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PRESENTS

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RE-IMAGINING MOBILITY IN CITIES POST COVID-19

by, Ms. Shravani Sharma, WRI India

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Representative Pic. 1

IN THIS ISSUE :

Re-imagining mobility in cities post Covid-19

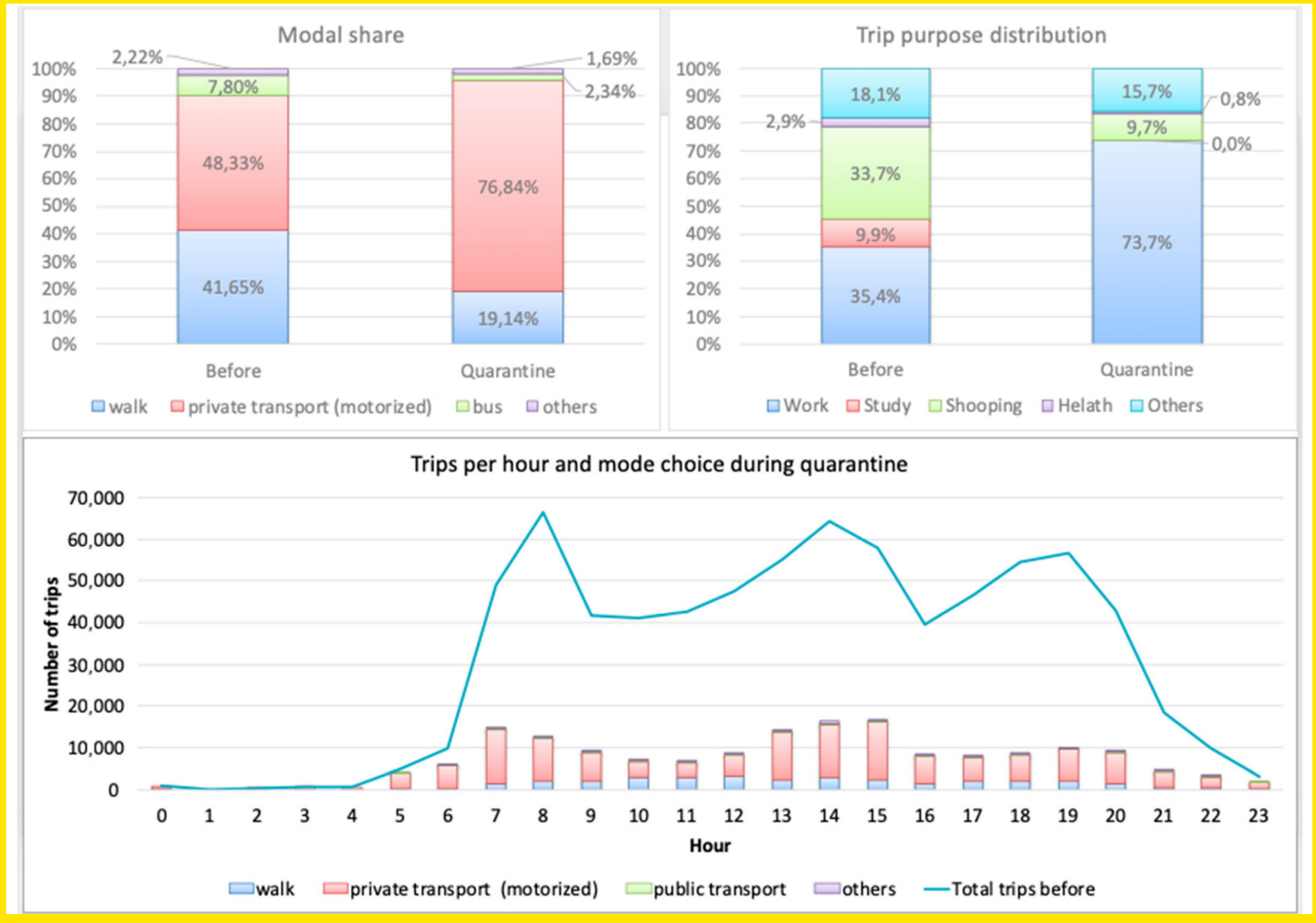
by, Ms. Shravani Sharma. WRI India

Globally, the COVID-19 pandemic has given an opportunity to re-imagine more liveable cities. Although COVID-19 pandemic has done significant damage to the world economy and human health, it has given an opportunity to experience life in new normal in the cities. In this article, a few of such changes pertaining to surface mobility in cities will be observed and discussed. Over the last few months, mobility has seen a completely new twist in cities.

The lockdown has made many significant forced decisions which affected the businesses and mobility in cities. This extraordinary situation has forced many employers to explore the possibilities of remote working and it has become quite a part of the “new normal” now.

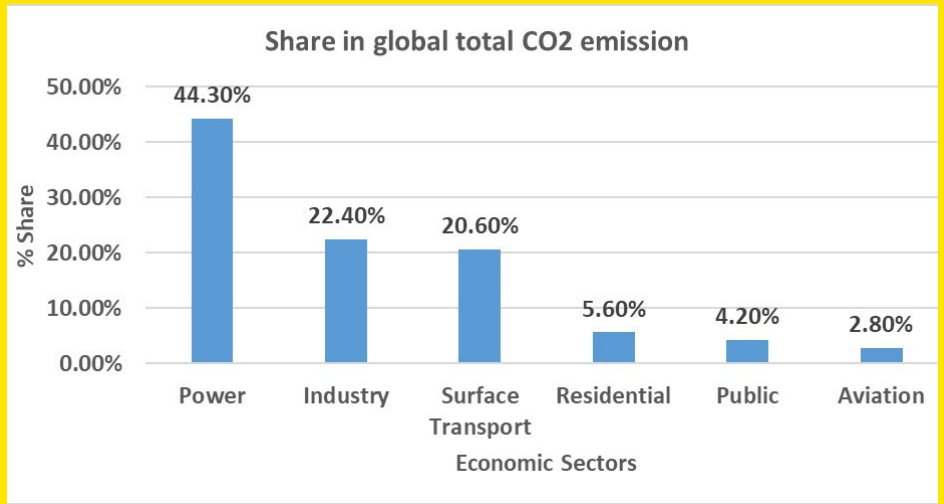
As a result of this situation there could be shifts in the usage pattern of the transportation systems in cities, and this resulted in seeing visible impacts on the atmosphere.

People are now avoiding crowded public transport, and more in favour of using bicycles and e scooters and walking (see Figure 1).



Source (Aloi:2020) Figure 1. Mode share, trip reason, and total trips daily profile before and during the quarantine

Surface transport is one of the largest emitters CO2 as a result of which there were intensive discussion during pre-covid times of the issues related to surface transport. All around the world people discussed regarding the declining air quality and climate change and many countries including India have taken various steps in order to mitigate this.



It is already known that 70% of the Green House as (GHG) emissions comes from cities (Habitat, 2011) and 20.60% of the Global (GHG) come from surface transport

Figure 2
Share of economic sectors in global total CO2 Emissions, (Corinne Le Quéré, 2020)

The cities are the drivers of growth, and with the increasing Gross State Domestic Product, the purchasing capacity also increases, hence the vehicular ownership, leading more transport related issues such as congestion.

Now in the past few months, there were some serious steps taken to battle with the virus and one of the most prominent one was lockdown in cities. Many employers chose to work fromhome and public transport were banned in cities due to the same. As a result of these measures, there were significant changes in patterns, due to which it was noticed that global daily emissions of CO2 fell by 17% at the peak of the crisis. There were studies where researchers calculated how 10 different greenhouse gases and air pollutants changed between February and June 2020 in 123 countries. They found that the drop off peaked in April, with CO2, nitrogen oxides and other emissions falling between 10-30% globally, mainly due to declines in surface transport.

Representative Pic. 2

It was observed that emissions from surface transport, such as car journeys, accounts for almost half (43%) of the decrease in global emissions during peak confinement on April 7. Emissions from industry and from power together account for a further 43% of the decrease in daily global emissions, while aviation – the economic sector most impacted by the lockdown – only accounts for 10% of the decrease in emissions during the pandemic.Increases in the use of residential buildings from people working at home only marginally offset the drop in emissions from other sectors(Member, 2020)

However during the lockdown, road traffic is still down in many countries such as all modes of UK transport is still 25% down, but with buses and trains running at less than 50% (McGrath, 2020). This shows that all around the world there are significant changes in the user behaviour towards public transport and all the cities have been pushing for cleaner public transport since forever.

What can we learn from these short-lived results that can be implemented for our cities?
There could be short, mid and long-term strategies to make these changes in terms of attaining good air quality in cities to be permanent.

Researchers feel that if transport goes back to what it was, and the world strongly invests in fossil fuels during the recovery, there is a very high probability that the world will go above the 1.5C warming threshold by 2050.
But if the recovery is strongly green, avoids the usage of fossil fuels, and cuts global emissions to net zero by 2050, the world would have around a 55% chance of staying under 1.5C by the middle of the century (McGrath, 2020).

Hence following the right steps would ensure a clean environment and a healthier air quality.

Some amongst many possibilities are:

Scenario 1: Reinventing green public transport
There is a real risk of a decline in the sustainability of mobility in urban areas. The main questions to be answered will be, first of all, when, how, and to what extent the demand levels for public transport systems will recover (if they ever do).
The willingness of the user to take over not only collective but also shared transport systems will be another important issue to be assessed. Further questions to be investigated are how this will affect users' perception of different transport services, and what new strategies both public and private sector operators will need to follow to make public transport systems attractive again.

Representative Pic. 3

Variables such as vehicle cleanliness and hygiene, as well as vehicle occupancy, are likely to increase their prominence in measurements of perceived quality (Aloi, 2020).

Scenario 2: Encouraging shared mobility and Active travel:
In one of the studies done by McKinsey and Company identified that during the coronavirus crisis, overall mobility has shrunk across all modes with 62 percent of respondents now traveling less than before COVID-19. However, their trips taken, and commuting are slowly picking up again in all regions. But consumers do not expect big changes in their post-crisis behaviour as compared to pre-crisis. Across markets, 20 to 40 percent of consumers plan to spend less due to various reasons and as a result of which the car purchasing levels have also significantly gone low especially in countries like US, Europe and Japan with a decrease of 26%, 12 % and 18% respectively (Thomas Furcher, 2020).

Short term measures: Before Covid, many Indian cities wanted to transform into cleaner modes of transport by switching to electric from ICE vehicles. Despite of many efforts from the government, the adoption rate was significantly slow as people could have only imagined about the benefits of switching rather than actually experiencing it. During this lockdown, the citizens had an evident experience of the air quality and from a theoretical point of view of benefits of switching to electric, they could actually see the benefits of these in reality.

Representative Pic. 4

Hence the push from the industry and the government with right pricing mechanisms, charging infrastructure availability, information availability, financial mechanisms would only be speeding up the existing measures of shifting our transportation systems into electric.

Representative Pic. 5

Mid Term measures: There was always an issue of insufficient bus in our cities. Now due to social distancing, the occupancy ratio of these bus are also smaller which means it needs to have more frequent bus on the routes. This is not possible unless more bus are deployed in cities and these buses can be electric buses as there are already many subsidies and schemes available for E-Buses.

There should also be serious thought put into increasing the reliability, efficiency and trust of these services and this is when innovative business models, ideas, and information sharing comes into action.

This would not only have the issue of adequacy for public transport resolved but also to regain the trust of the citizens. Topping it up with shared micro mobility services with proper sanitation and hygiene clearance, it can solve the issue of declining car ownership now and also the behavioral change that the people are going through as companies like Yulu have seen a significant increase in trip length and increase in usage frequency during the lockdown. Hence proper planning and business models for seamless integration can build back better the trust in Public Transport.

Long term measures:

Major changes could be seen in the citizens for the usage of mobility patterns in terms of trip length, trip purpose and modes during the pandemic. As many of us are already working from home, and it is seen as the new normal, there could be changes in the city development plans for the future development. Making of “compact cities” where all amenities are available within walkable distances or that ones which can be covered by escooters would be a great idea.

Representative Pic. 6

The land-use patterns would also change significantly later with less amounts for commercial areas and more on green shared spaces and public/social amenities with a better emphasis on inclusive and active mobility in terms of infrastructure and policies.

An integrated transportation system should be ensured in the comprehensive mobility plans in our cities which ensures seamless connectivity.

ABOUT THE WRITER

Shravani Sharma - WRI India, Shravani supports on technical research and analysis of sustainable mobility projects , particularly for Electric Vehicles (Infrastructure and Policy) projects. She is an Urban and Transport Planner and has obtained her MSc. in Urban Transport from University of Glasgow, United Kingdom and she also specializes in data science and statistics and was an active member of the Urban Big Data Centre, UK. She has done her Bachelors from CEPT University, India and worked closely with CoE (Centre of Excellence), during her research work.

Her professional involvement includes working with research organizations, government bodies and consultancies such as ARUP Glasgow, IRADe India, DULT India, TNCP India etc. She is particularly interested in multimodal integration, ICT, ITS, data and travel behaviour, intelligent mobility, demand modelling and policy making, etc.

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