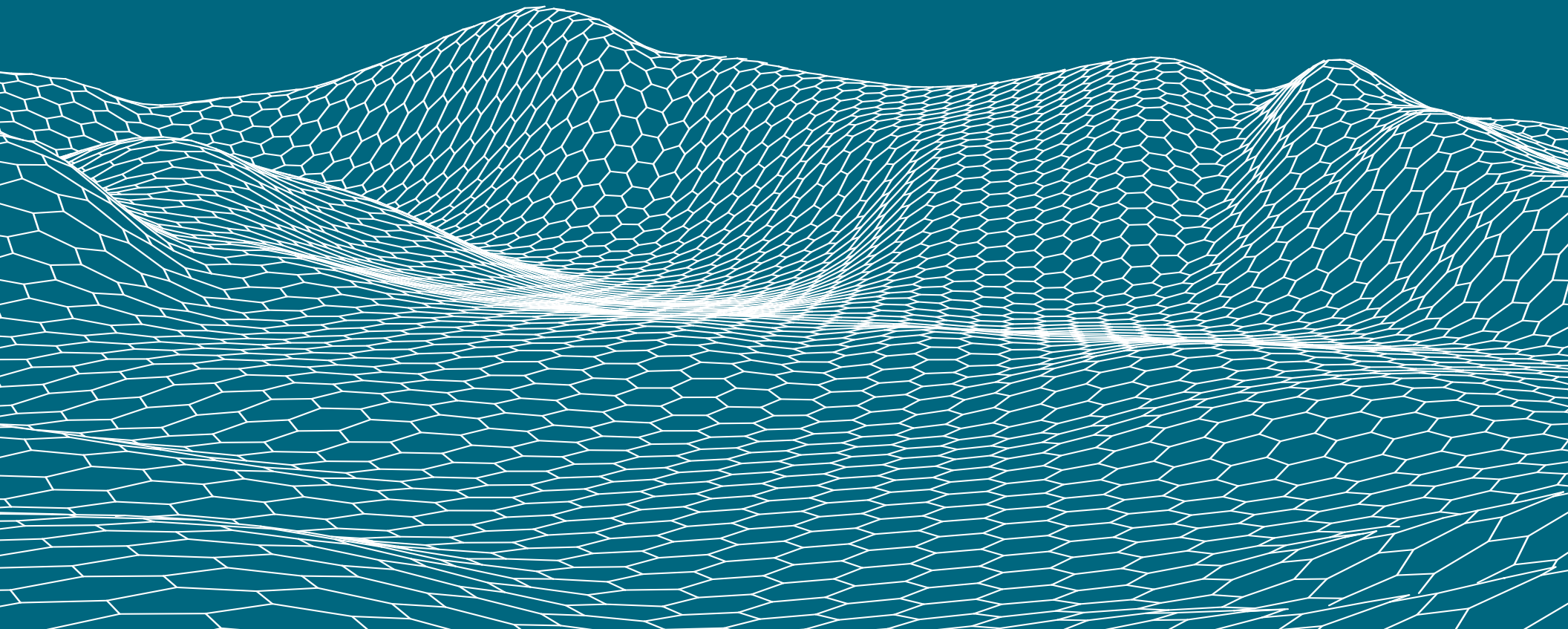

PURA: Addressing Rural Poverty in India

REACH PROJECT



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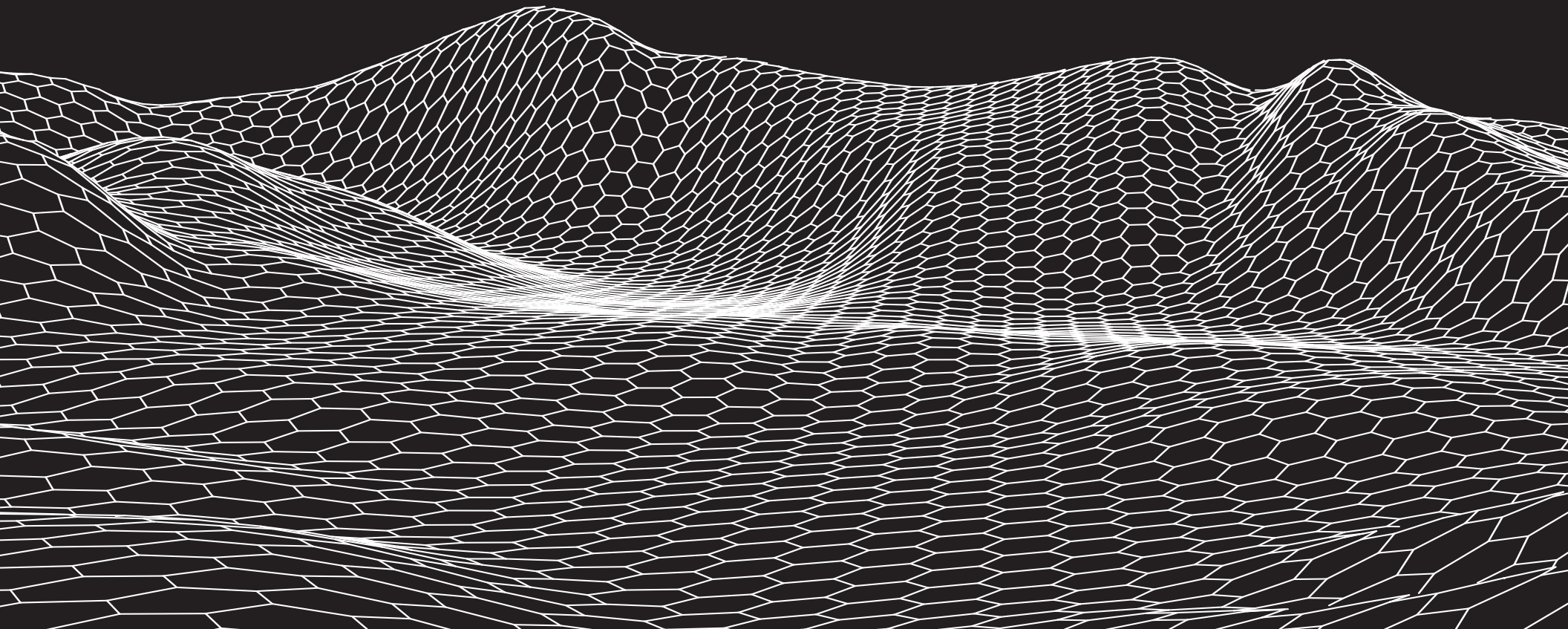
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CONTENTS

Rural Poverty in India: Context	4
India's Rural Development Policies	7
Conceptualizing PURA	10
Implementation of PURA	13
Lessons Learned	22

Rural Poverty in India: Context



According to the last census of India, which was conducted in 2011, 833 million people live in the country's rural areas—almost 68 percent of the total population. Even as poverty has diminished overall, rural poverty has declined at a slower rate than urban poverty. Rural incomes have stagnated and many rural areas also lack access to health care, sanitation, education, nutrition, and land. This, in turn, has reinforced the cycle of poverty.

Faced with a lack of social and physical infrastructure, many Indians continue to leave their rural homes to seek better opportunities in urban centers. Urbanization in the country grew from 27.81 percent in 2001 to 31.16 percent in 2011. Growing urbanization rates are expected to affect every Indian state and to alter India's economy.¹ According to the Ministry of Rural Development, "in 1995, India's GDP split almost evenly between its rural and urban economies. In 2008, its urban GDP is accounting for 58 percent of its overall GDP and if the current trend continues it is expected that urban India will generate 70 percent of India's GDP by 2030."²

Cities are unprepared to host the sizeable populations migrating from rural areas. The cascading effects of poverty and unemployment are transferred to cities, leading to the growth of slums across the country. According to government estimates, as income and populations increase simultaneously, demand for services will increase between five and seven times in almost every city, further worsening an already dire situation.

The government recognizes the need to address these issues and has launched multiple schemes over the past several decades. Large welfare programs such as the National Food Security Act have attempted to reduce the rural-urban divide.



FIGURE 1. Kharadiya, a remote village five hours' drive, then a thirty-minute walk from the nearest rural center

India's safety net is tremendously complex, and although there are more than 950 centrally funded subsidies and programs, much of the money spent never reaches the hardest to reach.

The country's over-reliance on providing subsidies for water, power, and other resources has proved so inefficient that, according to the World Bank, India could cut poverty at least as much by pooling the money it offers under subsidies and dividing it among every citizen, rich or poor.³ The Ministry of Rural Development's one-size-fits-all strategies have failed to account for rural

diversity and thus have been largely ineffective at addressing local needs. India now faces an unprecedented policy challenge—to reduce the rural-urban divide and decrease the rate of migration to cities.

PURA (Providing Urban Amenities to Rural Areas) was developed as an innovative attempt

¹ Krishnavatar Sharma, "India Has 139 Million Internal Migrants. They Must Not Be Forgotten," [World Economic Forum](#), 1 October 2017.

² Ibid.

³ "A Better Anti-Poverty Plan for India," [The Economist](#), 6 April 2019.

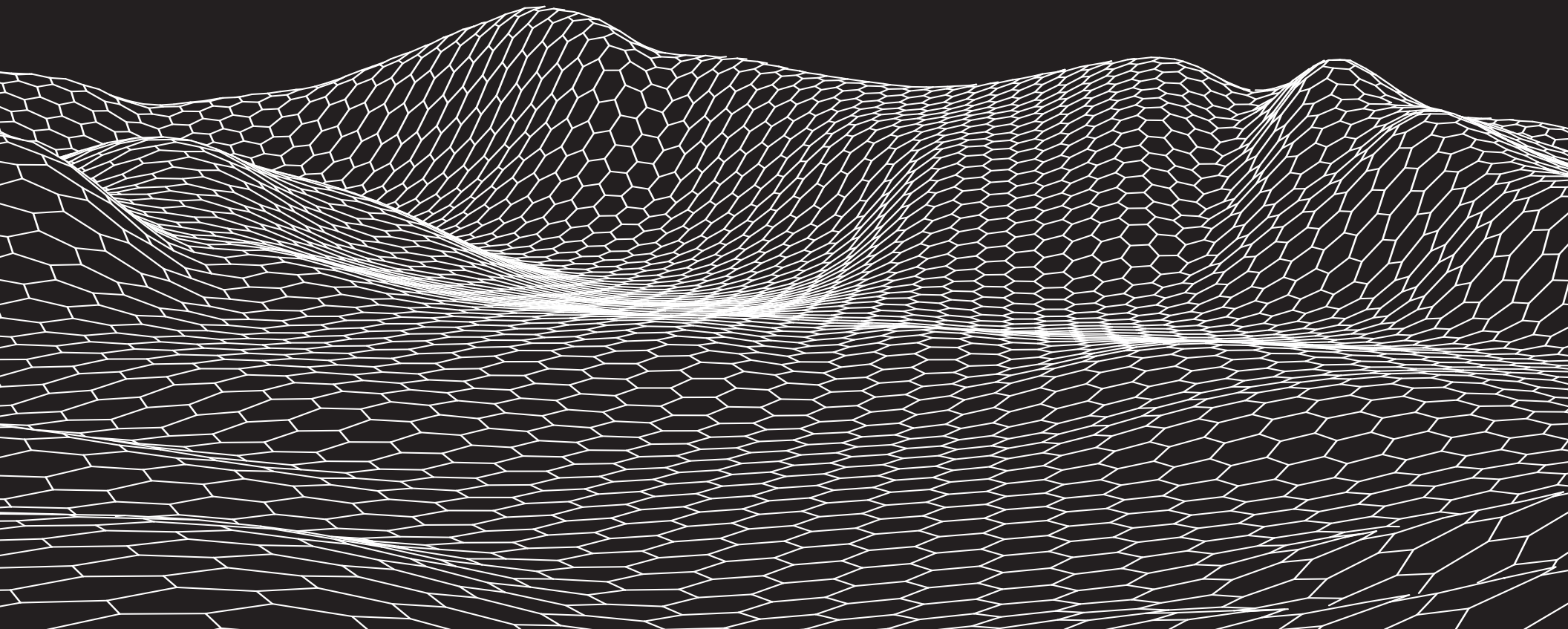
to address the challenges of rural poverty. It especially sought to stem the flow of rural to urban migration by ensuring that the same “amenities”—the quality of services, employment opportunities, and other resources—were available to the inhabitants of both urban and rural areas.

The use of the term *urban amenities* is somewhat imprecise—PURA was intended to operate as a holistic plan to positively affect all areas of rural life. It aimed to move beyond governmental strategies based merely on providing subsidies, which were viewed as “quick fixes” without lasting impact. PURA’s proponents viewed essential resources such as access to goods and services, health care, and education as “fundamental building blocks for empowering rural regions”⁴ and for ensuring their sustainability.

PURA’s vision has been implemented in three formats: public, private, and as a public-private partnership (PPP), with each model encountering its own set of obstacles. We analyze these challenges while highlighting certain successful initiatives, in particular in Odanthurai and at Periyar Maniammai Institute of Science and Technology. While PURA was informed by a very insightful vision of self-reinforcing strategies for rural development, in practice it often failed to deliver on its promise of reaching the hardest to reach in India’s villages.

⁴ APJ Abdul Kalam and Srijan Pal Singh, *Target 3 Billion; PURA: Innovative Solutions Towards Sustainable Development* (Penguin Books India, 2011), 97.

India's Rural Development Policies



GOVERNMENT CENTRALIZATION

India's failure to adequately address complex local development issues is related in part to the country's federal system. Its highly centralized decision-making apparatus repeatedly fails to account for the diverse needs of its villages, often giving rise to decentralized methods of service delivery that are financially and institutionally dependent on the central government.

The majority of taxation is levied by the central government, which contributes to the Union Tax Revenue (UTR).⁵ A share of the UTR is distributed to India's twenty-nine states. Although state governments collect their own taxes, they are dependent on the UTR because the central government's disbursement exceeds the tax revenue that all states jointly collect. States are therefore subject to central government control and receive funds based on budget allocations made at the federal level. The central government makes decisions about rural development projects it believes a state should prioritize, leading to potential conflicts between what a state needs, and what the central government prioritizes and finances.

To further compound the potential for misaligned priorities, each state is divided into districts, with respective district administrations (DAs). Cities and villages fall under these DAs' jurisdiction. Each city has a municipal government that coordinates with its DA on development projects. Villages, on the other hand, have individual village councils called *panchayats*. Each village elects *panchayat* officials to represent its specific needs to the other levels of government. Because

municipalities and *panchayats* mostly depend on the state for funding, each municipality's priorities are influenced by the funding they secure from the central government and by dealing with the bureaucracy of actually receiving that money as it flows through state governments.

The *panchayats* belong to a three-tier system. At the bottom of the hierarchy is the *gram panchayat*, which represents individual villages. The second tier is the bloc *panchayat*, which is a council of the *gram panchayats* chiefs. These elected leaders represent their geographical bloc at the top tier of the *panchayat* system—the *district*, or *zila panchayat*. *Panchayats* are an extended governance arm of the DA, and also represent their constituencies to the state government. They therefore face the challenge of representing their villages' needs while abiding by decisions made by the DA.

DAs are primarily responsible for service delivery to the *panchayats*' respective villages, but sources indicated that the private sector is often subcontracted or otherwise relied on to provide the actual services through government procurement or corporate social responsibility (CSR) projects. Certain PURA projects are an example of this, where decentralized, individual agents filled the needs identified through centralized rural development planning. This potential friction between centralized decision making and diverse needs met by individual efforts has caused significant inefficiencies in implementing rural development projects—

inefficiencies that are further compounded by structural challenges.

In certain states, the *panchayat* may also enter into contracts with private actors without approval from higher levels of government. We observed this dynamic in some PURA projects. Even in such cases, the project's execution still depends on permits and regulatory approvals from the DA.

STRUCTURAL CHALLENGES

The implementation of rural development programs faces three main challenges: instability caused by electoral politics, corruption, and bureaucratic inefficiency.

India holds federal elections every five years. In the last three decades, two major parties have emerged and traded election victories: the Bharatiya Janata Party (BJP) and the Indian National Congress (INC). Frequent political changes have caused significant repeals and restructuring of programs instituted by previous governments. Even when the INC and BJP have similar or identical policy priorities, each party has renamed and relaunched existing government programs to claim them as their own. This pattern has led to inefficiencies and reshuffled funding. In 2016, PURA was relaunched as Rurban—an existing project rebranded in the name of party politics.

India's federal structure is supplemented by a complex bureaucracy administered by the Indian Administrative Services (IAS). IAS officers at all levels of government are responsible for districts

⁵ Pursuant to article 246 of the Indian constitution, income tax, customs duties, corporation taxes, and GST all fall within the "Union Tax Revenue," which makes up the majority of the national tax revenue.

and specific ministries. In order for funding from the central government to reach the end user (often the hardest to reach), it must pass through several layers of federal and state ministries and gain bureaucratic approval.

However, this structure is characterized by systemic corruption. Government officials and bureaucrats are known to request bribes to move funding proposals along the chain or skim money off the top. Such cash leakages reduce available public funds before reaching the intended beneficiary.

To further complicate matters, singular projects at the village level may require approval from multiple central government ministries. For example, a water sanitation program in a rural area requires the approval of all relevant federal and state ministries (including the Ministry of Rural Development, Ministry of Water and Sanitation, etc.) As a result, there are several points of veto where a program can fail, despite being well designed and garnering political consensus.

At the DAs' helm are the district collectors (DCs), or district magistrates, who are bureaucrats. DCs are responsible for approving and implementing all development programs. A DC is usually based out of a district for seven years; their frequent turnover means that DCs often struggle to build long-term relationships or gain relevant expertise on the district. Every new DC has to rebuild connections with constituents and spend considerable time learning the district's priorities. As a result, bureaucracy moves extremely slowly.

DCs do not have enough time to efficiently supervise the full spectrum of district programs.

They pick and choose the projects they prioritize, sometimes based on their personal opinions, or on the preferences of members of other levels of government. Their seven-year rotation means that a project may have support for a time but will be abandoned if the next DC has different priorities.

DEFINING VILLAGES

The structural challenges affecting rural development are further compounded by the lack of a homogeneous definition of what constitutes a village. Each state can define which communities are classified as villages. Given that urban centers are not afforded the same benefits as villages, many villages lobby to maintain their legal status to keep receiving funding, despite having large populations. Many "urban villages" therefore resemble cities but are still classified as villages.

To address these heterogeneous definitions and the proliferation of "urban villages," the Census Bureau has developed its own classification. "Census towns" are designated when the bureau conducts its decennial census survey. A village is classified as a census town if it has a minimum population of 5,000, at least 75 percent of the male working population is engaged in non-agricultural sectors, and it has a population density of at least 400 people per square kilometer. This definition does not override the area's legal status based on the constitutional or state definitions but is used by the Census Bureau as a method of data collection.

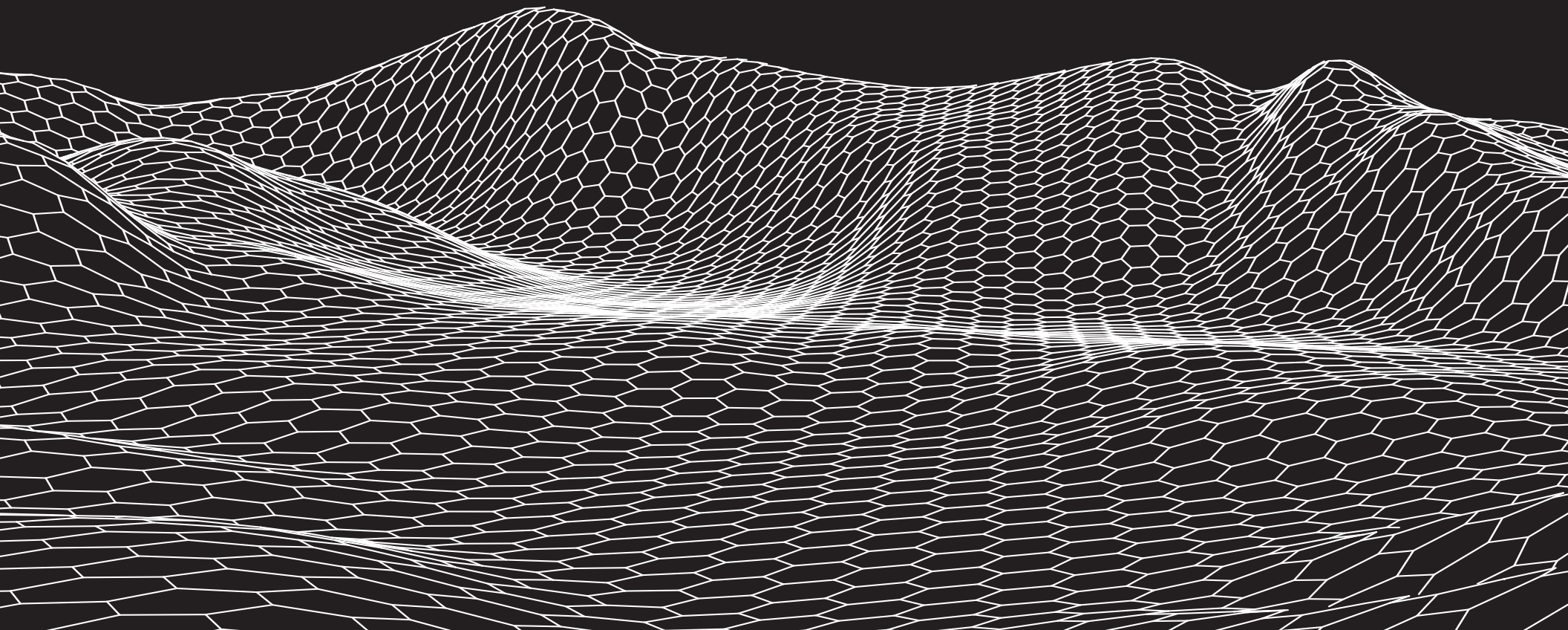
Census towns tend to have higher population density and greater access to public services. They also have access to the common pot of rural development program funds, despite not requiring

the same level of governmental assistance as traditional villages.

SUMMARY

Because rural development depends on central government support, there needs to be a coherent strategy from the center. Implementing this strategy involves navigating structural challenges and properly defining what qualifies as a village. Thus, rural development in India struggles to make its way through multiple layers of government while struggling to reach its end users.

Conceptualizing PURA



A number of individuals were involved in the initial conception and development of PURA (Providing Urban Amenities to Rural Areas). Professor PV Indiresan has been credited as the original “visionary” of the project, but PURA was widely promoted and popularized by the former president of India, APJ Abdul Kalam, who worked closely with Indiresan. The project’s architects also drew on programs that were already in operation across the country, including the initiative at Periyar Maniammai University.

FOUR CONNECTIVITIES

Dr. Kalam co-authored a number of books endorsing PURA and explaining how it offers an “innovative solution towards sustainable development.”⁶ He identified four types of “connectivities” that he considered essential for the project’s success: physical, electronic, knowledge, and economic. Physical connectivity refers to developing infrastructure to connect rural areas through roads, healthcare facilities, and public transportation. Public infrastructure is an “enabler” to connect villages to one another and to place them within the reach of urban centers to facilitate the movement of goods and people and allow access to different markets.

Electronic connectivity focuses on creating networks through communication and technology, including improving wireless and broadband capabilities, and developing e-banking and telemedicine systems. Knowledge connectivity was intended to develop the information and education available to rural populations through schools and vocational training, as well as to promote a greater understanding of waste and water management and other important skills. Economic connectivity refers to employment creation, entrepreneurship, and the growth of industries, which would follow from the realization of the other connectivities.

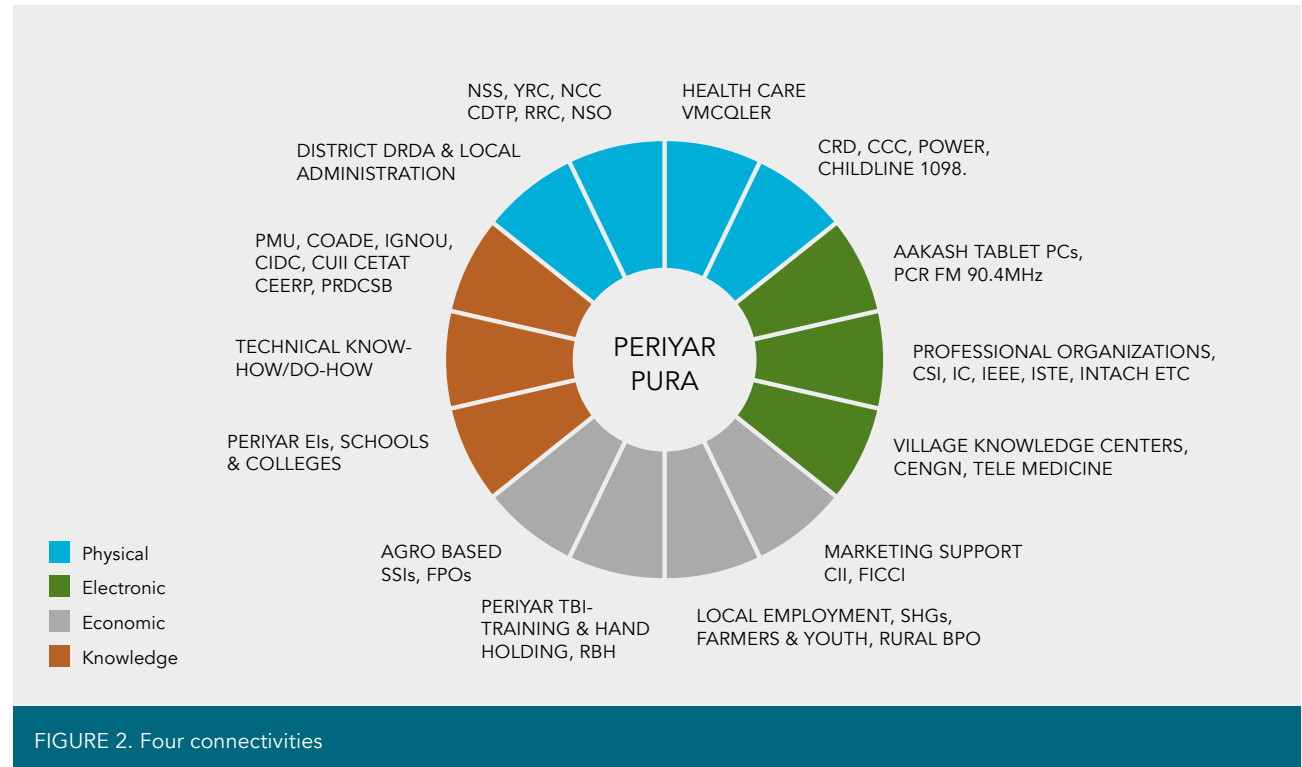


FIGURE 2. Four connectivities

Operating in concert, these connectivities would reinforce one another. For instance, PURA’s designers accepted that building roads was essentially meaningless without a public transportation system that would allow villagers to travel on them. Electronic connectivity would not be achieved unless individuals were provided with the knowledge to effectively make use of new technologies.

VILLAGE CLUSTERS

Central to the envisioned PURA design was the development of clusters of proximate villages.

A ring road would be built around the villages, physically linking them. They would share basic infrastructure such as healthcare facilities and educational institutions, and a cluster would reduce marginal cost and optimize scale in service delivery. Each village cluster would also identify one or more “core competencies”—essentially the basis for economic contributions the cluster could provide.

PURA’s champions recognized that PURA was essentially a meta model rather than a one-size-

⁶ Abdul Kalam and Singh, *Target 3 Billion*.

fits-all approach. It was intended to be customized to the skills and resources available to each cluster of villages to present a workable, sustainable solution based on local capabilities. According to Kalam, this “decentralization of the last mile solution will be the key.”⁷

POSSIBLE STRUCTURES FOR PURA

In his book *Target 3 Billion*, Kalam envisioned PURA as a collaborative project between the public and the private sectors with state government leadership. This would ultimately transition into what he referred to as a private-public-community-partnership model. The project’s first iteration was publicly funded with resources from the central government.

Normally governments are responsible for providing essential services, such as health care, access to clean water, and transportation. Provision of such services must account for both supply and demand. The supply side relates to the existence of facilities, infrastructure, and personnel to deliver the services, while demand side refers to the uptake of services provided. For example, while the government can build schools to address the supply side of service provision, families may decide to have their children work to increase their monthly income instead of going to school. In this case, demand-side solutions (such as conditional cash transfers) may be necessary. PURA focused on the supply side.

The public sector can both fund and deliver services, but it can also finance services and outsource their delivery to private firms. For example, the Indian Ministry of Renewable Energy has identified solar panels as an effective method of providing electricity to the hardest-to-reach places. The government funds solar panel installation but has entered into contracts with private firms like Veriown to deliver the panels to rural areas.

Private actors may be involved for a variety of reasons: corporations might perceive such contracts to be a profitable opportunity, NGOs may see these projects as part of their mission, or companies may embrace these initiatives as corporate social responsibility (CSR) programs, which are mandatory in India. Despite private-sector involvement, these schemes are considered public because they are driven and funded by the government.

The Public-Private Partnership (PPP) model also involves the private sector, but with risk sharing between public and private partners. Unlike government grant procurement, PPPs compel the private sector to share in the risk of project failure through equity buy-in.⁸ Our secondary research began with the assumption that PURA was operating as a PPP model, given that the Asian Development Bank had developed a PPP structure for its implementation.

In the field, however, we found a different reality. PURA was initially implemented as a publicly funded project, but this central government initiative did not move past its pilot phase. The PPP model was then proposed as an alternative but had the same fate. Many of the current successful versions of PURA are mainly private, run exclusively by private actors or civil society organizations.

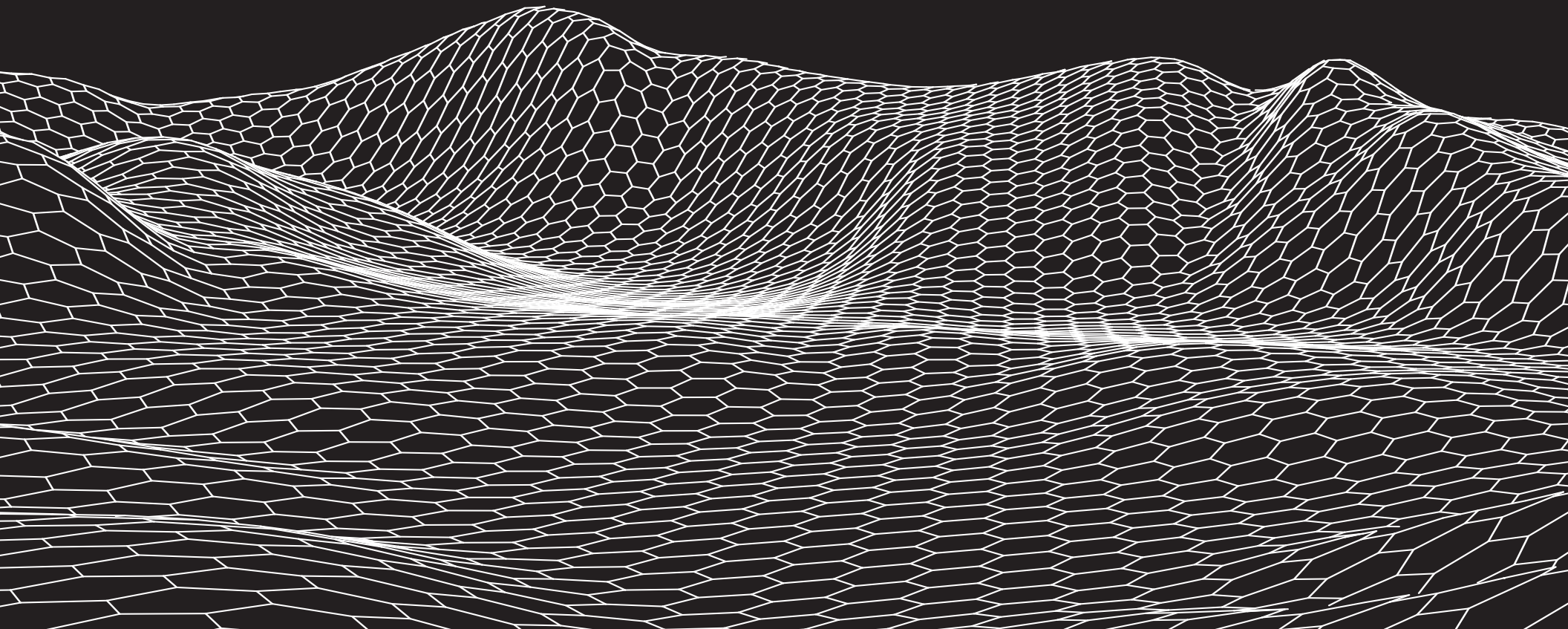
SUMMARY

The visionaries of PURA conceptualized the program as a means to connect hard-to-reach villages. They envisioned rural areas connected to each other and to urban centers to reduce physical barriers to reach, instigate economic integration, proliferate knowledge, and utilize technology.

⁷ Ibid., 19.

⁸ There is debate around the precise definition of the term PPP; see “Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money,” © OECD. Our definition includes risk sharing between parties.

Implementation of PURA



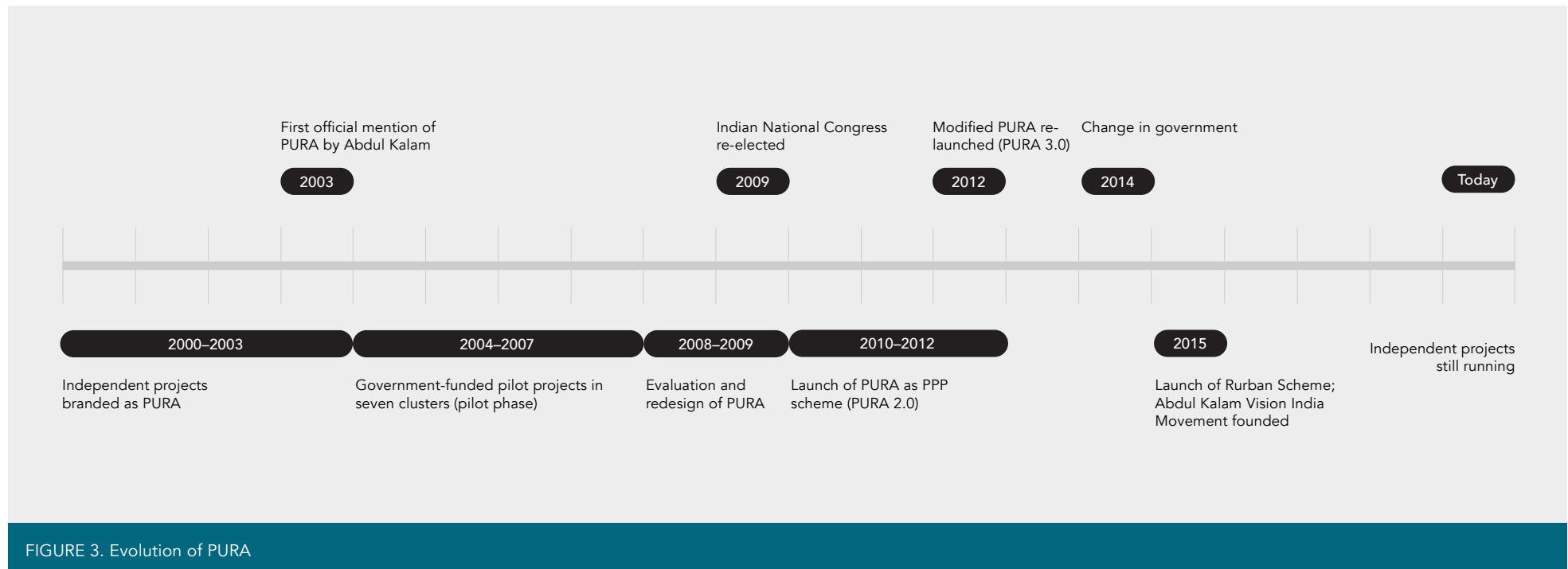


FIGURE 3. Evolution of PURA

Professor PV Indiresan's goal in envisioning PURA was to reduce unplanned, large-scale migration and prevent rural and urban distress. Dr. Kalam was especially attracted to these ideas of PURA and became its staunch advocate. Between 2000 and 2001 Kalam served as the principal scientific advisor to the government and proposed PURA as a governmental strategy. The initiative was approved shortly after and gained considerable momentum when he was elected the eleventh president of India in July 2002.

The president's role is largely ceremonial in India. Executive authority lies in the hands of the prime

minister and his or her cabinet, and the president's role is not particularly relevant to the operation of governmental programs. Presidents have neither the authority to assign resources nor to directly propose bills to parliament. However, PURA was an exception. President Kalam used the office's visibility to promote the rural development project as his own and he was a great champion of PURA.

From 2000 to 2003, Kalam and Indiresan branded Periyar, Loni, Chitrakoot, and Bhimavaram as PURA villages. These projects were similar to what Kalam proposed for all of India: they had been started by diverse groups, with the participation of

businesses, institutions, and communities.

"PURA 1.0" was officially mentioned for the first time during Kalam's speech on Republic Day, 2003. Projects in seven clusters were implemented between 2004 and 2007: Basmath (Maharashtra), Bharthana (Uttar Pradesh), Gohpur (Assam), Kujanga (Orissa), Motipur (Bihar), Rayadurg (Andhra Pradesh), and Shahpura (Rajasthan). According to the working group on PURA, there was a budget of 40 to 50 million rupees per cluster. Agencies who were supposed to implement PURA projects were responsible for providing village-level connectivity relating

to basic services, transport, power, electronic knowledge, and providing drinking water and healthcare facilities but it is still unclear how much they accomplished. The scheme went through a process of evaluation and restructuring between 2008 and 2009.

PURA 2.0 launched in 2010 as a venture between *panchayats* and private-sector partners, including companies and NGOs. Projects were to be proposed, implemented, and managed by the private sector but designed in a way that would address local needs identified by the *gram panchayat*. The strategy was governed by concession agreements and state support agreements for a period of thirteen years—three for the development of the facilities and ten for the operation and maintenance of infrastructure.

The government received ninety-three applications from the private sector and approved nine proposals (in Andhra Pradesh, Kerala, Maharashtra, Puducherry, Rajasthan, and Uttarakhand). Only three of these projects reached the point of signing a concession agreement, but in the end none obtained all the bureaucratic authorizations required by central and state governments. By 2012 it was clear that the approach needed to be restructured.

In February 2012, Rural Development Minister Jairam Ramesh stated that “Abdul Kalam’s project [had] failed,” and he announced the launch of a restructured version of PURA (PURA 3.0) in regions that were “neither rural ... nor completely urban.”⁹ Ramesh’s PURA garnered a lot of interest from the private sector. Out of the 105 expressions of interest the government received, forty-seven

were shortlisted for requests for proposals. However, none have been implemented.

Elections altered the political landscape in 2014 and the new government made no allocation for PURA projects in the Union Budget 2014–2015. Instead, the National Democratic Alliance (NDA) introduced their own vision for rural development with the Shyama Prasad Mukherjee Rurban Mission (or “Rurban”) and allocated 1 billion Indian rupees (approximately USD 14 million) to the initiative. A senior government official mentioned that “the new government now wants to replicate the Gujarat model at the national level to provide urban amenities in rural parts of the country. Consequently, we will subsume PURA into the Rurban Mission.”¹⁰ The Rurban scheme has been in operation since then.

PURA TODAY

In limited instances, the initial vision of PURA as a holistic solution for rural development appears to have been realized, as is the case with Periyar PURA, but in most cases the term *PURA* is used very loosely. PURA projects today span both centralized and decentralized approaches to private, public, and PPP models, but these cannot be harmonized under a single unifying strategy, and there are questions about whether these initiatives live up to the ideal form of PURA its visionaries articulated.

PUBLIC

Public efforts to implement PURA can be categorized as both centralized and decentralized. The federal government’s top-down strategy

proposed by Dr. Kalam is centralized, while a *panchayat’s* bottom-up approach exemplifies decentralized efforts.

Centralized Approach

Kalam presented the PURA concept as a governmental scheme in 2013. He quoted the Ministry of Rural Development:

PURA was envisaged as a self-sustainable and viable model of service delivery to be managed through an implementation framework between local people, public authorities and the private sector. The Government support would be in the form of finding the right type of management structure to develop and maintain rural infrastructure, empowering such management structure and providing initial economic support.¹¹

As a first stage, pilot projects were proposed, both to show that the concept could work, but also to gather political support to further scale the project. Between 2004 and 2007, seven projects were reportedly implemented. For their development, a budget of 40 to 50 million rupees (approximately 550,000 to 700,000 USD) was allotted to each project to create physical, electronic, and knowledge connectivities that would eventually lead to sustained economic activity. Infrastructure was planned to provide basic services.

⁹ “APJ Kalam’s PURA Project a ‘Complete Failure’: Jairam Ramesh,” *India Times*, 24 February 2012.

¹⁰ *Ibid.*

¹¹ PURA Guidelines  by the 11th Planning Commission of the Government of India.

There is little information regarding the current status of the infrastructure developed under the PURA scheme in this initial phase. According to a report from the Standing Committee on Rural Development, “no concrete infrastructure has been created in any of the [PURA] pilot projects.”¹² Moreover, no information regarding the implementation of connectivities was publicly available. An evaluation conducted by the Ministry of Rural Development between 2008 and 2009 stated that the pilot phase of PURA was not successful for the following reasons:

1. The projects lacked a detailed business plan that identified the potential of each cluster.
2. The pilots were infrastructure oriented with little attention to the development of economic activities.
3. The selection process did not consider each cluster’s growth potential.
4. There was poor institutional infrastructure with no ownership from the state government.
5. There was no successful convergence with other rural strategies.¹³

Based on the NIRD’s findings, recommendations from the Asian Development Bank, feedback from other ministries, and consultations with the private sector, the PURA scheme was restructured as a PPP model.

Decentralized Approach

Odanthurai is a group of a dozen villages located in a rural area of the state of Tamil Nadu. Before 1996, almost all its inhabitants lived in huts and lacked basic amenities. However, the election of *panchayat* president R. Shanmugam brought dramatic changes to the area when he introduced multiple programs to turn Odanthurai into a model village for the rest of India.



FIGURE 4. Mobile hospitals help extend the reach of health services in rural areas lacking infrastructure

In 1996, while conducting a financial analysis of the village, Shanmugam realized that public electricity was absorbing between 50 and 60 percent of its budget. The yearly bill for 575 street lights, one borewell motor, and fifteen water-pumping motors was INR 650,000 (approximately USD 1,000, a significant amount in India), which represented all of the *panchayat*’s tax revenue, plus a share of the grant money they received from the state government. To address this issue, solar street lights were installed in some of the areas in 2001, which quickly reduced the electricity bill. In 2006, the *panchayat* took it one step further

and acquired a wind turbine with the help of a commercial loan from the Central Bank of India and INR 4 million in *panchayat* savings. Today, the windmill produces enough electricity for the entire village, and also has enough surplus to make between INR 800,000 and 2,000,000 (11,000 to 28,000 USD) in yearly revenue.¹⁴

¹² Standing Committee on Rural Development.

¹³ The National Institute of Rural Development (NIRD) evaluated the pilots. However, the original document is not publicly available and the NIRD was unable to provide a copy for our analysis.

¹⁴ *New Indian Express*; “Case Studies on Decentralized Renewable Energy Projects: Financing for Decentralized renewable Energy,” Swiss Agency for Development and Cooperation, Selco.

In 1999, Shanmugam submitted a proposal to the National Drinking Water Program to obtain funds to build the necessary infrastructure to filter and treat water from a nearby river. The community had to contribute 10 percent of the funds for the government, with support from the World Bank, to provide the rest. Soon after, the *panchayat* president effectively collected INR 480,000, and received the remaining INR 480,000,000 from the government (USD 7,000 and USD 6.5 million respectively). According to Shanmugam, “villagers gave whatever they could. 100,500 [Indian rupees]. People who had more money contributed more.”¹⁵ Odanthurai became the only village in a region known as the south zone conference to obtain a commitment from the local community to provide such funds. By the year 2000, Odanthurai had a thirteen-kilometer pipeline, a water filtration station, storage tanks, and bacteria-free water supplied directly to village houses.

The *panchayat*'s annual income grew from INR 20,000 to 350,000 with 100 percent tax collection. Shanmugam said, “people did not oppose it, or the increase in taxes, as we provided better service. Be it tax assessment or any approval, we provided it in two days. So people were happy.”¹⁶

These new resources along with many Indian government grants allowed Odanthurai to build its own primary, middle, and high schools. Before Shanmugam's election, children had to travel to the nearby village of Mettupalayam to attend school. However, the difficulty of travel was leading to dropouts. Today, the number of children receiving education in the *panchayat* has increased considerably. As part of a government plan, 850 houses were also built for villagers, and within the span of a decade no villager in Odanthurai lived in a hut.

Other *panchayats* were interested in understanding and replicating Odanthurai's development model. Shanmugam charged them for his insights. “We asked each *panchayat* to pay INR 1,000 for seeing and understanding our development model. We collected 1.65 lakh [165,000 Indian rupees or USD 2,300 approx.] like this and put in the microfinance scheme.”¹⁷ Today, people can obtain small loans and receive free training to start their own businesses. For such entrepreneurs, the local administration has also arranged bank loans to help them kick-start their businesses.

Shanmugam is certain that if everyone was lifted above the poverty line in Odanthurai in less than two decades, it is possible everywhere else in India. But he warns that for development to occur, government schemes must be applied in an appropriate manner and there should be no corruption. When he was elected, there were 1,650 people living under his jurisdiction; today, there are approximately 9,500 inhabitants. “People now have access to water, energy, good roads and houses, and that is the reason why people are migrating to these villages ... Usually people talk about rural to urban migration. However, here the reverse is happening due to all-round development.”¹⁸

PUBLIC-PRIVATE PARTNERSHIPS (PPPs)

In India, there have been varying types of PPPs. They range from completely centralized models, where the federal government initiates the programs, to decentralized models where private actors bring proposals to the government for funding. However, as we learned in interviews, sometimes simple government contracts are (mistakenly) deemed to be PPPs.

Centralized PPP (PURA 2.0)

In 2010, the government decided to transition from PURA's first pilot phase into a nationally centralized model for the Ministry of Rural Development to roll out. It was inspired by an NIRD evaluation published in 2007, where the Planning Commission produced a series of recommendations for PURA. The newer model departed from the first version of PURA: instead of state agencies, private-sector actors (private corporations and NGOs) would assess the needs of *gram panchayats* and design a project to implement through a PPP model.

PURA's PPP model intended to address the shortcomings of the centralized public version of the program (PURA 1.0), which failed to create incentives for the provision of essential services in rural areas.¹⁹ The result was mostly infrastructure projects.

While *gram panchayats* benefited greatly from projects like the construction of paved roads, those were not intended to be PURA's only priority. According to the *panchayat* chief of a village in central Rajasthan, “we lobbied the government hard for roads in this village because the grants were available, but what we really need ... is protection from deforestation of arable land.” PURA's project-based PPP, by directly reaching the *panchayat* chiefs, was intended to address this

¹⁵ Sharada Balasubramanian, “Inspired Local Governance Transforms Villages in Odanthurai,” [Village Square](#), 25 June 2018.

¹⁶ M. Soundariya Preetha, “Graft-free Odanthurai Shows the Way to Local Bodies,” [The Hindu News](#), 7 September 2018.

¹⁷ Balasubramanian, “Inspired Local Governance.”

¹⁸ *Ibid.*

¹⁹ In its previous public iteration, state governments did not have a sense of ownership over PURA. The central government would identify a village and implement a PURA project cluster. The states usually received a grant of between INR 200 and 250 million (approximately USD 2.8 to 3.2 million) to develop a PURA cluster. State agencies were responsible for identifying clusters of villages and what amenities they required, resulting in a narrowed focus on infrastructure projects.

dissonance between what the state was offering and what the *gram panchayat* needed. But there was a lack of consultation with local leaders in the pursuit of a “one-size-fits-all” solution.

By the time PURA gained prominence, the government began emphasizing PPPs as a means of addressing developmental gaps in the country. Instead of the central government releasing funds and permits by deferring to state governments, it would accept bids from private-sector developers. The developers were to seek permission from the *gram panchayats* and consult them on their specific communities’ needs. These developers would propose projects for a particular cluster of villages. The issues would be selected from a list of priorities identified by the Ministry of Rural Development. If the proposal was accepted and shortlisted by the ministry, through a combination of equity put forth by the private developer and government grants, development would commence. Private-sector developers intended to make a profit. They could monetize the amenities they were providing in the future; however, they would need to assume the risk of failure in case they failed to follow through.

To address the bureaucratic inefficiency affecting many rural development projects, PURA’s PPP model adopted a “single-window” system. India’s complex bureaucracy and multiple veto points means that programs initiated by private actors usually suffer from inefficiencies in securing many necessary permits and approvals. To address this, PURA promised that all transactions would be concentrated in the Ministry of Rural Development. The private actor would need to respond only to tenders or calls for applications to develop a region, and if their project met the criteria the central government would provide approval. The Ministry of Rural Development

would then collect approvals from all the state and district-level authorities. From then on, the private actors could move directly to the implementation stage in consultation with the *panchayats*. This would ensure a simplified process, significantly reducing transaction costs for private actors.

One of this PURA model’s greatest strengths—the single-window system—ultimately turned out to be its biggest shortcoming. As one of our sources stated, “all grand schemes fail in India because of a rejection from state governments.” State governments are reluctant to relinquish autonomy over developmental projects, which eliminates their power to influence and benefit from these processes. Since PURA reached the villages directly with the help of the private sector, there was no opportunity for state agencies to hold permits as ransom. The single-window system of approval was ultimately eliminated in 2010 after heavy opposition from the state governments.

Once the single-window system collapsed, the foreseeable obstacles that the system was trying to bypass materialized because private-sector developers were once again required to seek permits from state governmental agencies. First, the private actor had to apply to PURA and have their proposed project accepted by the central government. They then had to sign a concession agreement with the local governmental agencies. Because the Ministry of Rural Development would not seek permits on behalf of the private-sector partner, the company and its local partners, the *panchayat* and NGOs, would need to contact district- and state-level development authorities for permits.

Of the eleven sanctioned projects, only three ended up signing concession agreements to begin. All three were from southern Indian states,

which are historically more immune to bureaucratic inefficiency, corruption, and political inertia. Additionally, one of the sanctioned projects in Rajasamand, Rajasthan, obtained the requisite permits, but the final concession agreement was never signed because the local governments in the area did not respond to the requests for the agreements, and the private-sector partners found themselves waiting for responses that never arrived. The remaining seven PURA PPP projects failed to obtain signed concession agreements from state governments.

Decentralized PPP

In contrast to the centralized PPP PURA model is a decentralized approach. Instead of the central government initiating the process of finding a private-sector partner for a village, local *panchayats* in southern India have collaborated with a private entity known as the Abdul Kalam Vision India Movement (or the “Mission”), which operates primarily in the state of Tamil Nadu. The organization bills itself as carrying on Dr. Kalam’s vision and is affiliated with a political movement. The Mission is involved in projects to provide basic services, including water and waste management, and has attempted to connect NGOs and local *panchayats* with private-sector donors. Their approach has had mixed results.

Athipatthi, for example, is a success story. The village of approximately 15,000 people claims to have reduced turbidity (measure of particulates in water) three-fold and raised the groundwater table by using a reverse osmosis (RO) system and passing water through a sand-filtration system. The Mission helped them procure funding for the project and has provided knowledge assistance in installing the system. Today, the entire village has access to clean water with a strong distribution

network (they charge a minor fee). The organization has since applied the Athipatthi model to wastewater management systems in other villages.

The town's success has its limitations. The *panchayat* chief in Athipatthi had to provide the initial capital for the RO system's installation. Other villages may not have a chief who has financial capacity to invest, or who can galvanize the community in a crowd-funding initiative (as in Odanthurai). Even if a village has a chief willing and able to find the capital to start a project, it may not be sustainable if it suffers from a lack of buy-in from its respective *panchayat*.

A third problem in these decentralized projects' sustainability is that they are premised on the continuous collaboration of all parties involved. This was exemplified during our site visit to Kurudampalayam. We were informed of a well-functioning waste-management facility that was adopted in concert with the local *panchayat* there. However, on arrival we discovered that the facility was deserted and the warehouse that was supposedly used to sort waste was empty. Upon further inquiry, we were given conflicting accounts: that the waste-management facility is in transition and would be up and running soon, but also that the local *panchayat* had severed ties with the Mission after a change in leadership. The project exemplifies how tenuous collaborations can be in decentralized development models.

PRIVATE

There are various nonstate actors engaged in funding and managing PURA projects, including universities, private companies, NGOs, and political movements. What follows are some examples of PURA initiatives led by private actors.

Decentralized Private

Dr. Kalam designated the Meenakshi Mission Hospital in Madurai part of the broader "Meenakshi Mission PURA" project in the region in 2010. Although it collaborates with the government on certain programs, as a private trust hospital it does not receive any public funds. The hospital relies largely on private donors like the Mission to fund its projects.

The hospital runs a number of important initiatives that serve the surrounding rural areas, including offering telehealth services through eleven telemedicine centers, and operating two mobile medical buses that travel to villages to provide free medical testing and care. The buses were financed by private donors, and since 2016 have been used to operate 312 medical camps in nearby villages. The hospital also offers other services to low-income populations, including free cleft palate surgeries and free care at the Camila Children's Cancer Centre.

The hospital views itself as responsible for a single part of the broader PURA project—the healthcare component. It is not clear exactly how developed the Meenakshi Mission PURA is outside of the hospital context.

Another example of a PURA project driven by private actors involves a number of wastewater management systems in villages in Cuddalore, a district in Tamil Nadu, including in the villages of Poovali and Semmankuppam. Poovali is especially remote, and in the past, the state government failed to provide accessible, clean water to its population. This led to a high incidence of kidney stones in the residents because of minerals present in the water supply.

These projects were initiated by the Mission to provide safe drinking water to the public for a nominal fee (between 2 and 5 INR per 20 liters of water). The cost varies depending on which site consumers access the water from, and in certain areas residents can choose to have it delivered directly to their homes. The systems use a reverse osmosis process and additional filters to convert groundwater into potable water.

The funding and technology required for the initial establishment of the water programs are from a number of different sources, including companies complying with their CSR requirements, NGOs, foundations based in the United States, and individual donors. *Panchayats* maintain the systems and the money collected is intended to be used for future maintenance.

Unfortunately, the money collected is not yet sufficient to cover operational costs. It is unclear how the model of a self-sustaining system will ultimately be realized. Possibilities could include securing additional external funding, raising the price of drinking water, or increasing the volume of water provided.

Centralized

Periyar PURA at Periyar Maniammai Institute of Science and Technology in Tamil Nadu is one of the projects that best realizes the comprehensive vision of PURA that Kalam intended. In fact, Periyar was operating before PURA's inception, and was one of the projects Kalam used as a model in his book, *Target 3 Billion*, after he visited the site. Kalam adopted it as an official PURA-branded project in 2003, though the university has never received direct government funding.

The university has “adopted” sixty-seven nearby villages. The institution previously surveyed and identified the villages’ core competencies, clustered them together, and has since undertaken comprehensive sustainable development efforts based on the existing skills identified. There is no single approach applied to every village—the university tailors its services and training to empower villages based on their particular capabilities. For instance, certain villages were rich in bamboo, so volunteers from the institution taught these communities how to best utilize that crop. Locals can now create approximately 250 different bamboo by-products and market them outside their villages.

The university is privately funded. It relies heavily on financing from NGOs and companies as part of their CSR requirements. Students and faculty from the university volunteer their time to provide various services, including social work counseling, medical camps, free legal aid services, and dozens of other resources.

The university focuses mainly on knowledge connectivity, in particular in the areas of employment, women’s empowerment, and energy. It provides local communities with the training and education to develop businesses and teaches them about new technologies and sustainable environmental practices.

There are also multiple departments at the institution that coordinate to develop coherent strategies for the program, including health care, civil engineering, social work, and architecture. The university has been involved in physical connectivity by way of infrastructure development, the construction of group homes, and assistance with facility repair. Economic connectivity is promoted through training as well as networking

opportunities in different employment-generating areas, including poultry and pig farming and organic vermicomposting. They also provide training on how to use smart technology to foster electronic connectivity.

ASSESSING THE PUBLIC, PPP, AND PRIVATE MODELS

India’s federal system, corruption, and inefficient bureaucracy create structural challenges when it comes to implementing rural development projects. Many PURA projects have been victims of these problems and were either never implemented or failed to achieve their goals. However, certain PURA initiatives still operate, and some are remarkable. Odanthurai is a prime example of a successful public project. While it has received publicity in the media and in academic circles, it is usually described as a case of strong leadership.²⁰ This makes it hard to replicate in India or elsewhere, but leadership remains an important factor in successful sustainable development initiatives.

An institutional issue that frequently arises in facilitating PURA projects and other rural development schemes in India is a lack of coordination, especially in the context of public-sector projects. The amenities the government seeks to provide, including water, power, and sanitation, are controlled by different government ministries. There also tends to be overlap between programs at the state and central government levels. Lack of coordination can lead to inefficiencies or to the failure or abandonment of projects altogether.

While private projects have greater autonomy from many of the political and operational issues faced by public programs, they are not entirely free from government intervention. In many cases, programs

require government approvals to be properly implemented. Even where official permission is not required, in practice organizations may still need the support of the DC to put certain programs in place, particularly where the project involves the use of real estate owned by the *panchayat*. Private programs may not be free of political influence or advocacy either, especially where the organization responsible for the program is affiliated with a particular political party or movement.

Perhaps the greatest bar to a successful development project, whether public or private, is lack of funding. A PURA project requires a significant financial investment, on a scale that is simply unachievable for many actors. In addition to the initial investment required to get a program off the ground, there are costs associated with maintaining a project over time. Whether public entities, private actors, or a combination of the two are best positioned to finance rural development projects continues to be a matter for discussion.

Without additional assistance from the government or other partners, most private entities can afford to fund only smaller, decentralized projects. In Cuddalore, the Mission and local authorities are committed to maintaining the systems that provide safe drinking water to the population, but without additional funding the projects are not yet self-sustaining. Even highly successful private ventures like Periyar PURA and the Meenakshi Mission Hospital are constantly working to raise additional funds to scale up their operations.

Periyar and Odanthurai were the sole examples we saw in operation that are in line with the original

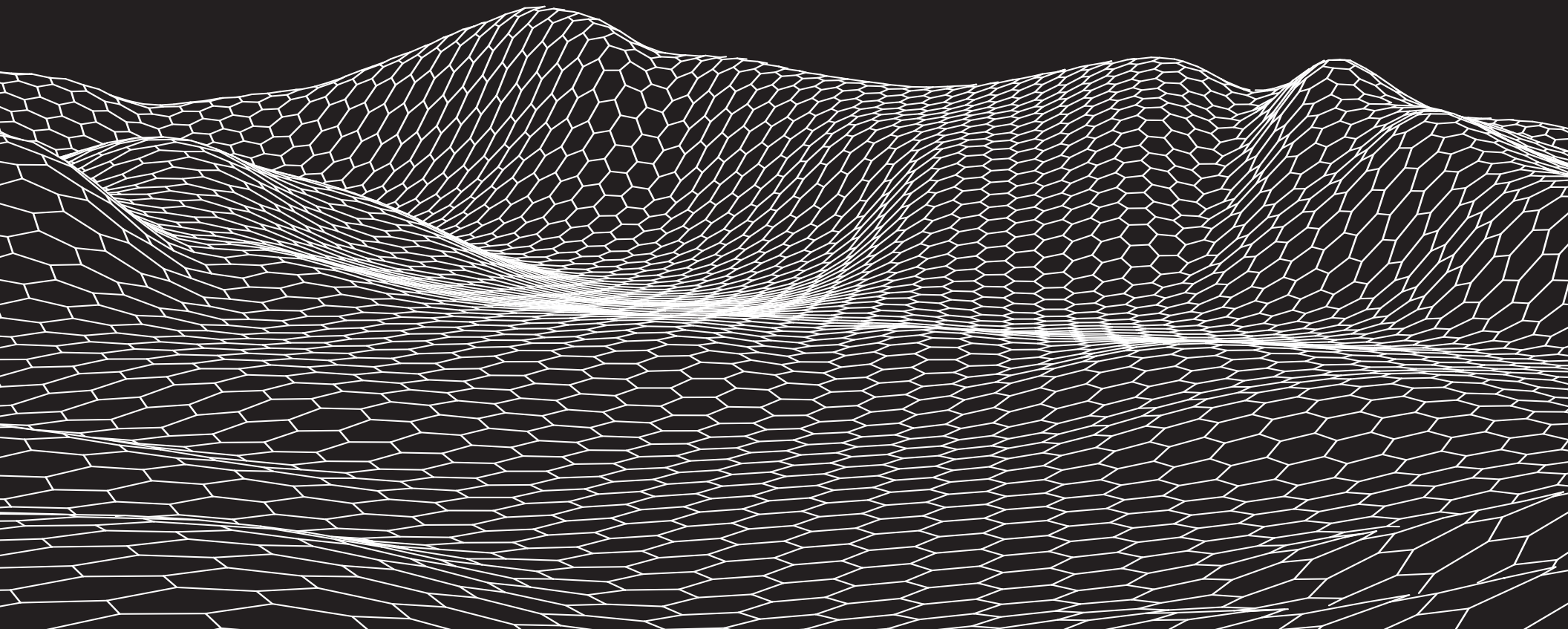
²⁰ Subbian Lakshmi, “Role of Panchayat President in Conservation of Energy.”

vision of PURA. It remains unclear whether either model is scalable, that is, whether they can be replicated broadly.

SUMMARY

PURA was initially implemented by private actors in a piecemeal approach. The Ministry of Rural Development adopted the model in the early 2000s and sanctioned pilots. Government procurement of service delivery to regions that needed them was the frame for this model. From 2007 to 2009, an independent review was conducted to restructure the model as a Public-Private Partnership. Various PPP pilots were sanctioned that ultimately were not implemented. This failure arose for a variety of reasons, including a lack of buy-in at the state level. Eventually, with a change of government in 2013, PURA was replaced by the Rurban Mission. Currently, PURA lives on primarily as a private-actor-led project, securing funding from a variety of sources.

Lessons Learned



INCENTIVES ALIGNED AMONG PUBLIC AND PRIVATE ACTORS

There are several reasons the public sector might invite private partners to collaborate in implementing infrastructure projects.

Governments have limited resources and they cannot afford to finance certain projects. Additionally, the public sector may lack necessary technical expertise. In such cases, private actors might have the tools to provide efficient, timely, and successful delivery of public services. However, conflicts of interest can arise as governments focus on long-term objectives while private-sector entities seek short-term profits.

Although PURA as a public-private partnership (PPP) scheme was unsuccessful, the problem can be traced to the Indian government's internal inefficiencies rather than to its relationship with the private sector. In fact, the government was very successful at designing a strategy that appealed to infrastructure companies. In the first iteration of PURA as a PPP, the Ministry of Rural Development received ninety-three applications in response to its notice for expressions of interest. Some companies interacted with the government for up to thirty-six months, trying (unsuccessfully) to obtain a contract. Even though the first iteration proved to be time consuming and expensive for private actors, its second iteration still drew 105 expressions of interest.

PURA's PPP business model successfully brought together nonconvergent interests by offering more than a simple infrastructure contract. The Ministry of Rural Development proposed private, add-on projects such as village-linked tourism and integrated rural hubs, along with other revenue-generating, self-sustainable, and people-centered projects. Similarly, it offered a capital grant for

up to 35 percent of the total add-on project cost, which would reduce the risks for the private sector. This strategy had a double purpose: it was intended to attract private partners by offering several profit-generating activities, while simultaneously generating economic and livelihood opportunities for the greater population. Such success highlights the importance of designing a business model that resolves conflicts of interest and ensures a collaboration that benefits both parties.

BYPASSING DYSFUNCTIONAL GOVERNMENT INSTITUTIONS

The PURA experience was marked by the Indian government's internal inefficiencies. The unfortunate result was a program that was never effectively implemented except in limited, piecemeal circumstances.

While the government decided to adopt a "single-window" system during its PPP phase to address bureaucratic inefficiency, the alternative arrangement met fierce resistance by stakeholders who benefited from the existing system. States were reluctant to relinquish their autonomy over development projects that eliminated their power to influence and benefit from these processes and meant they would receive a smaller budget for use in projects that could ensure their re-election. The lack of an alternative to dysfunctional institutions is one of the primary reasons PURA's PPP phase (or "PURA 2.0") failed.

PURA teaches us the importance of considering which actors will lose with reforms, and if there is any way of compensating them for such losses.²¹ In PURA 2.0, for instance, state governments did not provide approvals because the central government failed to incentivize states to cooperate in the project. Its successes and failures equally demonstrate the importance of

overcoming institutional obstacles to reforms. Wherever it is not feasible to fix government dysfunction, the ability to bypass institutions may prove an effective strategy for project implementation.²² A private entity like Periyar Maniammai Institute of Science and Technology, for instance, may have been more effective than other PURA initiatives because it was not led by or dependent on dysfunctional Indian bureaucracies, even if it can (and has) from time to time accessed government resources through various schemes.

While private bypasses are promising, there are also bypasses promoted by the public sector, such as the single-window system in PURA 2.0. This ability to bypass dysfunctional government institutions can allow for greater speed and efficiency in service delivery. It also insulates initiatives from being directly influenced by a change in government or by other political pressures that could affect whether and how a program operates.

OWNERSHIP

From the Top: Strong, Sustained Leadership

Where PURA projects have succeeded, there has been an individual, group, or institution that has firmly dedicated itself to that initiative. Without someone actively committed to driving development efforts, projects are far more likely to fail. Dr. Kalam recognized this explicitly: "without a person who is trusted by the community to champion the cause, it is difficult to find support over a sustained period of time."²³ Interviewees emphasized the im-

²¹ Michael Trebilcock, *Dealing with Losers: The Political Economy of Policy Transitions* (Oxford University Press, 2014).

²² Mariana Mota Prado and Michael Trebilcock, *Institutional Bypasses: An Alternative for Reforms for Development* (Cambridge University Press, 2019).

²³ *Target 3 Billion*, 193.

portance of oversight, whether by the government or private organization responsible for a project. As one source noted, “whatever is monitored gets done, whatever isn’t monitored doesn’t get done.”

Periyar PURA is a solid example of an institution taking ownership of a project for an extended period, leading to impressive growth. Likewise, in Athipatthi, a local leader actively financed a waste-water management project with personal money. This clear commitment helped ensure the community continues to have access to clean water. Similarly, the water purification sites in Cuddalore required various government permissions that were difficult to obtain. The systems’ existence is in part a result of the persistence of a representative of the Mission who was willing to repeatedly visit government offices until he succeeded in getting the relevant permits.

A lack of continuity in leadership appears to be a common reason that PURA and other development projects cease to operate in India. Programs are often abandoned when there is a shift in government or in political priorities. Such changes not only lead to canceled government-sponsored and government-funded projects, but sometimes can also affect private initiatives. This appears to have been at least one factor in the discontinuation of PURA 2.0 and PURA 3.0 pilots, even after the initial capital investment. Sustaining ownership over a project for an extended time, even when leadership shifts, is an important component of a successful long-term initiative. There must be strong incentives for successive governments to continue with existing programs, particularly where those projects benefit the public interest.

From the Bottom: Community Empowerment

Strong top-down leadership may not be sufficient

in many instances—community empowerment is also key to success.²⁴ Interviewees repeatedly stressed that “bottom-up” initiatives driven by local populations that are sensitive to their specific needs tend to have greater impact. In Odanthurai, for instance, the *panchayat* chief actively steered efforts to improve the quality of village life. Much of his success arose from his personal commitment, but also from the continuing support of the community who allowed drastic changes to be made and provided economic support.

Community support is particularly important in countries as diverse as India, where one-size-fits-all solutions have proven inadequate at reducing poverty levels and curbing rural-urban migration. When projects such as the waste management plant in Kurudampalayam failed to obtain community support, a change in leadership was apparently enough to curtail an otherwise well-planned project.

CONCLUSION

The delivery of essential services in rural areas is challenging, both in India and elsewhere. Although there are various models, they should not be considered in the abstract but in the specific context in which they are being implemented. For instance, in India the private-sector model prevails because of dysfunctions that plague the state, but in other countries a public or PPP model may be preferable.

It is difficult to generalize how to transplant any single model from country to country, but it is possible to apply the lessons learned from this case study more broadly. The three principles we identified—the need to align incentives among public and private actors, the ability to bypass dysfunctional government institutions where

necessary, and strong ownership from leaders and communities—are important components of sustainable development projects the world over, and represent challenges that every country may face. Development is about delivery—great ideas are not enough if they fail to reach those who need them the most.

²⁴ Ibid., 128, 181.

RESEARCH TEAM



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REACH PROJECT



Development is about delivery—the will and ability to deliver interventions to very poor and vulnerable people to help improve their lives. The development “space” is filled with great ideas and innovative solutions, from technological interventions to new policy initiatives. But the effects of these potentially game-changing ideas are severely mitigated if they do not actually get to the people they are intended to benefit. We think of this challenge in terms of “reach.” Solutions can solve problems only if they reach those who need them most.

The Reach Project focuses on the delivery of services and interventions to those who are hardest to reach. We are a research initiative supported by a partnership between the Munk School of Global Affairs & Public Policy at the University of Toronto and the Mastercard Center for Inclusive Growth. The Reach Project is led by Professor Joseph Wong. The commitment of student researchers and faculty mentors from across the University of Toronto drives our work. Together, we examine the delivery of services and interventions to those who are hardest to reach in countries around the world.



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