# Transport Budget Analysis 2011-12

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**Transport Budget Analysis 2011-12**

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Executive Summary

Pune has for several years allocated the largest share of its budget to the transportation sector. At around 30% of the total budget, this sector gets a larger share than important sectors like health, sanitation & slum rehabilitation together.

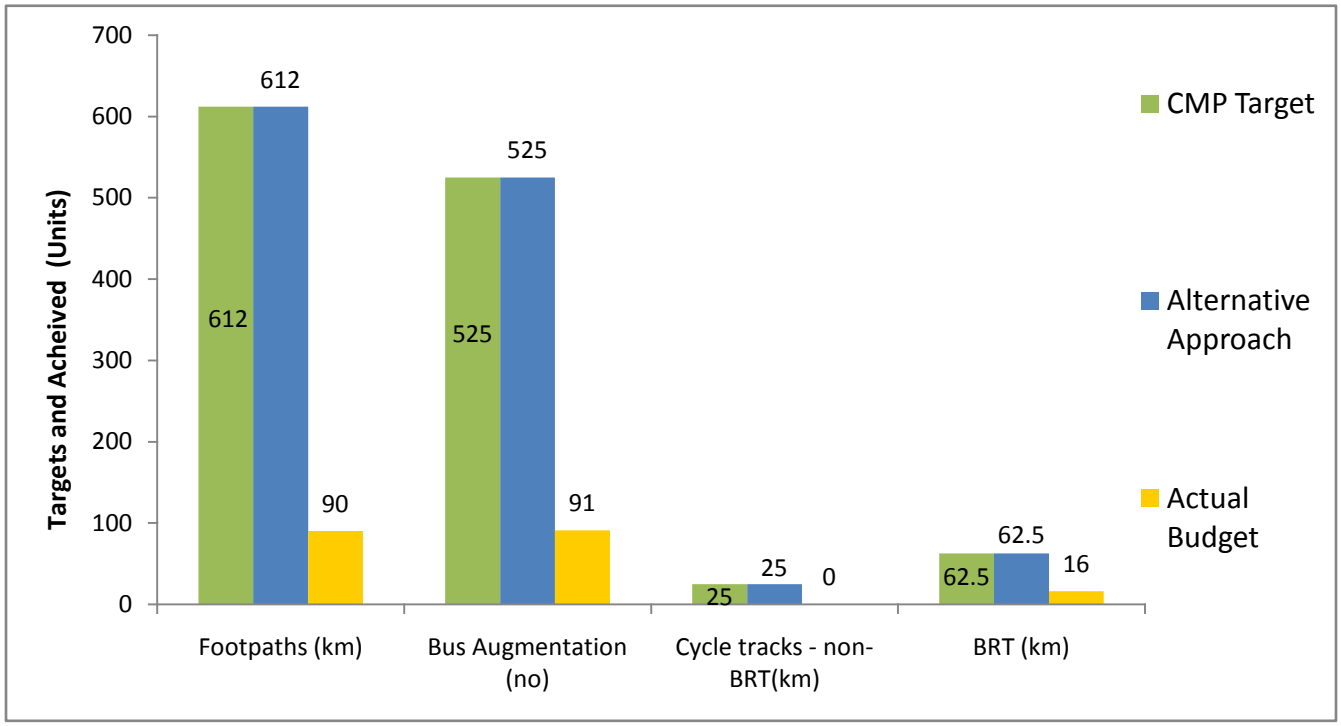
The country has formulated a National Urban Transport Policy (NUTP) and the city has commissioned a Comprehensive Mobility Plan (CMP). One would expect that allocation of money within the transportation sector would follow the principles of NUTP and attempt to achieve the goals laid down in the CMP. These documents have clearly mentioned their key focus as "**mobility of people rather than vehicles**" and keeping with this spirit, the main emphasis of CMP has been promoting public and non motorized transport in the city, and states that their modal shares should be 40% and 50% respectively by 2030.

Parisar analyzed the budgetary allocation on transportation sector in Pune's 2011-12 budget. It emerges that more than 60% of the transport sector budget is allocated to projects which are motor vehicle friendly like building of new roads, flyovers, parking structures and re-tarring of roads. On the other hand, non-motorized friendly and public-transport friendly projects get only 9% and 18% respectively of the budget allocation in spite of including doubtful projects such as subways, skywalks, BRT (as currently implemented) and Metro (as currently planned). This clearly suggests that the city has not paid any attention to the guidelines of NUTP or the goals set by CMP while preparing its budget.

The report also presents an 'alternative approach', which reallocates the transport sector budget of the last two years by using all the funds budgeted for non-motorized transport (footpaths, cycle tracks) and public transport (bus augmentation, BRT, metro and mono-rail)and some of the funds allocated to motor-vehicle friendly projects and projects of doubtful utility such as pedestrian subways and skywalks, and deploying them with the explicit goal of achieving the CMP goals.

The results are startling. With the alternative funds allocation, it turns out that the city could have built around 62.5 kms of BRT (including 125 kms of cycle tracks), 612 km of footpaths, 25

km of cycle tracks (on non-BRT roads) and added about 525 buses to the PMPML fleet. Instead, over these two years, the PMC has only built 16 kms of BRT (improperly implemented), 90 km of usable footpaths, 0 kms of usable cycle tracks, and added 136 new buses under PMPML. If one compares what could have been achieved and what has been achieved to the goals set by CMP, the alternative approach would have achieved 100% of the target for footpath construction, cycle track construction, bus fleet augmentation and BRT corridor construction, while the original budget has only achieved 15%, 0%, 17% and 26% respectively.




This clearly shows that a shortage of funds is not the reason for not being able to pursue and achieve CMP goals, but a lack of vision and commitment from PMC. Therefore, there is an urgent need for the right vision and commitment from PMC, so that these goals can be achieved and Pune can get the transport solutions it needs and deserves.

# 1. Introduction

A city's budgetary allocation offers one of the best windows into the thinking of its administrators and leaders on how a city should develop, because committing money to an activity or project shows real intention on the part of the city. Five year plans and development plans, whatever may be the effort that goes behind the exercise of preparing these documents, at the end of the day remain statements of purpose/ intent.

Parisar analyzed the budget allocation for the transport sector in the budget for 2011-12 as approved by the General Body of the Pune Municipal Corporation (PMC) to understand the vision and direction of the city as far as transport is concerned. This helped in understanding the budgetary allocations for various modes of transportation like motorized transport, public transportation, non-motorized transport, etc. In particular, we wished to see whether the city's budget moves towards accomplishing the goals stated in the city's Comprehensive Mobility Plan (50% of all trips by non-motorized transport and 80% of the remaining by public transport) and reflects the vision laid down in the National Urban Transport Policy (NUTP) that encompasses principles such as equitable allocation of road space, priority to public transport (PT), priority to non-motorized sport (NMT) and levy of parking fee to reflect the value of land.

This exercise is something that Parisar has been undertaking since 2010-11's budget. This year's analysis goes a step further. In addition to analyzing the existing budget of the city for the transportation sector, we have also tried and projected what the city's budget would actually be if it allocates money for certain investments so that the goals set by CMP are achieved.

We hope that this will make it clear that the city can achieve its own stated goals better by aligning its budgetary provisions with its policy documents. Unfortunately, it currently appears that the budgetary exercise is done independent of other documents that outline the city's vision and goals.

# 2. Budgetary allocation to Transportation sector(2009-10 to 2011-12)

In a previous analysis, Parisar had calculated and found the amounts that had been allotted to the transportation sector from 2009-10 to 2011-12's Budget[1]. The share of this sector has in all three years been around 30% of the total budget and has also been the single largest sector across years. Table 1 gives the amount allocated to the transportation sector over the last 3 years.

[1] http://parisar.org/activities/analysesreports/134-analysis-of-pmcs-budget-2011-12.html, accessed 09/08/2011

| Budget Year | Amount Allocated (in crores) | Share in Total Budget (in Percentage) |
|---|---|---|
| 2009-10 | 869.05 | 28.7 |
| 2010-11 | 1012.67 | 31.7 |
| 2011-12 | 930.60[2] | 29 |

Table 1: Transportation sector's allocation from 2008-09 to 2011-12's budget[3]

This fall in absolute amount allocated for this sector can be completely attributed to fall in JNNURM funds from Central government from about Rs. 400 crores in 2009-10 to Rs. 180 crores in 2011-12. The city's contribution to transport (i.e. the non-JNNURM budget allocation) has actually increased from about Rs. 465 crores in 2009-10 to Rs. 740 crores in 2011-12, a massive increase of nearly 60% over just 2 years.

## 3. Policies and Plans on Transportation

Various policies and plans exist at the national as well as the city level which should act guide investments made on transportation. The most important of such documents for Pune are:

A. National Urban Transport policy
B. Comprehensive Mobility plan of Pune

A. **NUTP** - Government of India formulated the National Urban Transport policy in the year 2006, to help deal with the growing mobility needs of the country .This policy aims to "offer a clear direction and a framework for future action" in the area of urban transportation. The objective of the policy is to "ensure safe, affordable, quick, comfortable, reliable and sustainable access for the growing number of city residents to jobs, education, recreation and such other needs within our cities."

[2] In our general budget analysis of 2011-12 budget, we have given the total amount allocated to transportation budget as Rs. 920.6 crores. We have revised this figure to 930.6 crores in this report. This revision is because we had not taken into consideration in our earlier report 5 crores that allotted each for bicycle distribution scheme and bus pass scheme for school children, which are classified under Secondary education department in the budget and were hence difficult to find.

[3] Methodology followed in calculating the sectoral allocations is explained in a previous report by Parisar. http://parisar.org/activities/analysesreports/134-analysis-of-pmcs-budget-2011-12.html, accessed 09/08/2011

The NUTP recognizes that people form centre stage in any city and hence believe all plans should evolve from this understanding. The policy also acknowledges the uniqueness of each city in terms of geography and socio economic set up and thus gives each city the freedom to come up with an urban form which caters best to its characteristics. Few things that have been given emphasis in the NUTP are:

a. Equitable allocation of road space for people, rather than vehicles–"In the present scenario, a bus carrying 40 or more people gets allocated only 2.5 times the road space that is allocated to a car. This has led to a situation where people of lower income groups end up paying a higher travel cost and higher travel time than people who own their own private vehicles. The condition of pedestrians and non-motorized transport users are even worse with this section hardly getting any road space." The NUTP aims to correct this situation.

b. Encourage greater use of public transport - By virtue of taking lesser road space and causing lesser pollution, public transport is a more sustainable option. Central assistance hence will be provided for among many things to the capital costs of public transport systems and in the costs involved in preparing Comprehensive transport plans and detailed project reports.

c. Encourage non-motorized Transport- This is recognized as the most environmental sound mode. Steps will be undertaken to provide segregated paths for non-motorized modes. This will not only increase the safety of people using these modes but will also help in smoother flow of traffic by segregating traffic of different speeds.

d. Increase parking costs – NUTP recognizes that parking fees should ideally reflect the cost of land it occupies. The idea is that higher parking fees will gradually discourage the use of private vehicles and make people shift to Public transport.

B. **CMP** - Comprehensive Mobility Plan of Pune is the city specific transportation plan, prepared in accordance with the requirements of JNNURM. According to the JNNURM, preparation of CMP is a prerequisite for the cities for seeking financial assistance from the centre for urban transport related projects. This plan should also comply with the guidelines given by NUTP.

The key focus of the CMP is "**mobility of people rather than vehicles**" in tune with the NUTP. This implies a greater emphasis on non-motorized transport, Public Transport systems and intermediate public transport (IPT). After studying the demographic patterns and travel characteristics of the city CMP has set certain goals that are to be achieved by 2030. Some of them are listed in Table 2.

| Index | Formulation | Existing | Target |
|---|---|---|---|
| **NMT Mode Share** | = NMT Trips / Total Trips | 33% | 50% |
| **PT Mode Share** | = Public Transport Trips / Total Study Area Trips | 18% | 40% |
| **Fatality** | No. of Fatalities / Lakh of Population | 11 | 0 |

Table 2: CMP Goals / Targets

To achieve these goals, the CMP states that the city must have good, walkable footpaths on all its roads, a good, usable cycle network, a city-wide BRT network and a bus fleet that has about 55 buses per lakh of population. Moreover, the CMP states that these goals should have been achieved by 2010.

## 4. Classifying the transportation budget

The total amount that has been budgeted for the transportation sector for the year 2011-12 is Rs.920.60 crores. This has been allotted for a range of projects which range from tarring and concretization of roads and footpaths to making of parking structures. We have divided this amount into four different categories depending on the purpose the budgetary allocation serves.

a. Motor vehicle (MV) Friendly- This category consists of budgetary allocations that primarily benefits private motor vehicles, and more often than not proves detrimental to PT and NMT. This category includes all work to build flyovers, elevated roads, parking lots, widening (or concretization) of existing roads etc. within the city, as it is well accepted now that construction of such infrastructure only encourages greater use of personalized motor vehicles[4].

   MV friendly expenditure has further been subdivided into 3 categories
   (i). New Roads - Budgetary allocation for making new roads, flyovers, ring roads etc.
   (ii). Road Repairs - Budgetary allocations for tarring and maintenance of existing roads.
   (iii). Others -Budgetary allocations for building parking lots, making of road signs and dividers, etc.

[4] See, for example, "Why are the roads so congested", a report by the Surface Transportation Policy Project, November 1999.

b. Public Transport (PT) Friendly - This category includes all expenditure that could be beneficial to PT services in the city. This refers not only to the existing PT facilities in the city like PMPML and BRT but also proposed ones like metro & monorail.

PT friendly expenditures have further been subdivided into 3 categories:

(i). PMPML - All budgetary allocations related to improving or expanding the bus service of the city

(ii). Doubtful - All budgetary allocations related to BRT, metro rail and mono rail projects are included in doubtful. Reservations on BRT arise not because Parisar doubts the usefulness of this project, but because of the way BRT funds have been used by the PMC. We are not fully convinced that the funds budgeted for various BRT related projects have actually helped PT in Pune, given the continuing absence of political or administrative will to ensure the success of BRT[5]. It is seen that in spite of large funds being used up in the name of BRT, the city is yet to have a proper BRT in place. The BRT project has not yet expanded much beyond the pilot stretch in Pune[6] and evidence so far is that most of the BRT funds have actually been used to widen roads (E.g. Baner road, Alandi road etc.). PMC's proposal that many of the proposed corridors will not have a dedicated lane for buses[7]only strengthens the perception that these funds may not benefit public transport as much as private motorized transport. According to the CMP, a city wide BRT network was due to be completed by 2010[8], but even as of July 2011, only the pilot stretch has been completed.

Doubts about Metro arise because Parisar is not (yet) convinced that Pune needs a metro rail system and the justifications provided so far have been rather weak for such a capital intensive system[9].

(iii). Others – All other expenditures related to public transport like building of terminals.

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[5]"Will BRTS get a separate Cell?" Times of India (Pune Edition), 29th June 2010.

[6] "State of civic projects to be delayed", Times of India (Pune Edition), 3rd Feb 2010

[7] "Civic body disappoints public, only 40% of BRTS for bus lane", Indian Express (Pune Edition), 5th Feb 2010

[8]http://www.punecorporation.org/pmcwebn/informpdf/CMP/CMP_July_2010/3-iuisl_Pune-CMP-November-2008-chapter-9.pdf , 01/07/2011

[9]http://www.parisar.org/activities/analysesreports/127-analysis-of-the-proposed-metro-rail-system-in-pune.html, accessed 29/07/2011

c. NMT Friendly - This category includes all budgeted expenditure that is supposed to be beneficial to pedestrians and/or cyclists. It includes footpaths, pedestrian signals, cycle tracks, signage and markings on cycle tracks, etc. We also include in this category certain expenditures budgeted towards pedestrian subways, over bridges and skywalks, even though it is highly questionable whether the purpose of these expenditures are to help pedestrians or to enable speedier movement of motorized vehicles. Having recognised this, a number of countries have now made policies to remove subways and create at- grade crossings[10]. NMT friendly expenditures have also been further been subdivided into three categories:

   (i). Cycling related - All budgetary allocations that are related to cycling like building of cycle tracks, schemes involving giving out free cycles to school children, etc.
   (ii). Pedestrian Friendly – Budgetary allocations on items such as making and repairing of footpaths, raised pedestrian crossings, etc.
   (iii). Doubtful – Budgetary allocations for subways, foot over bridges etc., which are done in the name of pedestrians and NMT but in reality are MV friendly. These expenditures do not serve in either increasing their safety or convenience but only help in reducing the number of obstructions faced by motorists on the road[11].

d. General – Works that are beneficial to all parties like provision of street lights, traffic signal maintenance, traffic awareness in schools, lifting of debris, salaries of employees in the concerned PMC department, etc.

The PMC budget document does not classify its budgetary allocations under the heads given above, and the classification has been done by Parisar by going through each of the proposed items. There were some entries in the budget that were a little ambiguous and Parisar had to take a judgment call on classifying them. Therefore, the same analysis by a different agency may throw up slightly different numbers though we believe that the overall picture that will emerge would be similar.

## 5. Analysis

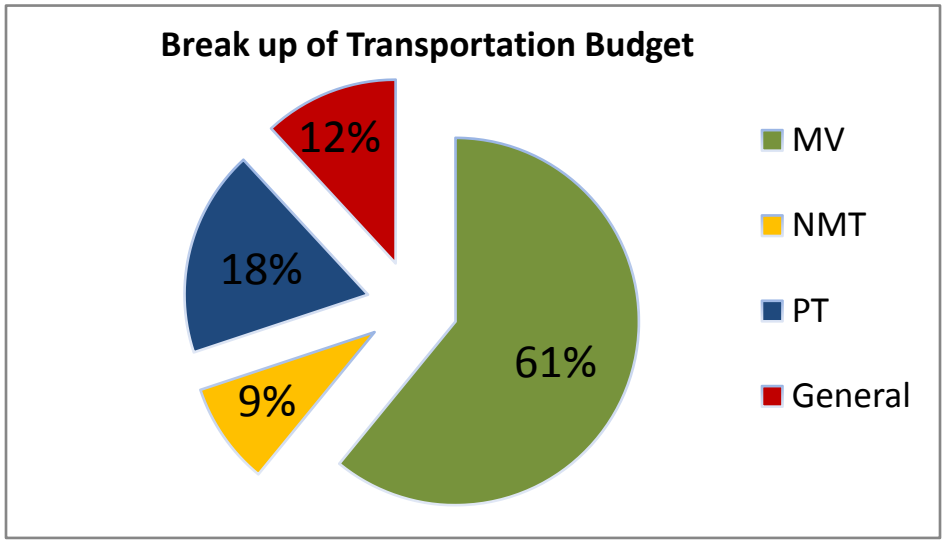
Based on the classification methodology mentioned above, the budgeted amount on transportation sector for 2011-12's budget was divided between 4 categories. The break up shows very interesting figures as shown in Table 3 and Graph1.

[10] http://www.tfl.gov.uk/assets/downloads/corporate/Item10-Subways.pdf , accessed 01/08/2011

[11] http://www.parisar.org/activities/analysesreports/121-pedestrian-crossing-facilities-in-pune.html , accessed 29/07/2011

| Category | Amount Allocated |
|---|---|
| Motor Vehicle friendly (MV) | 566.91 |
| Non-motorized Transport friendly (NMT) | 83.69 |
| Public Transport friendly (PT) | 169.48 |
| General | 110.52 |
| **Total** | **930.60** |

Table 3: Break up of Transportation Sector




Graph 1: Break up of transportation sector

The largest share of the budget, it can be seen is allotted for projects which are motor vehicle (MV) friendly. Less than 30% of this amount is allotted for Public Transport (PT) and an even smaller amount (less than 15%) is allotted to non-motorized transport (NMT). It is obvious that such a budget allocation is not geared towards achieving the goals set out in the CMP of achieving 50% NMT modal share and 40% PT modal share.

According to modal share as given in the CMP[12], it is seen that NMT (includes pedestrians and cyclists) accounts for 33% of the total trips made in Pune. Allotting less than 10% of the budget for a group which accounts for one-third of the total is unjustified. MV (Cars & two wheelers) account for around 48% of the total trips made. The share of this category has over the years increased at a high rate. It is a well-

[12]Modal share data from CMP, http://www.punecorporation.org/pmcwebn/informpdf/CMP/CMP_July_2010/1-iuisl_Pune-CMP-November-2008-chapters-1-6.pdf

known fact that the reasons for such an increase include most importantly the lack of a good public transport system and non-motorized transport infrastructure in the city as well as excessive budgetary allocation in their favour. This void in public transport system leaves people with no choice but to opt for private vehicles. If the city is able to provide a better public transport system, then a large number of private vehicle users will start using public transport. Given this scenario, a budgetary allocation of mere 18% to Public transport and 61% to MV friendly projects will only lead to the contrary situation with more and more people shifting to the use of private vehicles. This is an unhealthy trend and is not sustainable by Pune or for that matter any city in the world. The city should hence take steps to see that the budgetary allocations (and actual expenses) do not worsen the already existing traffic scenario in the city. For example, in its attempt to solve the problems of congestion on roads, the city has been investing excessively on roads and flyovers. This idea of increasing or widening the road network to solve the problems of congestion has been proved to not only be ineffective but also be counterproductive. This idea popularly known as the induced/ latent demand of roads has been well accepted through a large number of empirical studies on the same[13]. In short, the budgetary allocation for transport has no direct correlation to the vision and goals of the city.

We further subdivided each of these four above mentioned categories to better understand the allocation and share of each.

Motor Vehicle friendly: - This category at 62%, accounts for the largest chunk of the budget. All budgetary allocations under MV friendly have been further subdivided into 3 categories to understand this allocation better, as shown in table4. In previous year's budget, the amount allotted for MV friendly projects was less than the amount that has been allotted to Public transport friendly projects. This change in modal allocation within transport is an unfortunate development. In this year's budget, new roads alone make up more than the entire allocation on PT including money for BRT, which is also essentially spent for new roads.

| Sub Category | Amount (in crores) | Share (in %) |
|---|---|---|
| New Roads | 265.50 | 46.8% |
| Road Repairs | 243.38 | 42.9% |
| Others | 58.03 | 10.24% |

Table 4: Sub classification of MV friendly budgetary allocations

[13]"Induced Demand and road investment – An initial appraisal" James Luk & Edward Chung http://www.arrb.com.au/admin/file/content13/c6/ARR%20299%20Induced%20demand.pdf, accessed 29/07/11

http://www.bicycleuniverse.info/transpo/roadbuilding-futility.html, accessed 29/ 07/11

As can be seen in table 4, Rs. 265.5 crores has been allotted for making new roads and Rs.243.38 crores for road repairs. Together, they amount for more money than what PMC has budgeted for sectors like education and health put together.

NMT friendly: - At 9% of the total transportation budget, this category gets the smallest share among the four main classifications though NMT is supposed to support 50% of the trips in Pune by 2030. This has been further divided into three categories as shown in table5.

| Sub Category | Amount (in crores) | Share (in %) |
|---|---|---|
| Cycling related | 5.21 | 6.23 % |
| Footpaths | 56.76 | 67.82% |
| Doubtful | 21.72 | 25.95% |

Table 5: Sub classification of NMT friendly budgetary allocations

The money allotted for construction and maintenance of footpaths forms the largest share in this category. Budgetary allocations incurred on subways, foot-over bridges and other such doubtful expenditures get the second largest share. A little over Rs.20 crores of the budgetary allocations classified under doubtful is money budgeted for Subways. A study looking at the condition of already existing FOB and FUBS in Pune, has found that even in cases where these facilities are present, pedestrians prefer crossing the road at grade whenever possible[14].These budgetary allocations in our view are highly questionable and steps should be taken by the PMC either to channelize these funds for other purposes that genuinely improve conditions for pedestrians or spend them for other civic amenities.Rs.5.21 crores has been allotted for cycling related expenses by the PMC. This includes an allocation of 5 crores for distribution of free cycles for school students. For a city that was once known as the cycling city of India, this allotment is very encouraging and might help in promoting cycling in the city if it is implemented properly and supported by cycling friendly infrastructure.

Public Transportation Friendly: -Around 18% of total budgetary allocations on transportation have been allotted for this sector. This is much lower than the share this mode had received in the previous budget. This fall has happened in spite of the fact that the city is yet to properly implement the BRT project and much confusion prevails regarding it. In such a scenario, instead of taking steps to ensure that the BRT is properly implemented, the city appears to be shirking away from its duties.

Pune has been the very first city to introduce the concept of BRT in India. Though this was a positive and appreciable step taken by the city authorities, the BRT is yet to be implemented much beyond the pilot stretch. Even on roads where it is apparently completed, the implementation has not been proper. Cities

[14] "Searching High and Low", http://www.parisar.org/activities/analysesreports/121-pedestrian-crossing-facilities-in-pune.html

like Ahmedabad and Delhi which adopted the idea of BRT later, have already successfully finished one to two phases and are expanding these projects rapidly. PMC has much to learn from these cities.

The money allotted for Public transportation has been further divided into 3 sub classifications as shown in table 6.

| Sub Category | Amount (in crores) | Share (in %) |
|---|---|---|
| PMPML | 26.30 | 15.52% |
| Doubtful | 132.20 | 78 % |
| Others | 10.98 | 6.48% |

Table 6: Sub classification of PT friendly budgetary allocation

It is to be noted that allocations that are classified as doubtful account for around 80% of the money allotted under this category. 88% or Rs.115.90 crores of doubtful expenses have been allotted for the BRT project. The rest of the amount, which is the money classified under PMPML and Others, together account for only 4.1% of the total transportation budget and is comparable to money that has been allotted to street lighting alone (approximately 4%). It can also be seen that the money allotted to PMPML (Rs. 26 crores) is only around 10% of the money allotted just for repairing roads – clearly indicating the lack of priority for public transport in the view of the city[15]. Of this, Rs. 5 crores are meant for providing free bus passes to school students, which is a positive move.

General Expenditure: - Includes all budgetary allocations which are beneficial to all three above discussed classifications. Around 1/3rd of the total allocations under general have been budgeted for making and maintaining of street lights. Other important allocations include maintenance of traffic signals and awareness campaigns in schools.

[15]The excuse that PMPML is a separate corporate entity now does not hold water, because PMC (and PCMC) are the major shareholders of PMPML and it is in the interest of these two cities to have a healthy public transport system in the city – which includes financial strengthening of PMPML and improving its efficiency.

## 6. Alternative Approach to the transport budget

It is clear that the allocation of money in 2011-12 budget is not consistent with either the principles of NUTP or goals of CMP. The budgetary allocation for transport would have been quite different if the city was serious about achieving the goals laid down in the CMP, and the allocation for non-motorized and public transport would have been significantly greater.

In this section, we present an alternative approach to the transport budget that is explicitly aimed at achieving the targets laid out in the CMP. It turns out that the city could have achieved a significant portion of the targets laid out in the CMP using the same resources if it had adopted such a different approach to the transport budget that was guided by the goals of the CMP. Our alternative approach is presented for the last two years' budgets. Over this period we compare the CMP targets that might have been achieved with this alternative approach with the targets that have actually been achieved by PMC.

The picture that becomes clear from this analysis is that, a change in the outlook of city officials towards planning and implementation of transportation in the city, can help not only in improving the existing traffic situation in the city but also promote a more socially equitable and environmental friendly transport system and this is possible with just a reallocation of the existing transport budget of Pune.

In this analysis we are going to deal with four items of importance from the CMP: building a proper BRT, augmentation of buses under PMPML, building of cycle tracks and building of footpaths. Other desirable investments such as safe at-grade pedestrian crossings, traffic calming measures, or demand management measures are beyond the scope of our simple analysis. These being non-infrastructure projects are unlikely to cost a lot and hence could easily be accommodated in the various "other" categories. Some of these expenses are already being budgeted in such a manner but steps need to be taken to ensure better implementation of the same.

The CMP has time-bound targets for three of the above four investments considered, namely BRT, PMPML bus augmentation and footpaths. Though the time frame for achieving these targets was two years (to be achieved by 2010) according to the CMP, we have extended this time line to 2012 (and thus increased the time frame to four years). We analysed whether the alternative approach can help achieve these targets using the same resources as committed by PMC.

As our alternative approach covers two years of the extended CMP time-frame of four years, we try to apportion the reallocated funds to try and achieve half of the given CMP targets during these two years. By inference, a similar approach to budgeting for the two previous years (2008-09 and 2009-10) would have helped the city move towards the CMP targets.

In addition to the three CMP targets, we introduce an additional target, namely 50 km of cycle tracks on non-BRT routes over the four years, to meet the CMP target of having a high cyclability index in the city.

As mentioned in the CMP, all BRT routes implemented and proposed in the city have cycle tracks on both sides of the road as part of its design, resulting in about 250 km of cycle tracks since the city has planned about 125 km of BRT network (see Table 8). We believe that the city must develop a complete city-wide network of safe cycling routes in order for cycling to become a preferred mode and also to achieve the CMP target of 100% of cyclability in the city. Since the cycle tracks on BRT routes have not been planned in a comprehensive manner, even if completed (and of a quality that actually make them cycle able), they would not form a complete network. These 50 km of cycle tracks would therefore help connect these BRT cycle tracks into a comprehensive and connected network, thus improving the overall usefulness of the existing/planned tracks. Further one-way streets (which are largely ill-conceived) would also benefit from cycle tracks, as has indeed been discussed with the PMC in the case of JM and FC roads. Hence we have added an additional 50 km of cycle tracks on non-BRT routes to the list of targets over the four years. Note that the budget allocation for BRT is intended to cover the cycle tracks along BRT corridors while separate budgetary allocation is needed in the alternative approach only for cycle tracks that are not on BRT corridors.

Given the goals that were set by CMP and transport services in the city at the beginning of 2008-09, we calculated two year targets for all four schemes. Since data about the state of affairs at the beginning of 2008-09 financial year and the current status was not easily available, certain assumptions and extrapolation of data available had to be made, as explained below.

BRT – 125 kms is the length of BRT proposed/ planned in Pune[16]. This target is to be achieved in four years as explained earlier. This implies that over a course of two years the city should have built around 62.5 kms of BRT to meet CMP goals.

Cycle tracks – To meet the CMP objective of promoting non-motorised transport options in the city, we assume that 50 kms of good, usable cycle tracks have to be built over the course of 4 years in the city, over and above the ones that would be built along the BRT corridor. This implies that the two year target for this scheme is 25 kms of cycle tracks around the city.

Bus Augmentation – At the beginning of 2009-10 financial year, PMPML had around 637 buses in its fleet which were below the age of 9 years[17]. Only buses under the age of 9 years were considered since all buses above this age were supposed to be scrapped and replaced according to the JNNURM standards[18].

The CMP sets a target of 55 buses/ lakh of population while JNNURM but sets a lower standard of 50 buses/lakh of population. We have in our analysis chosen the conservative JNNURM standards of 50 buses per lakh population. Given these standards PMPML should be ideally running a fleet of 2615 buses. This implies that over the four year extended time line of CMP, PMPML should have added 2087

[16] "Design report for BRT lane and other associated facilities, Pune" , Mott MacDonald, February 2009
[17] Only buses below the age of 9 as on 2011 have been accounted. PMPML bus age Report dated 08/07/2011
[18] http://jnnurm.nic.in/nurmudweb/what%27snew/CSMC_Meeting/73_Meeting.pdf, accessed 28/07/2011

buses to its fleet. Assuming that 21% of buses operated by PMPML are hired[19] and that PMC and PCMC share the financial burden of improving PMPML's fleet in the ratio of their respective populations, PMC should have supported thepurchase of 1188 buses over four years, or 594 buses over the last two budgets to meet the CMP target.

According to the discussions city officials had with JNNURM officials of Ministry of Urban development, GOI[20], the city should buy 80% mid floor and 20% low floor buses costing Rs. 27 lakhs and Rs. 54 lakhs each respectively.

Footpaths- Out of the total 1652.73 kms[21] of developed roads in Pune, around 53% of roads have footpaths according to CMP. Assuming that another 10% of roads do not require footpaths as they would be narrow enough to allow safe walking conditions since traffic speeds would be low, Pune city still needs to build footpaths on the rest 37% of existing roads to achieve 100% walkability as envisaged in CMP. The two year target for the city will thus be to build footpaths on around 306 kms of roads, or about 612 km of footpaths since they have to build on both sides of the road.

To summarise, the targets for each of the four proposals have been compiled in Table 7.

| Investments/Projects | Target to meet | Two year target |
|---|---|---|
| BRT (km) | 125 | 62.5 |
| Cycle Tracks – non-BRT(km) | 50 | 25 |
| Footpaths (km) | 1224 | 612 |
| Bus Augmentation (no) | 1050 | 525 |

Table 7: Targets according to CMP guidelines

So, in the last two budgets, the city should have allotted money for (and achieved) building 25 kms of cycle track, over 600 km of footpaths, 62.5 kms of BRT and also bought around 700 buses in order to be in sync with the CMP goals.

Table 8 presents the resources that would be required to achieve the targets that are mentioned above.

[19] Currently, 21% of PMPML's buses are hired – we assume the same percentage would be hired even when the fleet is augmented.

[20] Minutes of Central Sanctioning and Monitoring Committee meeting regarding bus augmentation in Pune:http://jnnurm.nic.in/nurmudweb/what%27snew/CSMC_Meeting/73_Meeting.pdf, 28/07/11

[21]Reply to an RTI on total length of roads in Pune, dated 26th May 2011

| Scheme | Unit Costs | Two year target cost (in Rs. crores) |
|---|---|---|
| BRT (Rs. Crores/ km) | 12[22] | 750 |
| Cycle tracks: non-BRT (Rs. Lakhs/ km) | 37.5[23] | 9.4 |
| Footpaths (Rs. Lakhs/ running km) | 30[24] | 183.5 |
| Bus Augmentation - Low floor (Rs. Lakhs/ unit)<br>Bus Augmentation - Medium floor (Rs. Lakhs/ unit) | 54<br>27 | 170.02 |
| **Total (Rs. Crores)** | **-** | **1112.9** |

Table 8: Resources Required

So, to meet the targets set by CMP, the city ideally had to invest Rs.1112.9 crores over the last two budgets for Public transport and non-motorised friendly investments. Looking at the actual budgetary allocations, these targets can be easily achieved by just reallocating a certain portion of the existing budget.

Over the last two budgets, PMC had allotted Rs.82.09 crores towards public-transport projects (excluding money accounted for BRT, metro and monorail), Rs. 110.07 crores on non-motorized friendly projects such as footpaths and cycle tracks (without including projects of doubtful utility such as subways and skywalks) and Rs. 326.98 crores on BRT. We assume that all this money is available for reallocation as part of the alternative approach, since PMC intended to spend this money on public and non-motorized friendly activities (though what was spent on BRT has not helped public transport in any significant way).Money that has been allotted for PMPML bus passes (Rs.5 crores) and distribution of free bicycles for school students (Rs. 5 crores) has been excluded from this re-allotment since these projects have considerable impact in promoting use of PT and non motorised transport in the city. All these projects together will cover Rs.525.14 crores of the amounts required for the alternative approach. To cover the rest of the amount required for alternative approach, 50.22 % of the Rs. 1170.34 crores budgeted by PMC over the last two years for motor-vehicle friendly activities and projects of doubtful utility (excluding BRT) has to be reallocated. This in total would provide sufficient funds to meet all of CMP's targets. Table 9.a and 9.b together shows the amount that is to be reallocated for the alternative approach.

[22] CMP of Pune, 2008

[23] "Liveable Neighbourhood: Street furniture and amenity design menu card for citizens for use in participatory budgeting", Centre for environment and education & Janwani, September 2010

[24] "Liveable Neighbourhood: Street furniture and amenity design menu card for citizens for use in participatory budgeting", Centre for environment and education & Janwani, September 2010

| Category | 2010-11 (Rs. crores) | 2011-12 (Rs. crores) | Total (Rs. crores) |
|---|---|---|---|
| BRT | 209.8 | 117.18 | 326.98 |
| PT (excluding Doubtful) | 50.81 | 37.28 | 88.09 |
| NMT (excluding Doubtful) | 48.1 | 61.97 | 110.07 |
| Total | 308.71 | 216.43 | 525.14 |

Table 9.a: Amount to be fully reused for Alternative approach

| Category | 2010-11 (Rs. crores) | 2011-12 (Rs. crores) | Total (Rs. crores) |
|---|---|---|---|
| MV | 486.45 | 566.91 | 1053.36 |
| Metro | 21.25 | 0 | 21.25 |
| Monorail | 25 | 0 | 25 |
| NMT Doubtful | 49.01 | 21.72 | 70.73 |
| Total | 581.71 | 588.63 | 1170.34 |

Table 9.b – Amounts to be partially re-used for Alternative approach

Reallocating 50.22% of the funds meant for MV and doubtful schemes would mean that certain capital intensive investments such as flyovers and building some new roads, or concretizing roads (without sufficient justification) have to be forgone. We believe that such a change of expenditure would be in tune with the principles of NUTP and promote the cause of improved mobility in the city, if it is accompanied by other investments on pedestrian, cycling and public transport infrastructure as described below. Note that this would still leave Rs. 582.63 crores for motor-vehicle friendly schemes (and some schemes of doubtful utility if they need to be pursued). The PMC would hence have enough funds to manage, maintain and perhaps modestly expand its road infrastructure, if the funds were used efficiently.

In addition all the money that has been allotted in the budget for the running expenses of the department (classified under general category) has not been considered for the reallocation. These expenses are essential and have to be incurred by the department for its daily operations.

With such an alternative allocation of funds, all of the CMP targets could have been met by the city over the last two years (and, by extension, for previous years).

If we compare this with what has actually been achieved by the city on these fronts over the last two budgets, it presents a very discouraging and disappointing picture.

BRT - Pune city has been spending money on BRT project since 2006. The pilot stretch was to be completed by the year 2007and the whole BRT project was to be completed by the year 2010.

But it is well known that even the pilot BRT has barely been finished by the PMC. Even after 5 years of beginning the project, the PMC is yet to set a separate cell which will look into the implementation and management of BRT[25].The PMC has been failing one deadline after the other in implementing the BRT and has already been warned by the Union Urban development ministry about this[26]. The pilot stretch of the BRT (16 kms) took more than three and half years to be completed. In addition, the PMC has also been facing criticism on two other counts regarding the BRT. The first is the lack of coordination of the BRT project in Pune with the one that is coming up in Pimpri Chinchwad[27]. This lack of coordination will have its impact at a later stage when the public transport systems in both these regions have to be coordinated. The second issue is that concerning 'mixed- BRT lanes', which is a mockery of the whole concept of BRT[28].

But, the PMC has been regularly using up the funds that have been allotted for the BRT, both for the pilot stretch as well as phase-1 of the project. This has led to no concrete improvement in public transport but has only resulted in widening of roads. Even a lenient analysis of BRT implementation in the city which does not take into account the design issues will lead us to conclude that at most 16 kms the pilot has been implemented till date.

Bus Augmentation - Though the JNNURM sets a target of 50 buses/ lakh of the population in Pune, the PMPML currently has around 38 buses/lakh of population. Over the last two years, only 136 buses were added to the PMPML fleet[29]. Even if we assume that all of these buses have been bought by the respective municipal corporations[30], PMC's contribution to new buses is only 91, as against 525 buses that should have been bought from PMC funds to meet CMP targets.

Cycle tracks – An on-going study being conducted by Parisar has shown that a total of about 82 kms of cycle track that has been built in the city (including both cycle tracks on BRT corridors as well on non BRT corridors). Though, on paper, the construction of these tracks have been completed, they are highly difficult (in certain cases even impossible) to use. The problems range from wrong choice of track surface (like interlocking blocks) to existence of a large number of partial and total obstructions like lamp posts, garbage bins etc. Given this scenario where cycle tracks are more or less useless, we assume that the city has not built any usable cycle tracks on its non-BRT routes till date.

Footpath – It is not easy to find the exact number of km of footpaths constructed by PMC in the last two years. Therefore, we use a proxy to approximate this as follows. The city has allotted about Rs.79.66

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[25] "Civic chief Zagade demands special cell to manage BRTS", Sakaal Times, 24th March 2011
[26] "Zagade admits failure in Meeting BRTS deadline", DNA (Pune Edition), 17th April 2010
[27] "Civic bodies bungling up BRTS implementation, say activists", Indian Express (Pune Edition), 16th May 2011
[28] "Civic body disappoints public, only 40% of BRTS for bus lanes", Indian Express (Pune Edition), Feb 5th, 2010
[29] PMPML Bus age chart dated 08/07/2011
[30] In reality, buses have been purchased from a combination of central assistance, PMPML funds and assistance from the municipal corporations.

crores in the last two budgets for pedestrian friendly activities. As an analysis of last year's implementation of this budget has shown[31],only 34% of this budgetary allocation has been utilised satisfactorily and the rest of the funds were either not used at all or used but with unsatisfactory results. Therefore, we assume that only about Rs.27.08 crores (34% of the budgeted amount) have actually been used to construct useful footpaths in Pune over the last two years, which translates to 90.3 kms of footpaths at the assumed unit cost.

Figure 11 compares the alternative scenario that we have presented with what the city has actually achieved over the last two budgets. This brings to light the stark difference between what the city could have achieved if it had used its resources properly and what it actually did. While judicious application of funds could have achieved 100% for all 4 targets, PMC has only achieved 15% of the targets for footpaths and bus augmentation, 26% of the target for BRT and 0% of the target for cycle tracks.

It is clear that lack of funds is not a hurdle to achieving the goals of CMP and following the principles of NUTP, but a lack of vision and commitment on the part of the city. If the city officials and leaders had the proper vision and commitment to its targets, the scenario in the city would be very different from what it is at present and the city could have been on its way to addressing its most pressing transport problems.

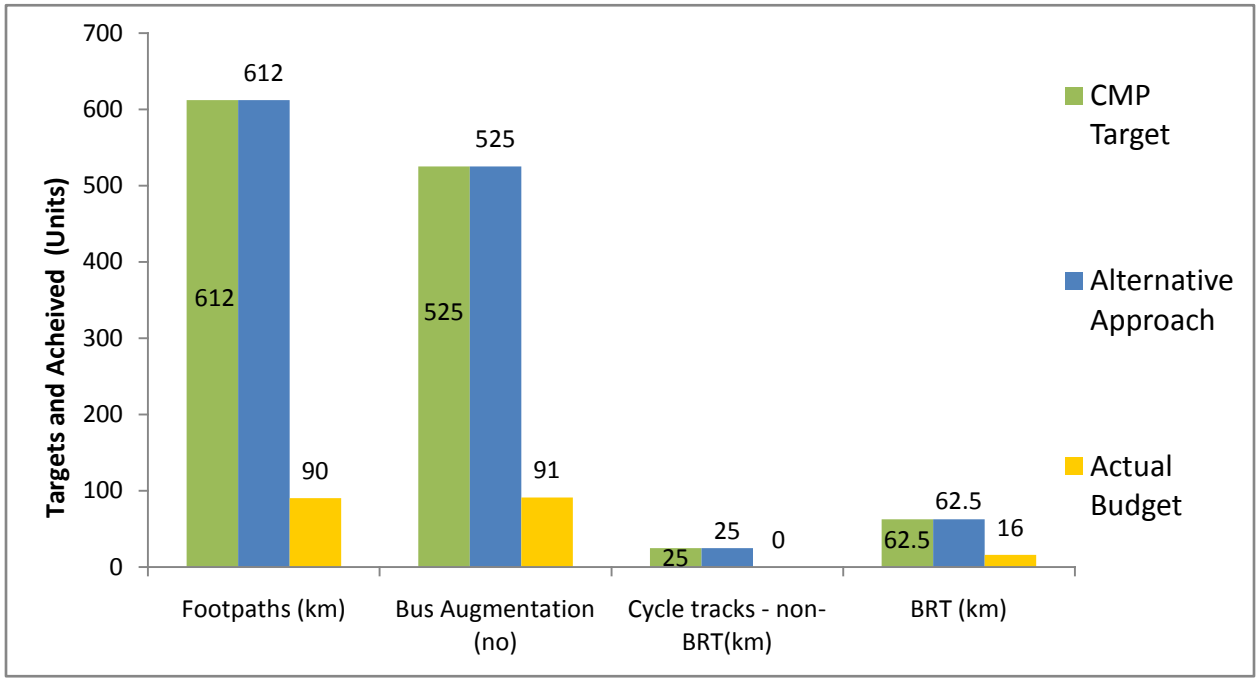


Figure 2: Comparing Original Budget with Alternative Approach (Rs. Crores)

[31] http://www.parisar.org/activities/analysesreports/125-analysis-of-pmcs-implementation-of-nmt-projects-in-the-09-10-budget.html, accessed 28/07/2011

It is clear that the budgetary allocations of PMC are not based on existing policies, visions or goals. Moreover, there seem to be no accountability to the citizens of the city on how public funds are utilized, since there is no transparency on funds utilization in PMC though there is transparency on budgetary allocations. This leads to an unfortunate and potentially dangerous situation where public funds are used for programs that are not necessarily promoting public interest.

**Conclusions**

In spite of making large budgetary allocations to the transportation sector, the city has not been able to tackle the issues related to it. Our analysis reveals that the funds allocation within this sector is highly disproportionate to the stated goals as laid out in the city's own plan and the country's policy. This suggests that there is a pressing need for a change in the outlook of the city officials to accept the importance of a sustainable approach to solve the transportation problems of the city, and believe in the city's own plan and the country's policy.

Our analysis has also shown that a different approach to allocating funds would have actually helped the city substantially achieve the targets laid out in the CMP and the vision of NUTP. This underscores the point that the primary hurdle to sustainable transport in the city is not a funds crunch but vision and commitment by the city officials.

A change in PMC's approach to transportation is not only desirable but critically necessary – otherwise the city cannot expect to meet its goals, no matter how much money it spends.

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