

Appraisal of City Development Plan

Kulgaon Badlapur

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Appraisal of City Development Plan: Kulgaon Badlapur

The City Development Plan (CDP) of Kulgaon Badlapur gives a good idea about the situation in the city, its future perspective and vision, and the investment plan for the city. Two aspects, however, were not provided in the first draft of the CDP that was reviewed by the National Institute of Urban Affairs (NIUA) i.e. (i) the status of water related costs and recovery of water related taxes and user charges and tariff structure were not provided, (ii) the institutional arrangements at the city level in the provision of basic services and the status of incorporation of eighteen functions of the 12th Schedule of the 74th Constitutional Amendment were not provided. In addition to it, clarifications were also sought on population projections and financial projections as per Financial Operating Plan (FOP). A few suggestions were made and city officials were asked to incorporate additional information in the revised CDP as discussed in Annex 1.

City's response after the first set of comments:

Based on the initial submission of the CDP, the comments mentioned above were communicated to the city. As is clear from these comments, the CDP did not require major revisions. A compliance note and the revised CDP were received by NIUA on 14 July 2008. The second revised and final version of the CDP was again appraised by the Institute.

NIUA's response:

The revised CDP has incorporated the required additions based on the comments made on the earlier draft of the CDP. The Chapter 2 has been revised and a section (2.3) on "Institutional and Legal Framework" has been added. In the Chapter 3 (Section 3.4), a methodology has been added with respect to "Projected Population 2006-2031". Further, as per the CDP, the water supply system in Kulgaon Badlapur has been managed by Maharashtra Jeevan Pradhikaran which a parastatal agency for water supply in Maharashtra hence the details on water tariff structure, costs and recovery of water related taxes and user charges has not been included in the CDP. Similarly the Chapter 11 has been revised and a new special sanitation tax has been proposed which clears the queries related to financial projections as per the FOP.

The CDP is now in accordance with the guidelines in JNNURM Toolkit Number 2.

Annex 1

Appraisal of City Development Plan: Kulgaon-Badlapur

1. Profile

Kulgaon Badlapur is one of the thirteen municipal councils and seven municipal corporations that alongwith their rural hinterland form the Mumbai Metropolitan Region (MMR). Now Kulgaon-Badlapur is considered as one of the rapidly growing towns in Mumbai Conurbation. Due to the high population growth and congestion, many people working in Mumbai have moved to Kulgaon-Badlapur. Kulgaon-Badlapur Municipal Council (KBMC) was constituted by incorporating 12 revenue villages. KBMC now is a Class-B Municipal council. KBMC covers an area of 35.68 square kilometres and is divided into 34 wards as per the 2001 Census. The Municipal Council looks after the administrative affairs through seven departments, which includes Electricity, Water Supply, Security, Town Planning, Store and Home Tax.

2. Existing Situation Assessment

2.1 Demography

The population of KBMC has been increasing steadily over the years. It has increased from 12,257 persons in 1961 to 97,948 persons in 2001 at an average decadal growth rate of 66%. The population growth has been particularly phenomenal in the decade of 1991-2001, whereby it has nearly doubled. The table below shows the population growth during 1961 - 2001:

Decadal Population Growth during 1961 - 2001

Area (sq. km.)	Total population	Population	Increase	% Increase	Incremental Increase
35.68	1961	12,527			
35.68	1971	18,077	5,550	44.30	
35.68	1981	31,460	13,383	74.03	7,833
35.68	1991	52,197	20,737	65.92	7,354
35.68	2001	97,948	45,751	87.65	25,014
	AVG.		21,355	65.98	13,400

Source: Primary Census Abstract – 1961-2001

It can be clearly seen that the population growth is exponential. It may be attributed to the increasing cost of living in Greater Mumbai and also to the northward shift of the workplace and the business district in the last decade. If this trend continues, in future the growth may increase further. Considering the comparative rate of growth of population between Kulgaon-Badlapur and Ulhasnagar and Ambernath, it is observed that KBMC is growing at a faster pace than its neighbouring municipal towns. The reason may be quasi-rural character of KBMC or its scenic ambience and affordable housing stock, which may have attracted people to settle down in Kulgaon-Badlapur. On the other hand, the reason may range from the nearby towns reaching saturation density. Demography has been justified well in detail.

2.2 Population Projection

Population projections form an important exercise as population provide the base for the calculation of all most infrastructural and services demand for the city. As per the CDP, the population of Kulgaon-Badlapur for the year 2006 is 1,66,000 and it has already outgrown all the projections made by different authorities for different purposes. The growth rate was lower in the earlier decade, but has been steadily increasing and in the half decade of 2001-06 the growth rate has been exponentially high.

Projected population for Kulgaon-Badlapur 2031

S.No.	Particulars	Persons
1	Population 2006	1,66,000
2	Projected Population 2011	2,55,412
3	Projected Population 2016	3,49,936
4	Projected Population 2021	4,46,617
5	Projected Population 2026	5,43,378
6	Projected Population 2031	6,29,924

2.3 Land use

Urban land use comprises two elements i.e. the nature of land use which relates to what activities are taking place and where, and the level of spatial accumulation, which indicates their intensity and concentration. The behavioural patterns of individuals, institutions and firms have an imprint on land use. The Broad land use gives the total proportion of land that can be developed or is developable and the quantum of land that is non developable. The non-developable land consists of water bodies and reserved forest, which should not be developed to maintain the fragile ecosystem in place.

Developable and non-developable land in under KBMC; 1995,2001:

Land Type	1995 (Sq.Km)	2001 (Sq. Km)
Developed & Developable Land	26.72	25.76
Non Developable Land	8.96	9.92
Total Land Area	35.68	35.68

Source: 1) Development Plan for UAKBSNA Region, 1996;
2) Data from the KBMC

It is observed from the table above that approximately 27.8% or 9.9 sq km of the total municipal area is non-developable. It is also observed that the amount of non-developable land has increased during the period from 8.96 to 9.92 sq km. The increase may be attributed to the refinement of land use statement prepared in 2001 over 1995. It may also be due to the increase in the coverage of water bodies, or a result of the buffer around water bodies also being declared non-developable.

Since there is a very large percentage of land under forest, or agriculture or vacant, all other land uses appear very small in percentage terms. Only considering the developed areas, removing forest and vacant/agricultural use, it is necessary to

analyse the allocation pattern of land use to determine any existing lag. The land use aspect has been explained well in the CDP.

2.4 Economy

The work participation rate has marginally increased from 33.78% to 34.73% during 1991-2001 and is sufficiently good compared to the neighbouring towns. It is observed that out of the total workforce of 34,014 almost 94% are main workers and the remaining are marginal workers. Most of the persons living in the KBMC region have a regular employment. Marginal employment is higher for the females than males.

Status of male and female workforce:

Year	Total Population	Workers (in Nos.)			Workers (in %)		
		Male	Female	Total	Male	Female	Total
1991	52,157	14448	3169	17617			33.78
2001	97,948	27917	6097	34014	53.79	13.23	34.73

Source: Primary Census Abstract, Thane district, 1991 and 2001

Main and Marginal workers; 2001

S.No.	Population	Persons	Male	Female
1	Total Population	97948	51899	46089
2	Total Workers	34014	27917	6097
3	Main Workers	32129	26785	5344
4	Marginal Workers	1885	1132	753

Source: Primary Census Abstract, Thane district, 2001

In 2001 the nine fold categories for workers were not published. Only categories 1, 2 & 5b were published separately and the rest all were clubbed together, thus comparison with the past data is not possible. If we consider only agriculture and cultivation as primary sector, then in 2001 the share of the primary sector has decreased to 6.4% of the total workers from 15% in 1991. The share of household industries has also decreased compared to the year of 1991. As per the CDP, the industrial activity or the secondary sector activity is decreasing in the KBMC, as most of the units within the MIDC are pronounced sick. Thus the worker base in Kulgaon-Badlapur is primarily dependant on tertiary sector. This aspect has been described well in detail in the CDP.

3. Analysis of Existing Physical Infrastructure

3.1 Water Supply

Mumbai Metropolitan region covers an area of about 4355 sq km with a 2001 census population of 19.5 million people approximately. For the purpose of planning water resources and hydrometric study, the Mumbai metropolitan region is divided into six zones. Kulgaon-Badlapur comes under zone two.

The principal source of water supply to KBMC and its surrounding region is the Ulhas River and its tributaries. The upstream of Ulhas River from Shahad weir is being used as the source of water supply. Ulhas River thus is a perennial and reliable source. The water supplied to the city is 24MLD and the source is located at 69 kms

from the city limits. Kulgaon-Badlapur has a water treatment plant, constructed in 1924, to supply 13.5 MLD water to the MIDC at Ambernath. It was later augmented to 27MLD in 1952. The capacity of this plant has been augmented to 34 MLD; however it is running at overloaded capacity of 45 MLD. An additional plant with 18 MLD capacity at Kharvai was established as part of the World Bank aided MWSS project. The total supply is thus around 63 MLD in 1996. The present water treatment capacity is 70 MLD. KBMC has a water storage capacity of 24 MLD pre and post treatment. The storage capacity in the distribution system amounts to 10.4 MLD.

As per the CDP, the main issues in the existing supply system are as follows:

- The existing water supply system network is inadequate to meet the demand of the increasing population.
- The unfavourable topography results in very low pressure at the higher areas.
- The distribution system mostly consists of AC and PVC pipes causing frequent problems and higher maintenance cost.

3.2 Drainage

Drains along the roads in the town provide storm water drainage. Waste water from households, effluents from septic tanks at times as well as surface runoffs are discharged into these drains which then through a network of larger nallas have an outfall in the Barvi River. The total length of drains is 138 Kms along the different categories of road. Each of the roads has drains on both sides. Drains are missing on the 62 km stretch of the road. Most of the primary roads have drains running alongside them, however in the case of secondary roads it is not so.

Total drain length by type in Kulgaon-Badlapur, 2006

Particulars	Covered Pucca (Km)	Open Pucca (Km)	Kutchha (Km)	No Drain (Km)	Total Drain Length (Km)
Along Secondary Road	25	15	12	35	52
Along Tertiary Road	15	18	10	22	43
Total Length	60	48	30	62	138

Source: Kulgaon-Badlapur Municipal Council

Overall the presence of drains stands at 60% of all road length. As per the CDP, this coverage needs to be increased. All the primary and secondary roads need to be provided with covered drains.

3.3 Solid Waste Management (SWM)

The present solid waste generation as per the KBMC records is 55 tonnes per day and it works out to 0.331 kg per capita per day. The solid waste generation rates are varying between the 0.576kg/c/d to 0.331kg/c/d between the time periods from 1996 to 2006. The solid waste generation, which at present is about 75 metric tonnes, will increase up to 201 metric tonnes by 2021 and will reach to about 283 metric tonnes by

the year 2031. The table below gives the projected solid waste generation up to the year 2031.

The KBMC had in past appointed a private agency to collect solid waste from part of its area. The coverage was restricted to the six villages of Kulgaon, Badlapur, Belivali, Manjarli, Katrap and Kharvai. Door to door collection is not taken up. The solid waste is dumped at specific location in and around the streets, from where the municipal trucks pick it up and the segregation of waste is not done. A dumping ground exists at Belivali Village on northern fringes of the KBMC area, which was being used for dumping of solid waste. It is an open land, which has been acquired for dumping and does not have any sanitary facilities.

3.4 Sewerage System

No sewerage system exists in Kulgaon Badlapur municipal council area. At the household level, each house has a septic tank. The municipality undertakes the cleaning of septic tank at regular intervals on application and submission of charges. The KBMC is equipped with a tanker with sewage pumping capability to carry out the task. The total amount of sewerage generated has not been accounted by the municipality.

As per the CDP, an underground sewerage system is a necessity for the city. The topography of Kulgaon Badlapur is undulating which makes it a little difficult for the provision of a centralized and unified sewerage system. Also the development in Kulgaon-Badlapur is a little sparse and scattered.

4. Urban Poor

The CDP has pointed out that there are 18 recognized slum pockets with a population of 6557 persons in 1619 households spread over an area of 12.8 acres. In addition to these there are 14 unrecognised slum pockets. The total slum population, including recognized and unrecognised slums, is 10,315 persons. The access of the slum dwellers residing in the recognized slum pockets to the basic services are given in the table below:

Access to basic services by slum dwellers, 2006

S.No.	Particulars	
1	Access to Municipal water supply	85%
2	Access to drainage facility	20%
3	Access to community toilets	60%
4	Access to solid waste management services	nil

Source: Kulgaon-Badlapur Municipal Council

To make the city liveable and to promote equitable growth, it is necessary to provide the basic civic necessities to the urban poor. As per the CDP, it is proposed that the recognized slum pockets to be redeveloped under the “Basic services for Urban Poor” (BSUP) scheme. The basic objective of the scheme is to strive for holistic slum development with a healthy and enabling urban environment by providing adequate

shelter & basic infrastructure facilities to the slum dwellers of the identified area. Urban poor aspect has been well covered.

5. Environmental Management

Kulgaon Badlapur Municipal Council Area is endowed with extensive and valuable ecological resources. The geographical setting itself, with the Matheran hills and the Matheran eco sensitive zone on the south west and the Barvi dam to its North west and the Ulhas river flowing across the municipal council area can be considered as a major environmental advantage, which needs to be put to the best use for the development of the city. Ensuring protection for these environmental features while at the same time utilizing these resources to the optimum is basically the key to sustainable development of the area. The Environmental Management Plan as devised by the CDP (for maintaining the balance between the “goods and bads” of the environment) delineates policies for the management and conservation of the city’s natural resources and the protection of the citizens from hazards and pollution. It is imperative that this plan be implemented in coordination with the sustainability and environmental management schemes of Mumbai Metropolitan Region. The CDP has formulated the SWOT analysis for Environmental Management.

6. Stakeholder Consultation & Vision Statement

Developing a vision for the city is central to the preparation of a CDP. A Vision defines the potential of the city and reflects its unique attribute in terms of comparative and competitive advantages, values and preferences of the city residents, relationship of the city to state, national and global economies and of course, the history and physical characteristics of the city. A vision aligns stakeholders' energies to work cohesively for the development of the city. In order to ensure effective delivery of services, a proper urban management program was formulated through the participation of key stakeholder and planning partners. The following representatives were involved in the process:

A. Public representatives

Senior citizen
Mahila Sangathan
Auto rickshaw / taxi union
Traders association
Truck and transport operators
Industries associations
Social organizations
NGO’s
Professors and teachers

B. Representatives from various Authorities

KBMC officials
Corporators & Sabhapatris
Electricity board (MSEB)
MJP / Jalswaraj

Police / Traffic Police
MIDC
Telephone department

The vision for the city has envisioned to promote and develop Kulgaon Badlapur area as a clean, liveable and eco-friendly Dormitory Town with quality physical and social infrastructure and urban services. It is also aimed to convert its large tracks of areas with its natural charm into, tourists paradise to attract people from the neighbouring over crowded city.

7. Municipal Finance

The financial profile of city indicates that the KBMC has a revenue account surplus; the current surplus in year 2006-07 has reached to 31.13% of the total revenue receipts due to better revenue realization. Few municipalities in India are able to claim such surpluses. As per the CDP, the KBMC is not a revenue-dependent corporation, and its dependency ratio on state resources is low, consisting primarily of octroi cess education cess grant and other petty grants. Aggregate per capita expenditure levels have risen considerably over the past five years and have in fact, registered a increase at 2002-03 prices at a rate by about 25 per cent in 2006-07. Combined with the fact that expenditure levels are low and the KBMC is unable to hold on even these levels would tend to suggest deterioration in the levels of infrastructure services in the city of Badlapur.

As per Municipal Finance Code, the financial accounts of the KBMC are being maintained as per the guidelines of double entry system. Every inflow of cash and bank balance is being treated as income irrespective of the fact that whether it relates to current year or not.

8. Financial Operating Plan (FOP)

Based on the Capital Investments proposed in the CDP, a multi-year Investment Plan was prepared involving a seven years Financial and Operating Plan (FOP). A separate FOP is generated for accounts. However project sizing is done based on the overall financial sustainability. The guiding criterion for project sizing is that in no year should the Corporation have a negative opening balance. The FOP process involves the following steps:

1. Projection of yearly revenue under various heads and alternative: - assumption
2. Projection of expenditure for existing levels of services.
3. Estimation of capital expenditure for providing infrastructure at different service-levels.
4. Estimation of additional O & M cost due to the new schemes.
5. Estimation of annual debt servicing burden under alternative scenarios of loan / grant mix.

9. Capital Investment Plan (CIP)

Capital Investment Plan is an operational action plan to achieve Goals and Strategies of City Development. The Capital Investment Plan (CIP) is the multi year scheduling of public physical improvements and investments. The scheduling or phasing of the plans is based on assessment of fiscal resources availability (for new investments and O&M), technical capacity for construction and O&M, and the choice of specific improvements planned for the future five years.

As part of the CIP, the KBMC has undertaken the following steps:

- Analysed the existing applicable norms and standards for infrastructures services, considering low, medium, high and mixed options
- Discussed, agreed the public priorities and expectations and recommended a reasonable realistic options
- Justified and provided rationale when the chosen option is not within the existing service level standards.

As assessed in the development of strategies and programs, based on the demand of services for the population in year 2006 and the existing supply, gaps have been identified in the basic service. The phasing has been worked out by the KBMC. The estimated capital investment is phased more or less over a 5-year period (2006-07 to 2011-12) so as to enable capital investment identified for the 2011 populations.

Summary Of Estimated Sector-wise Capital Investment

Sl. No.	Nature of Investment	Capital Investment Estimate (Rs. Crores)	% Age
1.	Road Projects	53.70	17.12
2.	Transport and traffic management	12.00	3.83
3.	Water Supply Department	15.00	4.78
4.	Sewerage & drainage	136.00	43.35
5.	Street lighting	6.00	1.91
6.	Solid Waste Management	5.00	1.59
7.	Markets	2.50	0.80
8.	Others including urban governance	37.25	11.87
9.	Urban governance	14.00	4.46
10.	BSUP	32.25	10.28
	Total Capital Investment Estimate	313.70	100.00

10. Expected Improvements

The following issues are expected to be addressed in the CDP for the final approval.

- i. The methodology used for the projected population 2005 onwards needs to be rechecked and should be provided with an adequate details.
- ii. The water demand / gap, projected sewage generation and solid waste should be linked with revised projected population.
- iii. The CDP has not provided adequate details on water tariff structure, costs and recovery of water related taxes and user charges etc.
- iv. Functional domain of the KBMC, the status of incorporation of eighteen functions of the 12th Schedule of the 74th Constitutional Amendment and the

institutional arrangements at the city level in the provision of basic services should be incorporated in the CDP.

- v. The Financial Operating Plan needs to be rechecked because these financial projections seem to be on the higher side compared to its past five-year's performance especially for the projections for property tax and grants.