



# Green Schools Network

## ACTIVITY SHEET

May 2008

### Why talk about Buses and Bus Rapid Transit (BRT)?

Name.....

School Name .....

Class.....Date.....

Its all because of these buses Damn BRT!



**Activity:** You are planning to go to your grandparents for your holidays. Mom and Dad have asked you to pack all your stuff and be ready to move the next morning. You have collected everything- lots of clothes, shoes, some books, ludo, some CDs and table tennis bats. Which of the following combination of luggage items would you use to pack  Tick you choice.

- Your new kitty bag, the Caffe Coffee day red bag, your avourite black handbag
- Your gray suitcase with manouvre wheels and a hand bag
- The shopper's stop rug shopping bag, The Levis polythene bag and other shopping bags
- A rucksack-that's it

It's the talk of the town. It is dominating newspaper headlines, TV news and everyone is talking about it? What a chaos it has made in Delhi! Why did we implement it, if there were going to be more traffic jams around it.

BRT or Bus Rapid Transit is a system of transportation tas per which he road is physically divided into separate lanes for vehicles to ply. So, there are separate lanes for buses, cars/two wheeler, cycles and walking-all made to increase the average speed of the traffic, especially buses. Bus stops are designed in the railway platform fashion and carry a sizable number of people.

But why not make flyovers and expressways, instead, to make traffic smoother? How is BRT going to help us? Lets explore...

Surely, if you are an avid traveller, you would choose option 'd' - because its easier to carry and you can get all your stuff in it.

Well! The situation is somewhat the same on our roads. As more people want to use designer luggage items(read cars of a company or other), making space for everyone in the train compartment is a major problem (traffic jams on roads). As the space in the train is limited, it is perhaps better to use a rucksack or a big suitcase (read buses). That's easier to manage and will accomodate everyone.

Now the government in a bid to persuade more people to carry rucksacks, is coming up with new attractive design (enter BRT)



*Hi! I am Pandit Gobar Ganesh. You will find me in Gobar Times—a magazine that tells you how your everyday life is linked to the world around you. Hooked, huh? If you want to know more about me and GobarTimes visit us at:*

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**Gobar Gyan: Why does congestion happen?**

There was once a road built for traffic to move. It was supposed to carry a certain number of vehicles. But as the population of vehicles increased, the road became crowded. So, the government widened the road and built a flyover. But even that was not enough and there were many traffic jams. The space is limited and more people want to move in it. In most places we have exhausted the option of widening roads and making flyovers. Delhi has 21 per cent of its area under roads; much more than what urban planners advise to have. Yet the city is gridlocked. Between 1996 and 2006 total road length in Delhi has increased by about 20 per cent. But cars increased by 132 per cent . We are stuck in a stalemate.

The other option is to reduce people who want to travel- obviously not an option at all. that is also not possible, because that many people need to move. So what do we do, we need to go in for options which take the minimum space and carry the maximum people- the bus is one vehicle which meets both these demands.

*Its good – do an awareness rally to ask people to use buses.*

But why would a person take a bus if he could ride in a car? Moreover, the bus gets stuck in the same jam and its not even as comfortable to sit in. So, the planners decided to give a dedicated way to a bus (segregate traffic) and started efforts in making a bus ride more attractive. We have the BRT. It works on the basic principle of management – segregation. Just like in waste, it is important to segregate to get the maximum benefit, it helps to segregate traffic and give an edge to buses.



Now obviously, it’s a new system and it will take time for people to understand it – but it is evident that this is the most sustainable option with us at the moment.

We need to focus on moving people and goods rather than vehicles. In dense cities, public transport saves valuable space and energy compared to private transport, and can make healthy profit at the same time. But cities need to nurture their public transport by giving it priority on the road over cars. If buses are always caught in traffic then a vicious cycle begins, with the bus riders abandoning public transport, taking individual vehicles and hence, adding to the traffic jams.

Also we need to realize that right now only a few portions of the city roads are in the BRT system and hence the problem. Once the entire city is integrated, the jams will melt away. Also, we need to understand that it is a new traffic culture, which is being cultivated, which will take its own time to sink in. So just don’t rule out the BRT as yet.

**Activity:** Go to a busy road or junction near your school and observe the traffic- how it moves- note the cyclists and non-motorised transport, the buses, the cars and other kinds of vehicles. Note the number of people travelling by each means of transport. Note down your observations and the thoughts, which come to your mind, here:

Buses: \_\_\_\_\_

Cars: \_\_\_\_\_

Non-motorised transport (Cycle, rickshaw) \_\_\_\_\_

What are your solutions for managing this traffic?  
 \_\_\_\_\_  
 \_\_\_\_\_

**Space activity:** Now take a measuring tape and locate a parked bus (average size bus). Talk to its owner/driver/conductor and measure the length and breadth of the bus to find out its area. Also enquire about its passenger capacity (the total number of passengers it can carry)

Length – \_\_\_\_\_ Breadth – \_\_\_\_\_

Therefore, Area = Length X Breadth = \_\_\_\_\_ Passenger capacity = \_\_\_\_\_

Now, let us find the space occupied by a bus per passenger. It can be found out by dividing the total area of the bus by the total number of passengers.

Space per passenger = Total Area / Passenger capacity = \_\_\_\_\_

Now repeat this exercise for an average size car.

Length of the Car- \_\_\_\_\_ Breadth of the Car- \_\_\_\_\_

Area of the Car = \_\_\_\_\_ Passenger capacity of the car – \_\_\_\_\_

Road space occupied per passenger – Total Area of the car/ passenger capacity = \_\_\_\_\_

Now, compare the road space occupied. Which occupies more road space? \_\_\_\_\_

On an average, a bus occupies two times the space occupied by a car and can carry 40 times the number of passengers.

And it is not only a question of road space but also of parking. Please refer our activity sheet on Parking to get more information on the same.

### Gobar Extract- March 2008 issue on Cars

...interesting piece of information. While there has been a phenomenal growth of private vehicles in our cities, large numbers of people-an estimated 60 percent and above- still travel by bus or bicycle or walk or work.

Share of buses in the total fleet in India has dwindled from 11 percent in the 1950s to 1.1 percent today. This is visible in the use of road space. In Delhi, personal vehicles- cars and two-wheelers- use up more than 75 percent of the road space but meet only 20 percent of the commuting demand. But buses that use less than five percent of the road space, meet more than 60 percent of the travel demand.

The above picture is a representation of the amount of space required to transport the same number of passengers by car bus or bicycle.

We must understand that transport solutions like BRT just ensure that buses, which have an efficient ratio of road space as compared to passengers are given a right of way. It just redistributes road space to increase efficiency.



**Activity:** Visit the office of the traffic police department and talk to the head. Ask him the following questions:

What is the total number of vehicles in the city/town?

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What measures has the traffic police taken to reduce traffic congestion in the city?

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Are there any plans to introduce newer traffic/transport planning solutions? If yes, what?

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What kinds of transport plans are being put in place in India and across the world?

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**Gobar Gyan:** A lot of people are now comparing the BRT to the Metro and saying that when the Metro came, it disrupted nothing, while the BRT has ushered in problems galore. The primary reason for this is that the Metro did not compete for space with the existing traffic on the road, it is either underground or overground. Also, it needs to be taken in to consideration that the Metro costs almost Rs 300 crore per kilometer while solutions like BRT are not more than 10 crore per kilometer. It is cheaper and hence a more viable option.

#### **Myths about BRT**

- a) There would be chaos if a bus breaks down - all traffic stops
- b) Buses have taken away road space for other vehicles
- c) Bus stops in the middle means problems in crossing the road

#### **Reality Check**

- The bus lanes have an option to overtake in case of breakdown and join back the same lane
- The BRT has merely redistributed space while giving an advantage to the bus (anyway a lot of space was wasted earlier)
- The distance of crossing the road has actually been reduced because the bus stops are in the middle- one just has to cross half the road

#### **Benefits of BRT:**

- The separate lane for cyclists actually promotes the habit of cycling and its safe for one to cycle on city roads amidst traffic
- With a better public bus system in place, there is likelihood of people shifting from cars to public bus, thus reducing congestion
- Buses emit less per person as compared to cars and is our best bet to reduce global warming



If you found the activity sheet interesting, E-mail us at [eeu@cseindia.org](mailto:eeu@cseindia.org) or write to:

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