

India's capital is marked by different settlement types, defined by diverse degrees of formality, legality, and tenure. As part of a larger project on urban transformation in India, Cities of Delhi seeks to carefully document the degree to which access to basic services varies across these different types of settlement, and to better understand the nature of that variation. Undertaken by a team of researchers at the Centre for Policy Research (CPR), New Delhi, the project aims to examine how the residents of the city interact with their elected representatives, state agencies, and other agents in securing public services.

Through three sets of reports, the project provides a comprehensive picture of how the city is governed, and especially how this impacts the poor. The first is a set of carefully selected case studies of slums, known as jhuggi jhopri clusters (JJC) in Delhi, unauthorised colonies, and resettlement colonies. The second set of studies explores a range of different processes through which the governing institutions of Delhi engage with residents. The third, of which this is one, focuses on selected agencies of governance in Delhi. All reports are made public as they are completed.

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## The Delhi Development Authority

### Accumulation without Development

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*We are indebted to David Adler, whose Brown University thesis, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City' (2014), informed our exploration of the DDA and provided invaluable primary material. David also gave us insightful feedback throughout the research and writing process.*

### Introduction

The Delhi Development Authority (DDA), established in 1957 by the Government of India, is charged with drafting the Delhi master plan and developing the city to provide housing, commercial and recreational space, and infrastructure for Delhi's residents. The Authority's mandate is broad—"to promote and secure the development of Delhi"<sup>1</sup>—and it is involved in almost every activity related to land, housing, and infrastructure in Delhi. The Authority's power extends far beyond the 'planned city': with control over countless acres of 'encroached' land, the DDA plays a larger role in governing Delhi's jhuggi jhopri clusters (JJC) and other unplanned settlements than any other agency in the city.<sup>2</sup>

From a planning perspective, placing the tasks of land-use management and housing provision under one organisational roof is an ideal set-up for promoting a well-planned, inclusive city. Our study of the DDA reveals, however, that the Authority has not lived up to this promise. What emerges from our research is a picture of an organisation that is at once relatively efficient and successful at certain tasks—like acquiring land and providing high end amenities—and extremely slow to accomplish others—like building and allotting low-income housing. The resulting dynamic has huge implications for Delhi: the city's poorest residents become squatters as the DDA acquires the land on which they live, yet they have few affordable housing options.

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## Box 1: Government(s) in Delhi

As a central government agency with purview over a city that has become a state, the DDA functions in a complicated and overlapping governance landscape. Delhi sits at the intersection of local, state, and national governments.

### Local

At the same time the DDA was born as a central government agency, the Delhi Municipal Corporation (DMC) Act established the Municipal Corporation of Delhi (MCD). The MCD has since been split into three agencies—the South, North, and East Delhi Municipal Corporations—which, together with the New Delhi Municipal Council and the Delhi Cantonment Board form five bodies of local urban government in the city.

### State

Although Delhi briefly had a legislature after Independence, between 1956 and 1992 Delhi was a union territory, governed by the central government with no state-level legislative power. In 1992 the Government of National Capital Territory of Delhi Act, 1991 came into force, creating Delhi as a state with a new state-level representative government to be called the Government of the National Capital Territory of Delhi (GNCTD).

### National

Delhi's statehood has remained limited by two facts: the state government does not control either Delhi's police—who answer to the Government of India—or its planning, land use, and development—which remains with the DDA.

The story of the DDA must be read against this complicated background. The Authority was established alongside a vision of a Delhi without a state government, of a city administered fairly directly by the Government of India. Since 1992 that vision has changed, but the DDA's role has not been reimagined, and it remains an agency of the Centre. Yet, while its structure remains the same, certain administrative tasks that had been entirely under the DDA's control are now shared with the GNCTD, a shift especially true in the governance of unplanned settlements.<sup>4</sup>

The DDA was designed to create a planned, rational capital city for all its residents, but one statistic speaks volumes to its failure: at the turn of the millennium, less than a quarter of Delhi's residents lived in planned colonies.<sup>3</sup> This report concludes that the Authority marshals its considerable power to plan, create, and maintain a city that meets the needs of only a fraction of its residents. We trace this shortcoming to three features of the DDA. First, while the DDA might project a progressive vision for Delhi, its strategic planning overlooks many of the demographic, social, and economic realities of the capital and envisions a city geared towards a particular, relatively affluent group of residents. Second, the entrenched organisational structure of the DDA reinforces this attitude, maintaining bureaucratic distance between those who plan the city and those who execute the plan and witness its implications on the ground. Finally, these organisational challenges are compounded by the unusual and complex eco-

system of government in Delhi, in which local, state, and national structures overlap. (See Box 1.)

The result is an agency that plans, builds, and maintains an 'aesthetic' city,<sup>5</sup> one that privileges parks over functional infrastructure, cleanliness over liveability, and a 'world-class' veneer over inclusion. This approach—which is inevitably class biased—is evident in the introductory section of the DDA's 2006-7 annual report, in which the Authority marks the fiftieth anniversary of its creation:

In the 50 years of its relentless efforts to maintain the pace of development and match steps with the best cities of the present era, DDA has crossed one milestone after another.

It is constantly adding one feather after another in Delhi's CROWN [sic] with gardens, neighbourhood parks, green belts, commercial centers, houses etc.

It aims to keep Delhi young and alive in the midst of an ever changing scenario.

DDA is also playing a major role in giving Delhi a facelift in the light of the 2010 Commonwealth games. Not just that the 2021 Master Plan envisages to ensure an over-all development of the city. [sic]

Emperors have come and emperors have gone, history has been written and re-written, but Delhi has continued to grow in glory and spread its warmth. DDA aims to build Delhi as an epitome of development and design, making it the treasure of not just India but the world.

This declaration is notable not only for its tone, but also for what it does not say. In celebrating its achievements and future aspirations, the DDA makes no mention of housing the poor, establishing usable infrastructure, or including the vast 'unplanned' sections of the city in its ambit.

## History

Since its founding, the DDA has prepared and executed three master plans for the city. In this section, we trace the history of the Authority through the periods defined by these documents.

### First Master Plan (1962-1981)

#### *Land acquisition*

The DDA emerged as a response to the partition of India in 1947, when half a million refugees entered the city in a single year. These migrants began constructing large settlements on the southern and eastern edges of the city. To respond to this crisis, the new Government of India convened a committee to review the Delhi Improvement Trust, the agency charged with maintaining and developing the city. In 1951, the committee recommended the creation of a single agency to plan and oversee the development of Delhi.

In 1957, the Government of India passed the Delhi Development Bill, establishing the Delhi Development

Authority as a central government body. The Bill described the DDA's role as "promoting and securing the development of Delhi in accordance with the Master Plan".<sup>6</sup> The DDA was designed to restore order to haphazard planning across the city through an explicitly top-down process. The Report of the Joint Committee on the Delhi Development Bill asserted, "the underlying principle of the Bill was that the initiative for town planning would be derived from the top, rather than be allowed to emerge from the bottom".<sup>7</sup> This mandate would be enacted primarily by drafting and executing master plans.

The Ford Foundation assisted the DDA with the first master plan, which was approved in 1962. Over the nearly two decades covered by this document, the Authority began to move beyond a pure planning function, assuming a variety of roles including land management and construction of housing. By 1968, the Authority had a construction division, a building division, and a land acquisition division; planners, engineers, horticulturalists, and other staff numbered 35,000.<sup>8</sup>

Yet while the scope of the DDA's mission grew with the city's increasing population, its ability to meet that demand did not keep pace. According to the first master plan, 62,200 acres of land were to be acquired and developed in two stages, spanning 1962 to 1981. The master plan itself justified this massive centralised acquisition as a necessary step in the efficient creation of a planned and inclusive city:

Land acquisition by Government on a large scale has been recommended. The ownership of land by Government makes planning and the implementation of the plan easier and is imperative if slum clearance, redevelopment, subsidised housing and provision of community facilities according to accepted standards have to be undertaken, as, indeed they must be, in Delhi, in a determined way.<sup>9</sup>

During this period, the Authority was fairly successful at meeting its acquisition goals, gaining control of 56,834 acres of land.<sup>10</sup> The DDA, however, was unable to follow through on the second half of this proposition. By 1978, the Authority planned to have developed 30,000 acres for residential use; it only succeeded in developing 13,412 acres.<sup>11</sup>

This land development gap is mirrored in the Authority's housing construction numbers, and by the late 1970s it was clear that the DDA was unable to provide adequate planned housing for the city's residents. The DDA had constructed fewer than 50,000 of its projected 75,000 flats between 1969 and 1981, and the prices for these flats continued to rise, becoming too expensive for the lower and middle classes.<sup>12</sup>

Compounding these development and construction shortfalls, the Authority's distribution of available land and housing was quite skewed in favour of the city's elite. In 1983, Datta and Jha observed that

between 1960-61 and 1970-71 the high income group (HIG) was given as much as 49.8 percent of the total plots of land through auction. Those whose land was acquired (alternative allottees) were given 14 percent and the middle income group (MIG) and low income group (LIG) were allotted only 24.7 percent and 11.5 percent of the total plots, respectively. The proportion of land given to the LIG actually declined from 55 percent in 1961-62 to 3.2 percent and 1.9 percent in 1969-70 and 1970-71, respectively.<sup>13</sup>

The fact that these housing resources were far from sufficient to respond to the enormous demand for low income housing is evident in the continued rise of informal settlements: by 1983, nearly 30 percent of Delhi's population—more than 1.7 million people—lived in unauthorised colonies and JJs.<sup>14</sup> It was during these years that the DDA also began to take decisive action against these unplanned settlements. In an effort to 'clean' the city of the unplanned housing that was arguably the inevitable result of its actions, the DDA began to demolish homes and evict settlers from its land.

The DDA's annual reports from this period describe these efforts as 'protecting' the city from unplanned settlement. In its 1980-81 report, for example, the DDA described, "a vigorous program...to fence the vacant pockets so that the lands are saved from encroachments". Yet, one can argue that the DDA might also prevent the growth of unplanned settlement by fulfilling its mandate to provide adequate planned housing for a rapidly growing city.

## Second Master Plan (1981-2001)

### *Housing shortfalls*

The DDA's preparation of the second master plan was delayed considerably: although it was due in 1981 it was not published until 1990. After the period of Emergency ended in 1977, the new government directed the DDA to develop a "Perspective [sic] Plan for Delhi 2001", i.e. the second master plan.<sup>15</sup> The DDA did not, however, make a draft of this plan public until 1985, four years after the first plan had expired.<sup>16</sup> The central government's Ministry of Urban Development did not finally approve the plan until the end of the decade, a delay reportedly linked to the Ministry's concerns about conflicts between the proposed master plan and the regional plan being developed by the National Capital Regional Planning Board, established in 1985.<sup>17</sup>

While the master plan's preparation and approval was delayed, the DDA continued to struggle to meet housing demand, enacting additional housing schemes in 1981 and 1985. Data published by Maitra in 1991 quoting the DDA's Performance Report, 1986-87 offers interesting insight into the Authority's efficiency as a housing provider during the first half of the decade. The paper estimates the housing shortage by income category based on two assumptions: (i) the number of registrants reflects demand and (ii) the number of flats allotted reflects supply. This data is presented in the table below and it suggests that overall, only 85,168 of the 240,387 registrants (about 35 percent), were allotted flats, a shortfall of 64.5 percent. (See Table 1.)

The decade following this poor performance saw a significant transformation in the DDA's approach to delivering housing, alongside India's economic liberalisation. Beginning in 1994, a series of new central government policies reduced public sector control of land and housing, a shift apparent in the Authority's approach to planning. During this period, the DDA reformed its tenure policies, moving from leasehold to freehold ownership of houses.

Adler (2014) observes that this transformation extended to commercial property, as well:

In the 1993-94 [annual] report, the DDA boasts of its "disposal of shopping centres ... by auctioning

Table 1: Housing Demand and Supply, 1986-87

Income Category	No. of Registrants (Demand)	No. of Flats Allotted (Supply)	Shortfall
Middle Income Group (MIG)	47,521 (19%)	9,500 (11%)	38,021 (24%)
Low Income Group (LIG)	67,502 (28%)	15,320 (17%)	52,182 (34%)
Economically Weaker Segments (EWS)	56,247 (23%)	21,887 (24%)	35,162 (23%)
Self Financing Scheme (SFS)	69,115 (30%)	39,261 (58%)	29,854 (19%)
<b>Total</b>	<b>240,387</b>	<b>85,168</b>	<b>155,219</b>

Source: DDA Performance Report, 1986-87, quoted in Maitra, 1991<sup>18</sup>

commercial sites without construction of shops by DDA.” Under this concept, auction winners will construct the commercial site according to DDA specifications, outsourcing the public sector developmental responsibilities enshrined in the Delhi Development Act of 1957 to the private sector in a new form of Public-Private Partnership (PPP). “This concept evoked a good response and is a first major step towards privatization,” the report asserts.<sup>19</sup>

For Delhi’s residents, the effects of these shifts varied widely. Delhi’s formal residents—living legally on plots allotted by the DDA—were rewarded: freehold would lift the bureaucratic burden of dealing with the DDA and create new opportunities for wealth generation and capital investment. The promise to support new shopping centres appealed to middle-class residents. Yet the shift toward privatisation stimulated a new pressure on real estate, increasing the imperative to demolish unplanned settlements and evict their residents. As the DDA sought to auction off its property, the ‘encroachments’ stood directly in the way of real financial gain. Now, the DDA’s massive land reserves not only had use value, but also exchange value.

### Third Master Plan (2001-present)

#### *A new approach?*

From a quantitative perspective, the DDA did transform during the last decade of the second master plan, moving towards an increasingly private model of development. The 2003-04 annual report shows that the DDA staff continued to shrink. In 2004, the Authority reported 21,396 total personnel, down 20 percent from its 1993 level. And the DDA’s finances reveal a substantial shift, as well. During the first years of the new millennium, the Authority appears to move from a financial model driven by cost recovery to one focused on the creation and maintenance of reserves. This is evident in the growing difference between receipts and expenditure in two of the DDA’s principal accounts. (See Box 2.)

The Master Plan 2021 reflects many of these shifts, introducing a new emphasis on public private partnerships (PPPs) as a development tool. This latest master plan was approved in early 2007, once again leaving a long gap between the conclusion of one plan and the ratification of another. In it, the DDA does show a new frankness, positioning its recommendations against the backdrop of the fundamental

## Box 2: From Cost Recovery to Reserve Creation

Here, we consider the finances of the DDA as recorded in the Nazul Account II (NA-II), responsible for the DDA's land acquisition, development, and disposal. The receipts under this account, which include sale proceeds of land and recovery from ground rent, increased through the first years of the new millennium: in 2001-02, receipts were Rs. 4.78 billion; in 2002-03, the account reported receipts of Rs. 7.05 billion, nearly a 40 percent jump; and then, in 2003-04, the NA-II account reported Rs. 24.66 billion in receipts, 350 percent of the preceding year.<sup>20</sup> Furthermore, by 2006-07, the number had increased to 44.24 billion, nearly ten times that of 2001-02.<sup>21</sup>

Expenditures from this account, which include acquisition and development of land, also increased over this time, but not at the same rate, leading to a growing gap between receipts and expenditures: in 2001-02 expenditures were higher than receipts, but by 2006-07, expenditures represented only 27.6 percent of the receipts.

**Table A: Nazul Account - II (all figures in Rs. billion)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Receipts	4.78	7.05	24.66	23.10	19.31	44.24
Expenditures	7.39	9.40	6.75	10.47	16.68	12.22
<b>Receipts minus expenditures</b>	<b>-2.60</b>	<b>-2.35</b>	<b>17.91</b>	<b>12.63</b>	<b>2.63</b>	<b>32.01</b>

We see a similar pattern on a smaller scale in the DDA's General Development Account, which funds direct development of housing and shopping centres. With the exception of 2003-04, we see the same trend of increasing cash reserves that we find in the Nazul Account - II.

**Table B: General Development Account (all figures in Rs. billion)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Receipts	4.86	4.88	5.22	10.04	7.57	9.34
Expenditures	4.36	4.87	5.73	5.72	5.77	7.87
<b>Receipts minus expenditures</b>	<b>0.50</b>	<b>0.01</b>	<b>-0.51</b>	<b>4.32</b>	<b>1.80</b>	<b>1.46</b>

Source: DDA's various Annual Administration Reports.



shortfall in the construction of affordable housing that has resulted in the continuous growth of unplanned settlement in Delhi. The Authority acknowledges its own failure and responsibility for these settlements, albeit in passive, bureaucratic language:

... up to the year 1991, the contribution to housing stock through institutional agencies was only 53% (excluding squatter housing). Therefore, the component of housing through non-institutional sources, viz., unauthorized colonies, squatter / JJ clusters, etc., is quite significant. This trend has continued in the current decade as well.<sup>22</sup>

Here the DDA articulates what has been obvious for decades, that the unplanned housing that shelters more than three quarters of Delhi's population<sup>23</sup> is the direct result of its own actions. In an interview, a top DDA official put it more bluntly, ascribing the housing shortfalls to limited planning vision. "In planners' thought", he said, "there has been a neglect of the economically weaker sections within planning."<sup>24</sup>

What have the shifting finances and open acknowledgement of shortcomings of the last decade meant on the ground? In the next section we examine the DDA's activities since 2003 and explore how much, if at all, the Authority's results have improved under this latest planning regime.

## On the Ground

The DDA's power today rests both in the breadth of its original planning mandate, and in the enormous amount of land that it still controls: as of April 2014, the Authority held 90,326 acres of land, 25 percent of the city's total area.<sup>25</sup> As it has since the beginning, the Authority plans land use—through the master plan—acquires land, and develops that land. And as has been the case for decades, the DDA displays markedly different levels of efficiency in these tasks. To understand the DDA's current priorities, we evaluate the data they have reported over the last decade, parsing the land it has acquired, the housing it has developed, and the unplanned settlements it has removed from its land.

Land acquisition over the last decade has continued apace: the DDA has taken possession of 11,625.837

acres since 2001. Annual acquisition during this period has ranged widely, from just 11.56 acres in 2008-09 to 3,426.96 acres in 2005-06. (See Table 2.)

**Table 2: Land Acquisition, 2001-13**

Year	Physical Possession of Land by DDA (acres)
2001-02	473.25
2002-03	2,095
2003-04	770.697
2004-05	1,765
2005-06	3,426.96
2006-07	1,932.58
2007-08	551.86
2008-09	11.56
2009-10	73.23
2010-11 <sup>26</sup>	Not available
2011-12	329.08
2012-13	196.62
<b>Total</b>	<b>11,625.837</b>

Source: Compiled from various annual reports of the DDA from 2003-04 to 2012-13.

Once a piece of land acquired by the DDA is demarcated for housing to be constructed by the DDA, the Authority's Engineering and Construction Department takes over. From the start, a given unit of housing is designated for members of one of four income groups: HIG (Higher Income Group), MIG (Middle Income Group), LIG (Lower Income Group), and EWS (Economically Weaker Sections)/Janta. Actual construction of housing for each group during the last decade, as reported by the DDA, is presented in Table 3.

**Table 3: Housing Construction, 2003-13**

Year	HIG	MIG	LIG	EWS/ Janta	Total
2003-04	416	492	704	64	1,676
2004-05	Not available	—	—	—	9,896 <sup>27</sup>
2005-06	856	886	828	0	2,570
2006-07	140	496	2,445	0	3,081
2007-08	66	100	100	0	266
2008-09	216	0	970	0	1,186
2009-10	336	24	3,920	0	4,280
2010-11	Not available	—	—	—	—
2011-12	1,733	16	3,502	3,050	8,301
2012-13	716	0	1,080	0	1,796
Total Houses Completed	4,479	2,014	13,549	3,114	33,052

Source: Compiled from various annual reports of the DDA from 2003-04 to 2012-13.

Between 2005 and 2010, not a single EWS flat was constructed by the DDA. These years also saw a significant wave of demolition in the city’s unplanned colonies to make way for Commonwealth Games infrastructure, followed by the relocation of residents to remote resettlement colonies.<sup>28</sup> These construction numbers, read against the fact of demolition, reveal that the DDA did not consider it the Authority’s responsibility to replace the ‘illegal’ housing stock it demolished.

While it is difficult to measure these numbers against real demand, the DDA does set annual targets for overall housing development for many financial years. These numbers, compared with actual construction, reveal the DDA fails to meet even its own annual projection. In other words, these shortfalls, at times dramatic, do not alone tell us that the DDA is not providing enough housing for Delhi, but they do indicate that the Authority is quite inefficient at planning and constructing housing. (See Table 4.)

**Table 4: Construction Shortfalls, 2003-10**

Year	Houses Targeted	Houses Completed	Percent of Target
2003-04	5,919	1,676	28.3%
2004-05	12,662	9,896	78.2%
2005-06	8,695	2,570	29.6%
2006-07	5,070	3,081	60.8%
2007-08	266	266	100%
2008-09	1,046	1,186	113.4%
2009-10	8,997	4,280	47.6%
Totals	42,655	22,955	53.8%

Source: Compiled from various annual reports of the DDA from 2003-04 to 2012-13.



Although the DDA met its targets twice, these years represent the two least ambitious during the period under review. And it is nearly certain that all the targets set during these nine years dramatically underestimate need. While we do not have a measure for real demand for housing, we can arrive at a rough understanding based on the increase in actual houses—planned and otherwise—in the most recent inter-censal period (2001-2011). Using the compounded annual growth rate to measure the annual increase in the number of houses, we see that between 2003 and 2010, nearly one million houses were built in Delhi. The DDA added fewer than 23,000 new housing units during this same period. (See Table 5.)

**Table 5: Actual Construction, 2001-11**

	Number of Houses	Increase
2001	3379956*	
2002	3486167^	106211
<b>2003</b>	<b>3595715^</b>	<b>109548</b>
<b>2004</b>	<b>3708705^</b>	<b>112991</b>
<b>2005</b>	<b>3825246^</b>	<b>116541</b>
<b>2006</b>	<b>3945450^</b>	<b>120203</b>
<b>2007</b>	<b>4069430^</b>	<b>123980</b>
<b>2008</b>	<b>4197307^</b>	<b>127876</b>
<b>2009</b>	<b>4329201^</b>	<b>131895</b>
<b>2010</b>	<b>4465241^</b>	<b>136039</b>
2011	4605555*	140314
	<b>2003-10 Total:</b>	<b>979,073</b>

\* Actual data from House Listing and Housing Census 2001 and Census 2011

^ Estimated using CAGR

But if we put aside the gap between estimated need and actual housing stock increase, we can draw some conclusions about the DDA's internal functioning. First, it is important to note that the shortfalls that we measure between the DDA's projected and actual construction of housing are compounded by the Authority's allotment processes. Although the DDA allotted close to 34,512 housing units between 2003-04 and 2009-10, 20,557 of these were to clear the backlog of housing that had been constructed before 2003. This means that 9,000 of the houses built during this period remained uninhabited in 2010.<sup>29</sup>

In other words, between 2003 and 2010, the DDA aimed to construct and—we presume—allot 42,655 housing units. It succeeded in building and allotting 13,955, leaving a total gap of 29,200. It is important to emphasise again that this is against the Authority's own estimate of demand and its own assessment of capacity, as expressed in its annual targets. While these numbers certainly reflect the organisation's inefficiency, they also expose the agency's inability to understand its own capacity: the Authority repeatedly sets goals that it does not come close to meeting.

The DDA's inability to measure its own capacity creates a perpetual gap between planning and implementation that has huge implications for Delhi's residents. On the one hand, the DDA acquires and controls a vast section of Delhi's land and retains exclusive development rights over that land. On the other hand, the DDA has been unable to develop the housing stock necessary to provide shelter to Delhi's residents. This shortage is met, in part, by the unplanned settlements that continue to house enormous sections of Delhi's population, and which continue to face the threat of demolition by the DDA and other agencies. Grasping this fundamental paradox is at the core of understanding the DDA's role in Delhi: the Authority is fighting a perceived problem for which it is in part responsible.

In a series of annual reports from the last decade, the Authority explains that to protect its land from 'encroachment', it has established a "working system for land protection".<sup>30</sup> The annual reports explain the system: "Regular watch and ward is kept on DDA land by the security guards who are deployed and assigned specific beat areas. Regular demolition operations are planned and carried out with the help of

police to check the tendency of encroachment.”<sup>31</sup> The data on demolitions from 2001 to 2013 indicates that on an average, 364 demolition operations were carried out each year; together, these have enabled the DDA to “reclaim” more than 1,500 acres of land by removing more than 50,000 structures from JJs in Delhi.<sup>32</sup> This data also clearly indicates the large-scale demolition operations that were carried out in the first half of the 2000s in the run up to the Commonwealth Games. (See Table 6.)

During the time period for which we have complete data on housing construction (2003-2010), the DDA reports demolishing 29,962 structures—7,000 more housing units than it built—reinforcing the paradox described above. This additional deficit in overall housing stock creates more pressure on the city’s population, adding to the list of people waiting for housing that the DDA is not delivering.

It is important to note that this is based on the DDA’s own data. Many scholars contend that the number of demolitions during these years is much higher. Bhan (2009), for example, asserts that between 2004 and 2007, 45,000 homes were demolished.<sup>34</sup> Perhaps more important than the DDA’s likely underreporting of demolition data is the Authority’s clinical approach to the process, which is described in enduringly impersonal language across its public communications.

In its 2003-04 annual report, the Authority writes that the

Land Management Deptt. carried out some major demolition operation during the year which has *drawn praise from all sections of the society as well as press except the land mafia* (emphasis added).

Source: Compiled from various annual reports of the DDA from 2003-04 to 2012-13.

**Table 6: Reported Demolitions, 2001-13**

Year	No. of Demolition Operations	Land reclaimed by removing JJs (acres)	No. of structures/ buildings <sup>33</sup> removed
2001-02	460	164.84	5,906
2002-03	472	374.54	14,567
2003-04	354	259.44	13,077
2004-05	Not available	—	—
2005-06	344	158.9	4,495
2006-07	402	168.67	4,388
2007-08	646	95.91	3,245
2008-09	199	38.09	1,325
2009-10	278	138.84	3,432
2010-11	Not available	—	—
2011-12	258	50.238	2,642
2012-13	229	85.574	1,890
<b>Total</b>	<b>3642</b>	<b>1535.042</b>	<b>54,967</b>

The DDA's claim that their actions are nearly universally praised needs to be contrasted with the many court cases it handles every year. From 2005 until 2013, between 11,000 and 18,000 court cases involving the Authority were pending each year, with new cases brought faster than existing cases could be resolved. The majority of these cases involved the land management, land disposal, and housing departments, a fact that is itself testament to the immense contestation between the DDA and other stakeholders in the city.

The Authority has made some commitments to improving this counterproductive and contentious process. In 2008 the DDA initiated its first in-situ slum rehabilitation, aiming not to disturb the occupational habits of residents.<sup>35</sup> In-situ rehabilitation is a zero sum approach: in theory, housing units are demolished and replaced as a single undertaking. In a similar move, the government has begun to allot flats to residents displaced from JjCs to resettlement colonies, rather than providing empty plots. The introduction of the Delhi Urban Shelter Improvement Board (DUSIB) in 2010 and its designation as a single coordination agency for relocation of JjCs has been another progressive step in the governance of Delhi's unplanned settlements, providing a much clearer set of guidelines for relocation.<sup>36</sup>

Nonetheless, the progress of the DUSIB has been limited,<sup>37</sup> and the DDA's willingness and capability to coordinate with the emergent DUSIB even more so. While the DUSIB maintains formal authority over some categories<sup>38</sup> of Delhi's unplanned settlements, the DDA continues to collect its own information and move forward with its own operations in those settlements located on DDA land.<sup>39</sup> Residents in many of these settlements continue to experience daily vulnerability. The patrol of the DDA security guards keeping "regular watch and ward" often involves a form of direct intimidation or rent-seeking: wherever new construction emerges in the slum—a new door or a new floor for an expanding family—DDA security guards may issue sanctions to prevent this construction, or, in some instances, demand a bribe in exchange for allowing it. Earlier this year, the DDA reported that it would begin real time digital surveillance of some 1,500 acres of 'encroached land', matching video footage with GIS data and satellite imagery to check new construction.<sup>40</sup>

### Box 3: Is the Plan really so rigid?

DDA officials point out that it is often the strictures of the master plan itself that impede the implementation of the Authority's progressive inclinations: the master plan defines land use, and, by extension, marks settlements as 'encroachments'. As much as DDA officials may view the city's unplanned settlements with sympathy, they report, they are obliged to operate based on their legal status. And the only route for modifying this legal status is through the complex, lengthy, and bureaucratic process of drafting the next master plan. Ultimately, officials find themselves caught, as one senior staff member put it, "in a double bind wherein it cannot do anything outside the plan and it cannot do much within the plan because it is too rigid".<sup>41</sup> There is, however, precedent for modifying a master plan to reflect the dynamic needs of the city. In 2006, after the 'sealing drive', which curtailed all commercial activity in residential areas, the master plan was amended to allow mixed-use development. This precedent challenges the notion that the master plan is inviolable.

When the Supreme Court of India ordered that non-residential establishments in areas demarcated for residential use by the master plan be closed, the MCD began a 'sealing drive' to shutter commercial establishments operating in residential areas. The thousands of traders and shopkeepers impacted by this came together in protest. What followed over the next few months was a back and forth between the protesting shopkeepers and traders and the Supreme Court.

In September 2006, a notification approved by the Ministry of Urban Development, Government of India, made a crucial modification in the Master Plan 2001 to allow for non-residential activities in residential premises. The sealing drive continued, however, setting off another series of exchanges between the traders and the Supreme Court.

Finally, in February 2007, when the Master Plan of Delhi 2021 was notified, mixed land use was included. These regulations allow for non-residential activities in otherwise residential areas of the city, and have been hailed as an important precedent for modifying the master plan.<sup>42</sup>

## Inside the DDA

Despite transformative economic shifts in India and the Authority's own increasingly self-aware rhetoric, the DDA has consistently failed to meet its goals and realise its promise. The fact that the organisation's internal structures, culture, and processes have evolved little since its founding might begin to explain the Authority's enduring shortcomings. According to one executive engineer interviewed by Adler (2014), "Everything is the same. The preamble is the same; the rules are the same. The DDA has not changed."<sup>43</sup>

## Organisational Structure

The DDA's governance is notably vertical, led by the Lieutenant-Governor (LG) of Delhi who serves ex-officio as the chairman of the DDA. The vice chairman (VC), who is next in the hierarchy, is a civil service officer appointed by the Ministry of Urban Development (MoUD). Adler (2014) analyses the DDA leadership:

In my interviews with DDA bureaucrats, these positions were consistently depicted as the central node of decision-making at the DDA. "People don't communicate within the DDA," one Director of Land Disposal complained to me. "If one department wants something done and another doesn't, this will cause major delays. But if the VC wants, then all the departments will do it." The former Commissioner of Planning echoed this sentiment: "When the VC wants something, it happens." The DDA is an extremely large and diverse organization, divided amongst a variety of different departments; the Chairman and Vice Chairman are the only positions within the DDA's vertical hierarchy who can command horizontal cooperation between departments, a crucial component for expedited project management. As such, the Chairman and Vice Chairman exert the most powerful influence over the trajectory of project implementation, promoting their particular vision for the organization.

These positions are occupied almost exclusively by bureaucrats from the Indian Administrative Services (IAS). ...Yet these positions are also highly political. While the bureaucrats themselves are homegrown civil servants, their appointments

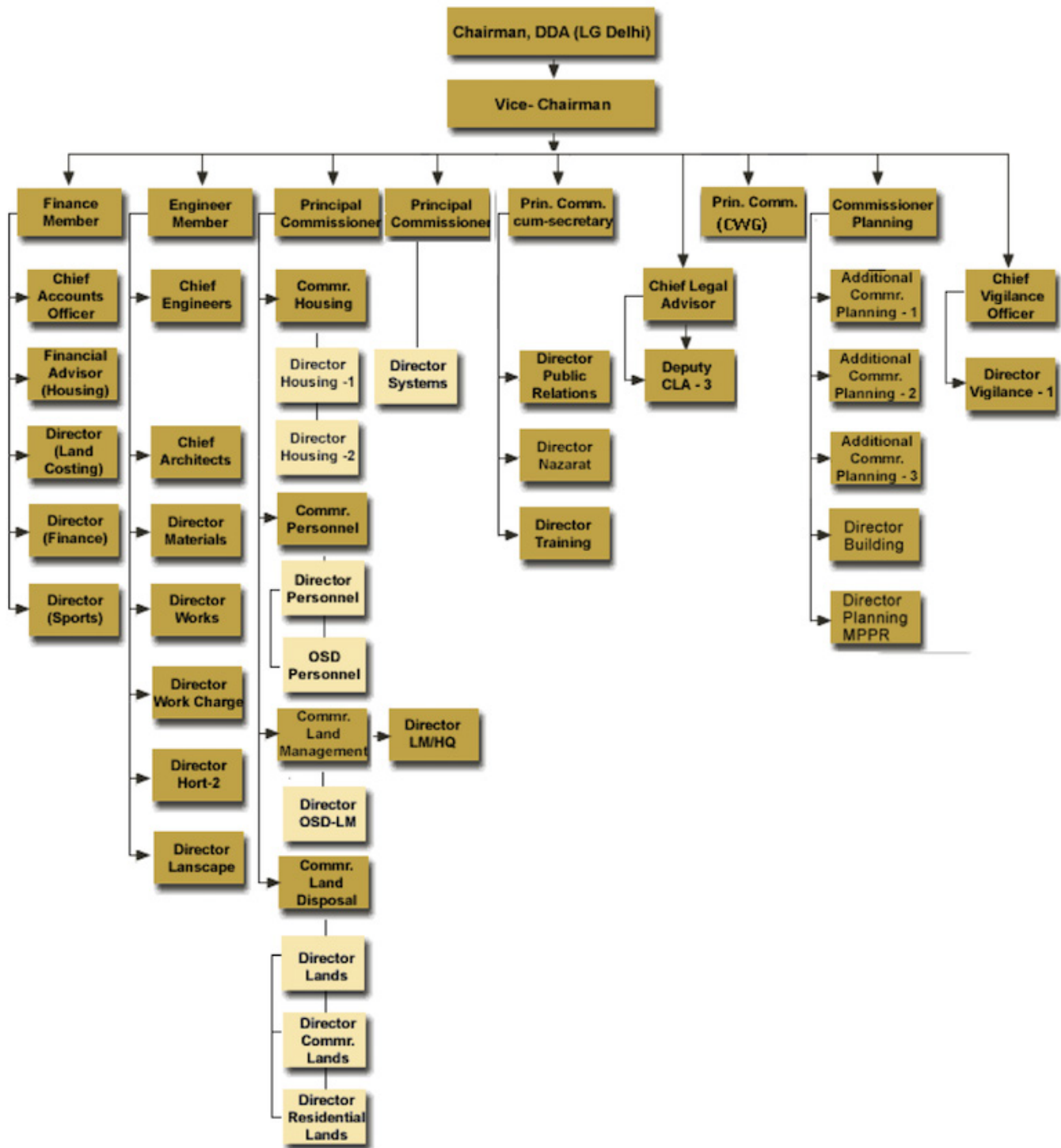
are at the discretion of central political figures—in the former, the President of India, tied directly with the ruling party of the Indian parliament; in the latter, the Ministry of Urban Development, led also by ruling party-affiliated politicians. ... [And] the short-term tenure of these officials has farther-reaching consequences, as well. In my fieldwork, several bureaucrats argued that the high turnover rate in DDA leadership cripples the capacity for the organization to cohere around a single set of projects. According to the Director of Land Disposal, "The VC—the boss of the DDA—never sticks around for a very long time. Then the next VC comes in with very different priorities. It is a problem of continuity, really. The focus never stays for too long."<sup>44</sup>

Beneath these two posts, the agency is organised into 12 departments: Architecture, Engineering and Construction, Finance and Accounts, Housing, Horticulture, Land Management and Disposal, Law, Personnel, Planning and, Quality Assurance, Sports, Systems and Training, and Vigilance. In addition to these 12 departments, a thirteenth was created in 2008: the Unified Traffic and Transport Infrastructure (Planning & Engineering) Centre (UTTIPEC), which coordinates transit and infrastructure projects in the city. (See organisational chart on following page.)

In addition to its obvious verticality, this organisational chart clearly illustrates the Authority's significant bias towards the technical side of planning and implementation. There is no department at the DDA whose mandate is to engage with the residents of Delhi for whom it plans and executes projects or broadly, that of 'community participation'. This is interesting to note especially in the light of the DDA's recently increased mandate to undertake community participation for its housing rehabilitation projects under the Rajiv Awas Yojana (RAY).<sup>45</sup> The guidelines of the RAY envision NGOs as a bridge between implementation agencies and residents; but as one top official at the DDA told us, "Nobody at DDA trusts NGOs. You could have room full of 25 DDA people and I would be the only one willing to work with NGOs."<sup>46</sup>

Over the past several years, Delhi has witnessed a live example of this gap in the DDA's staffing in the case of Kathputli Colony, where the Authority is undertaking its first in-situ redevelopment project.<sup>47</sup> Here, in what

DDA Organisation Chart



Source: Delhi Development Authority at [dda.org.in](http://dda.org.in).



has been touted as an example of progressive slum rehabilitation, the DDA has been plagued by problems stemming from poor community involvement. Mismanaged communication between the DDA and residents has led to rampant misinformation, a situation worsened by the Authority's repeated threats to use force against residents. We argue that the failure to engage the community in this case represents a central shortcoming in the DDA's institutional structure, one that significantly impacts its efficacy.

## Staffing and Promotion

The challenges of the Authority's vertical structure and technical focus are exacerbated by a staff that is itself divided into two very different groups, working in different spheres. In the first, an elite cadre of bureaucrats drafts the master plan, sets goals, and responds to shifting political priorities. In the second, a lower-level cadre executes these plans. This group of staff enters the DDA through direct recruitment; such an employee, in general, moves slowly up the ranks over the course of a career, rarely entering the upper-level management.

The upper management, in contrast, consists of 'deputationists', high-level bureaucrats on leave from various other government organisations, recruited to operate at senior levels in the Authority. According to a personnel official interviewed by Adler (2014), "At the level of director and above officials are mostly on deputation. Out of five commissioners, three are on deputation."<sup>48</sup> Based on his conversations with DDA officials—themselves largely on deputation—Adler identifies three common explanations for the Authority's significant reliance on the deputation process. First, deputation is considered an opportunity to create a class of bureaucrats who understand the range of government functions across agencies in Delhi. Second, deputation is thought to bring fresh ideas into the DDA. According to another official interviewed by Adler, "Deputation works well for the DDA. It brings experience, and people who have been working at the DDA don't have any new ideas. They are stuck in their own vision, their own experience."<sup>49</sup> Finally, deputation is an effort to import fresh talent into the DDA, a task at which recruitment has not succeeded.

We conclude, however, that deputation has been counterproductive, resulting in a divided and inefficient organisational structure that struggles to implement policy. At the most basic level, the high turnover that attends deputation means that the DDA managers are not in place long enough to both understand the Authority's needs and see projects through to completion. As an official from the Training Department interviewed by Adler said that, "people are just beginning to learn from their mistakes when they leave".<sup>50</sup> Deputation has serious impacts on the culture of the organisation, as well: career DDA staffers see deputationists as an impediment to their advancement, fostering resentment and amplifying the distance between the two groups of staff.

As Adler observes, instead of creating a dynamic, modern organisation, deputation reinforces the divide between DDA management and the staff who execute its activities throughout the city. This distance between strategy and the ground is a key factor in the Authority's failure to deliver on its mandate, and it is one that we have observed repeatedly in two years of fieldwork in Delhi's unplanned settlements.

## Systems and Processes

By the end of the financial year 2003-04, the annual report of the Authority asserted that, "DDA is upbeat with systematic automation to minimize downtime". By 2013, the Authority had launched a range of online tools, including applications for conversion of leasehold to freehold and grievance redressal, as well as implementing electronic accounting. Indeed, in its 2012-13 annual report, the DDA announced that, "The road map for complete computerisation of DDA was prepared. ... In the road map it has been envisaged that activity of every department will be automated ... which will help the top management in taking decisions."<sup>51</sup>

Yet, according to Adler (2014), who spent time in the DDA's offices, "the DDA remains firmly rooted in the technological terrain of the 1980s. Projects are still managed as paper files, traveling from office to office, department to department." These technological challenges, he writes, are compounded by the



cumbersome process of communicating between the Authority's departments:

In my interviews ... bureaucrats consistently cited a lack of inter-departmental communication as one of the key factors for the DDA's implementation challenges. The DDA operates instead largely in vertical silos, where communication across departments only takes place at the very top. ... "It is the duty of the head of the department to communicate," one DDA planner described in our interview. "Deputy directors are not allowed to communicate across departments."

These organizational silos retard the process of implementation. As one former DDA official explained to me, when an application goes to the planning department, the planners will review the project and then send back "queries"—requests for further clarification, modification, etc. This departmental back-and-forth can often take months to work through, as the planners do not engage in inter-departmental meetings to sort out these matters en masse. "The DDA is a massive organization," he explained. "The people in different departments are not friends."<sup>52</sup>

This inefficient information sharing has been longstanding at the DDA, and it is a phenomenon the Authority has been unable to address. A 1986 analysis by Tata Consultancy Services (TCS) explains it well:

The information system in the DDA is characterised by a 'data explosion' at the lower levels and 'information starvation' at the higher levels of management. There is little consolidation or analysis being carried out at any level of the DDA. Even senior officers receive information in the form of raw data. In the absence of the data being processed and presented as information, officials are unable to use it as a decision-making tool, thereby defeating the very purpose for which the data was gathered.

TCS's findings resonate with the conclusions we have drawn nearly thirty years later, a fact that speaks to the longevity of the DDA's challenges. We include more extensive excerpts from their work as an appendix to this report.

## Conclusion

At the edge of one of South Delhi's wealthiest neighbourhoods, high stone walls mark out five acres of flower beds and glades cut by shady paths. Here, in park-like quiet the area's residents—or their gardeners—can buy plants to keep their plots and terraces decked with green and flowers. The prices are low, the quality is high, and the staff is helpful and professional. The land is owned by the DDA, which also manages the nursery.

Ten kilometres east of the nursery, across railway tracks and an industrial zone, is a neighbourhood of 200 acres. Somewhere between 50,000 and 100,000 people live here, but the area has no piped water or sewerage, inadequate street lighting, and poorly paved streets. Empty lots pepper the settlement, marked by DDA signs announcing community centres, shopping complexes, and transportation infrastructure. They have been there for more than a decade. This is a resettlement colony, DDA land designated by the Authority to house residents of JJs that it demolished. Incidentally, many of them were evicted from JJs in the neighbourhood of the DDA nursery.

These examples alone are not enough to draw conclusions about the DDA's role in Delhi. But they illustrate the profoundly class-biased city that the DDA has played a central role in creating, and which is evident in the data presented in this report. For a few, it is the 'world-class city' that the DDA has promised. But this modern city systematically excludes most of Delhi's residents. Our analysis—and those of other researchers—shows that the Authority consistently underestimates the need for EWS housing and under-delivers on that underestimate, sustaining a cycle of homelessness, informal settlement, and demolition.

Alongside this class bias, we identify two features of the DDA and its role in Delhi that impede effective and inclusive development. The first is Delhi's limited statehood, the fact that the state government does not administer the work of planning and development (or police activity)—the DDA is not accountable to the government most directly elected by Delhi's residents. This means that even if the city's elected representatives perfectly understand and lobby for the kind of planning and development its citizens need, the agency responsible for realising that city does not answer to them.

The second is the deep internal divide between those who establish DDA's vision—bureaucrats who move in and out of the Authority—and its permanent staff, who are often much closer to ground realities. This divide is exacerbated by vertical departments that do not communicate horizontally. This is further compounded by a challenging workflow, in which files move slowly and approval processes are archaic and inefficient.

In two years of fieldwork in Delhi's unplanned settlements we have been struck by the fact that the DDA is staffed overwhelmingly by technical experts and engineers. The Authority is charged with creating a liveable city, a space to be inhabited by one of the largest urban populations in the world, and one of staggering diversity. Yet, the staff at DDA do not appear to be trained to work with communities, to understand their needs and translate that understanding into planning.

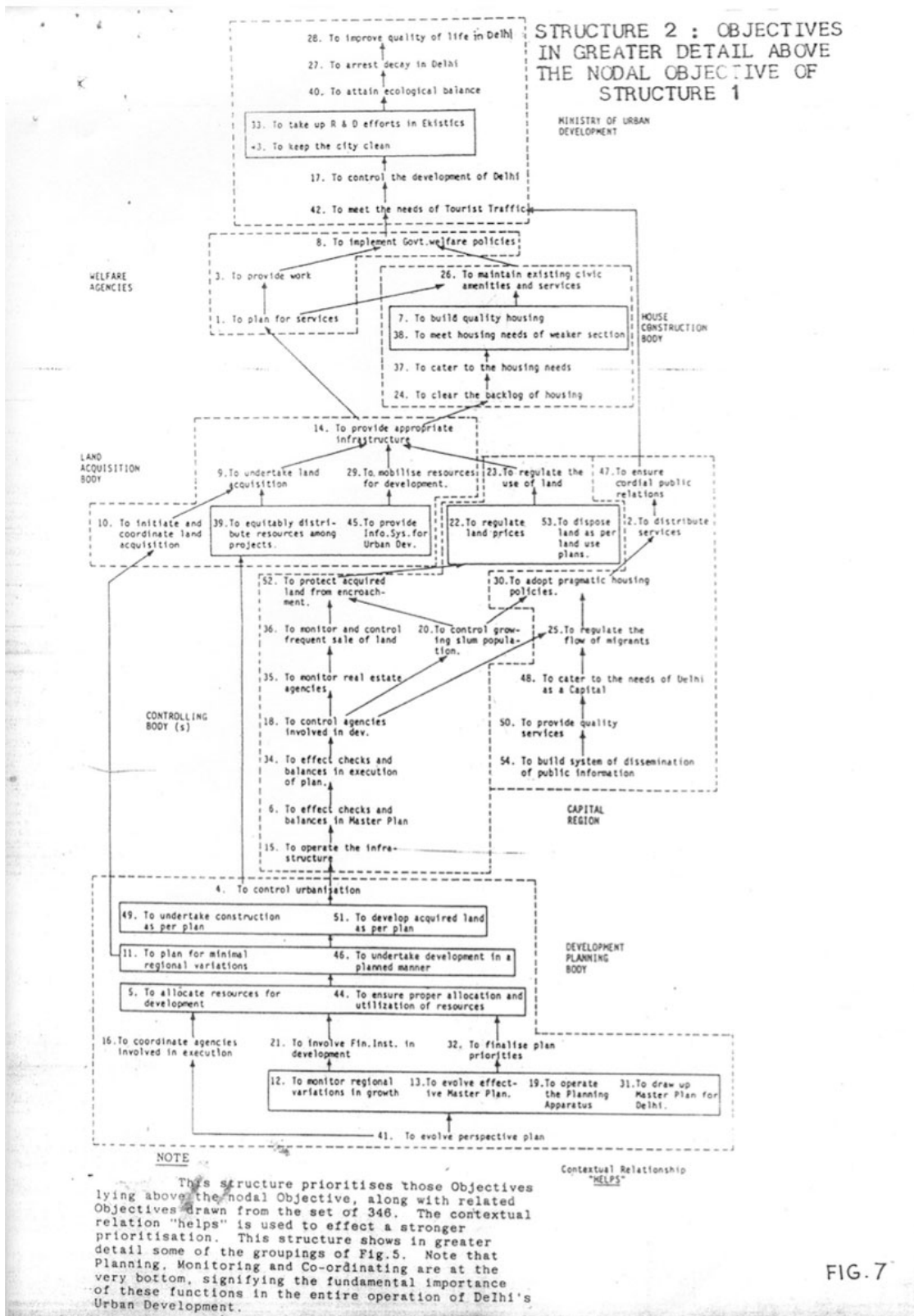
In its 2003-04 annual report, the DDA describes itself as “working day & night to ensure a healthy, secure and enjoyable standard of living for every Delhite”. In our research, we find a DDA that is working to create liveability not for every resident of Delhi, but rather for a small subset of the city. To fulfil its mandate, the Authority must expand its gaze to include every person living in the city. In a city of the size, and cultural and socioeconomic diversity of Delhi, this is an enormous challenge.

## Notes

1. Delhi Development Act, Section 6, 1957: "The objects of the Authority shall be to promote and secure the development of Delhi according to plan and for that purpose the Authority shall have the power to acquire, hold, manage and dispose of land and other property, to carry out building, engineering, mining and other operations, to execute works in connection with supply of water and electricity, disposal of sewage and other services and amenities and generally to do anything necessary or expedient for purposes of such development and for purposes incidental thereto."
2. Shahana Sheikh and Subhadra Banda, 'The Delhi Urban Shelter Improvement Board (DUSIB): The Challenges Facing a Strong, Progressive Agency'. A report of the Cities of Delhi project, Centre for Policy Research, New Delhi (May 2014); Shahana Sheikh and Subhadra Banda, 'The Thin Line between Legitimate and Illegal: Regularising Unauthorised Colonies in Delhi'. A report of the Cities of Delhi project, Centre for Policy Research, New Delhi (April 2014).
3. This represents the most recent data. Source: Categories of settlements in Delhi presented in Economic Survey of Delhi, 2008-2009, page 169, citing Delhi Urban Environment and Infrastructure Improvement Project (DUEIIP)-2021.
4. See Shahana Sheikh and Subhadra Banda, op. cit.
5. D. Asher Ghertner, 'Rule by Aesthetics: World-Class City Making in Delhi'. Ananya Roy and Aihwa Ong, ed., *Worlding Cities: Asian Experiments and the Art of Being Global* (Blackwell, 2011).
6. Delhi Development Authority, 'Master Plan for Delhi', New Delhi (1962).
7. Lok Sabha Secretariat, 'Report of the Joint Committee on the Delhi Development Bill', New Delhi (November 1957).
8. J. D. Singh, 'Delhi Growing Too Fast; Lack of cohesion', the Times of India (29 January 1968).
9. Delhi Development Authority, 'Master Plan for Delhi' (1 September 1962).
10. Atul Kapoor and B. Thankur, 'A Geographical Analysis of Land Acquisition for Urban Development: A Study of Delhi'. in Baleshwar Thakur, ed., *Perspectives in Resource Management in Developing Countries. Volume 3, Ecological Degradation of Land* (Concept Publishing Company, 2008).
11. Abhijit Datta and Gangadhar Jha, 'Delhi: Two Decades of Plan Implementation', *Habitat International*, 7/1 (1983), 37-45.
12. 'DDA Flats: A Raw Deal?', the Times of India (12 February 1978).
13. Abhijit Datta and Gangadhar Jha, op. cit.
14. K. Srirangan, 'Public land and property development and cross-subsidisation for low-income housing in Delhi', DFID Research project R6860: Delhi field studies and workshop (March 2000), 18-21.
15. S. P. Agarwal. *Development Digression Diary of India : 3D Companion Volume To Information India 1991-92* (Concept Publishing Company, 1993).
16. Ibid.
17. Viswambhar Nath, 2007. "Problems of Metropolitan Cities in India", Chapter 9 in "Urbanization, Urban Development, and Metropolitan Cities in India", Edited by S. K. Agarwal, Published by Concept Publishing Company
18. Sipra Maitra. 'Housing in Delhi: DDA's Controversial Role', *Economic and Political Weekly* (16 February 1991).
19. David Adler, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City'. Brown University, Providence, RI, USA (May 2014).
20. DDA's Annual Administration Report for 2003-04.
21. DDA's Annual Administration Report for 2006-07.
22. MPD 2021, page 18
23. Economic Survey of Delhi 2008-09, page 169, citing DUEIIP-2021
24. Interview with top DDA official on 25 April 2013.
25. Standing Committee on Urban Development. Press release of Thirty First Report on the subject "Functioning of Delhi Development Authority particularly with reference to Affordable Houses in Delhi and its role in Regularization of Unauthorized Colonies in Delhi and matter connected thereto". Report presented to Hon'ble Speaker Lok Sabha on 22 April 2014 at the Lok Sabha Secretariat, Parliament House, New Delhi. Percentage calculated based on Ministry of Urban Development data: <http://ncrpb.nic.in/ncrconstituent.php>
26. Annual Administration Report for 2010-11 is not available on the DDA's website.
27. DDA's Annual Administration Report for 2005-06.
28. See Shahana Sheikh, Subhadra Banda, and Ben Mandelkern, 'Planning the Slum: JJC Resettlement in Delhi and the Case of Savda Ghevra'. A report of the Cities of Delhi project, Centre for Policy Research, New Delhi (August 2014).
29. Data is available for allotment of DDA housing from 2003-04 to 2009-10. During these years, the number of DDA houses allotted to residents of Delhi increased from 341,982 to 376,494 i.e. by 34,512. Of these allotments, 20,557 allotments were made to clear the backlog of allotment to houses that had been constructed by the DDA under schemes launched prior to 2003-04. A simple calculation suggests that the remaining 13,955 allotments were made for houses that had been constructed under DDA schemes, launched between 2003-04 and 2009-10. This can be compared to the total reported construction during this period of 22,955 units.

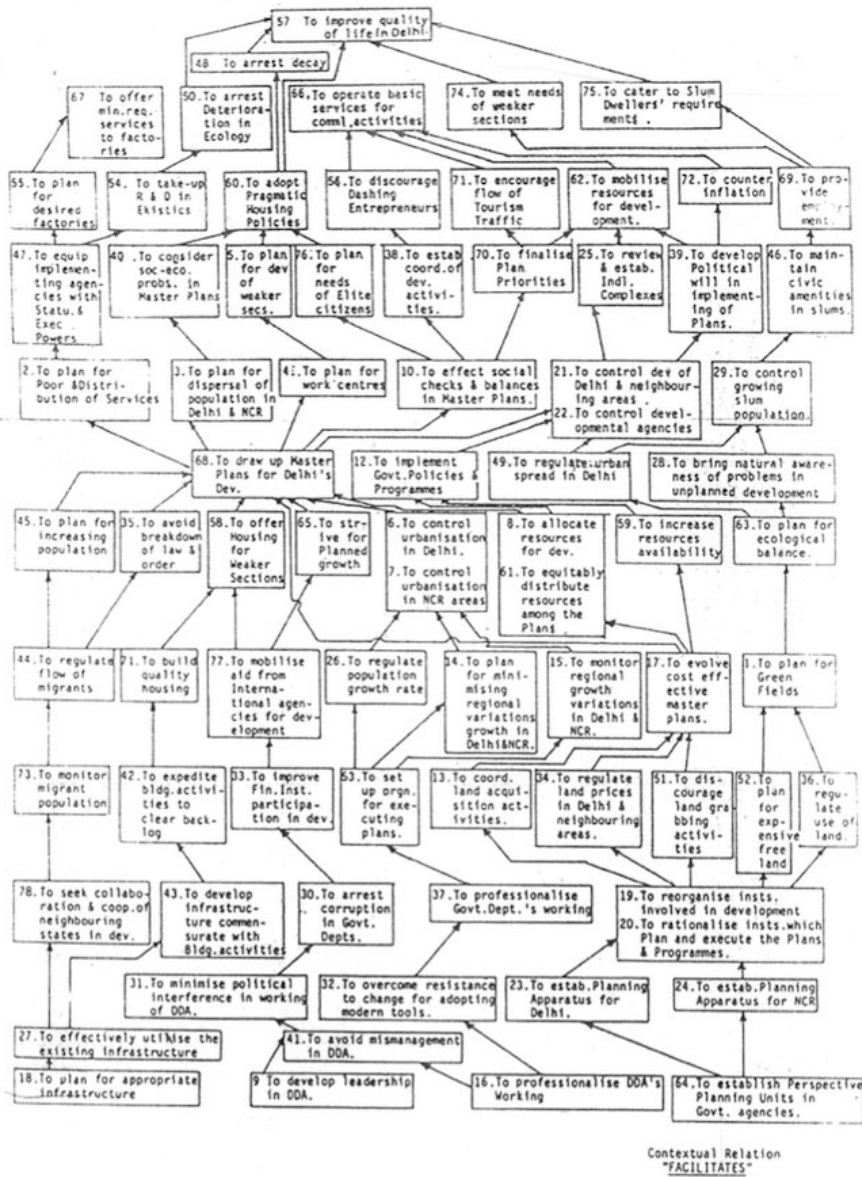
30. Section 11.14 in various annual reports of the DDA (2003-04, 2005-06, 2008-09).
31. Section 11.15 in various annual reports of the DDA (2003-04, 2005-06, 2008-09).
32. Kucha: temporary; pucca: permanent
33. Kucha, pucca and semi-pucca
34. Gautam Bhan, 'This is no longer the city I once knew. Evictions, the urban poor and the right to the city in millennial Delhi', *Environment and Urbanization*, 21/1 (2009).
35. Despite the progressive intentions, the DDA's first in-situ slum rehabilitation has had only limited success. See 'Kathputli Colony: Delhi's First In-Situ Slum Rehabilitation', another report of the Cities of Delhi project.
36. Order No. F 18(7)/UD/DUSIB/2011/Vol I 2350 - Guidelines for implementation of the Scheme for relocation/ rehabilitation and allotment of flats to Jhuggi Jhopri dwellers under JNNURM-2013, Department of Urban Development, Government of NCT of Delhi, 25 February 2013.
37. See Shahana Sheikh and Subhadra Banda, 'The Delhi Urban Shelter Improvement Board (DUSIB): The Challenges Facing a Strong, Progressive Agency'. A report of the Cities of Delhi project, Centre for Policy Research, New Delhi (May 2014).
38. Slum designated areas, JJs, and resettlement colonies.
39. Suhas Munshi, Our flat design outdated, DDA vice-chairman says, *The Times of India*. 12 February, 2014.
40. Ibid; Geospatial Data Limited is a company of the GNCTD
41. Interview with top DDA official on 25 April 2013
42. Diya Mehra, 'Protesting Publics in Indian Cities: The 2006 Sealing Drive and Delhi's Traders', *Economic and Political Weekly*, 47 (30), 2012
43. David Adler, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City'. Brown University, Providence, RI, USA (May 2014).
44. Ibid.
45. Rajiv Awas Yojana (RAY), Guidelines on Community Participation, July 2012, Ministry of Housing & Urban Poverty Alleviation, Government of India;
46. Interview with top DDA official on 25 April 2013
47. Véronique Dupont, Subhadra Banda, Yashas Vaidya, and M M Shankare Gowda, 'Unpacking Participation in Kathputli Colony Delhi's First Slum Redevelopment Project, Act I', *Economic and Political Weekly*, Special Article, Vol - XLIX No. 24 June 14, 2014
48. David Adler, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City'. Brown University, Providence, RI, USA (May 2014).
49. Ibid.
50. David Adler, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City'. Brown University, Providence, RI, USA (May 2014).
51. Annual Report 2012-13, Delhi Development Authority (page 14)
52. David Adler, 'Bureaucracy after Liberalization: The Delhi Development Authority & The World-Class City'. Brown University, Providence, RI, USA (May 2014).

Appendix: Figures Excerpted from Tata Consultancy Services Report, 1986





STRUCTURE 1: STRUCTURING OF HIGHER LEVEL OBJECTIVES

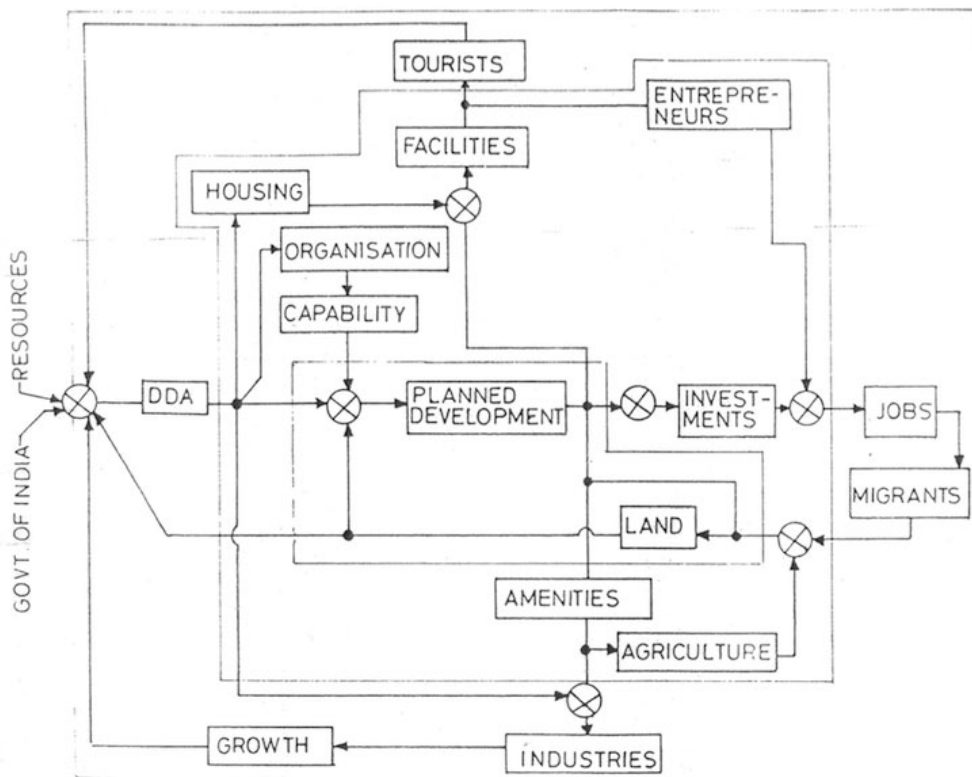


NOTE

Out of the 346 Objectives, 78 referring to the various groups were identified as Higher Level Objectives. These have been structured using the contextual relationship "facilitates". For example, the realization of Objective 18 on the far left, facilitates the realization of Objective 27, which facilitates the realization of Objective 78, and so on, in an upward flow by way of several streams, leading to the global Objective 57 "To improve the quality of life in Delhi". The structure prioritizes the Objectives. Objective 68 is seen as a nodal Objective, as many streams converge upon it.



CONTROL SYSTEM EQUIVALENT OF A PART OF THE  
MACRO LEVEL CYBERNETIC INFLUENCE DIAGRAM



**NOTE:** This diagram graphically traces the growth of the DDA from a city improvement trust, as shown by the blue box. At that time, the planned development was essentially connected with developing land. Later, the DDA became more involved with the consequences of Delhi's growth. It had to respond to the demands of entrepreneurs and their investments, and provide various facilities, and take up housing. The green box encloses that phase. It is seen, that up to this stage, the DDA was in full command of the situation. The current situation shows how industrial growth has accelerated employment, migrants and further growth of the city. The demands of growth have engulfed the DDA, and cut it off from the inputs of the Govt. of India and its resources. The red box shows that the control inputs have gone beyond the scope of the DDA.

**LEGEND**

- DDA 1957
- DELHI IMPROVEMENT TRUST
- DDA TODAY
- ⊗ COMPARATOR.-A device for comparing accurately in order to detect deviations from the required standard

FIGURE. 4.

