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Experiencing Optimization of transport infrastructure Use towards Social Health security in COVID -19 Situations in India

Kalpana N. Kawathekar (Thakare)[1], Dr. V. K. Bakde[2]

[1]*Ph.d. Scholar at VNIT, Nagpur and Faculty at K.I.T.S., Ramtek, Nagpur-440002, Maharashtra State, India*

[2]*Supervisor, Department of Architecture and Planning, VNIT, Nagpur, -440002, Maharashtra State, India*

ABSTRACT

Corona virus has spread from its origin at Wuhan, China and created havoc situations worldwide since December 2019. India though located neighboring took two months and more to reach India to have it detected positive. Since then the social life of all the people got disturbed for having lockdown situation all over the world. All elders were shocked to see such situation for the first time in their lifetime with all activities being stopped with the stopping of transport in and outside the world countries. This paper is an attempt to analyze the transport infrastructure continuity experiences in order to achieve the social health security during COVID -19 pandemic situations in India. It studies the complete lockdown for transport activities and stage wise unlocking of transport facilities thereby achieving the optimum use of transport facility while taking utmost care of Social Health and its security in India.

Keywords: Corona Virus, COVID- 19, Social distancing, Social health security, transport optimization

1. INTRODUCTION TO COVID-19 CORONAVIRUS

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases. Corona was recognized as a new virus family in 1968 than other viruses. A novel coronavirus, a new strain that has not been previously identified in humans is a severe acute respiratory syndrome coronavirus-2 SARC-CoV- 2 also known as ***COVID*-19.** COVID-19 stands for COrona VIrus Disease 2019 for being detected in 2019. (WHO, 2020)

As known today in the world, originated in the laboratory at Wuhan city of China, it has transmitted from an individual and spread in all the countries. Based on the virion morphology and intracellular budding site it has a distinguished characters. It is found to have characteristic features of their genome, replication strategy, and structural proteins. (Holmes, 1999)

International health agency, World Health Organization has declared it a pandemic. (Yashpal Singh Malik 1, 2020) It has taken a lead for understanding its growth and finding out its reasons therein. It has also opened its research for all to bring in vaccination as it is the universal body to work on research and development for the good health of the world's individual. As also said by Dr. Tedros, The director General at WHO "WHO remains committed to equitable access to health products for populations that need them and will work to ensure that

access is always part of all R&D efforts." (The Director,2020). The study was aimed at understanding the COVID 19 and its effect on various activities particularly transport infrastructure in case of India.

The paper is prepared to formulate the analytical base work for organizing research framework for the sustainable transport.

2. PANDEMIC DUE TO COVID-19

The Wuhan seafood market in China was implicated as the epicenter of the COVID-19 pandemic, and China was marked as the index country. Seven cases of pneumonia of unknown etiology were reported in Wuhan from8– 18December 2019. The first cluster of such patients was identified on 21 December 2019. patients The presented with a severe acute respiratory infection and some developed acute respiratory distress syndrome (ARDS) and associated complications. Consequently, a cluster of patients reported respiratory illness to the local health care facilities, and on 30 December 2019, and the Chinese National Health Commission (CNHC) suspected an outbreak of pneumonia of unknown etiology in Wuhan. With the increasing number of cases in neighboring countries and other areas worldwide, the disease spread to several countries worldwide and it was declared a Public Health Emergency of International Concern by the World Health Organization (WHO) on 31 January 2020. The epidemic intensified and spread without boundaries and affected more than 215 countries and a few international conveyances, which led the WHO to declare COVID-19 as a pandemic on 11 March2020.

3. THE HEALTH OF A SOCIAL BEING AND ITS CONCERN AS AN EFFECT OF COVID 19SITUATION

With COVID 19 the world has seen the sudden decline of social health. The total number of corona positive cases in the world as on 30thSeptember 2020 is 33,902,014 and the number of deaths occurred are 1,013,692. The top amongst the countries are US at 1st and India at the second number with corona cases 6,243,881 and number of deaths around 977,719 cases. (Anon., 30 sept 2020). The exponential growth of positive cases of corona has entailed to shut down all the socio-physical and economic activities locally as well as internationally for the social safety avoiding transmission of corona virus observing the slogans 'Stay safe by being at home' and 'work from home to be safe' (Anon., February 2020). The shutdown of economic activities has affected the state economies drastically bringing it back to 20 years & more. (WHO,2020)

In India lockdown was observed in four stages starting from March 24th to May 31st 2020 and the phase wise unlocking began on 7th June 2020. Religious centres, hotels and the tourists places are the last ones to have opened with mandatory follow of social distancing norms. Though large number of People are recovering from Corona, the rate of positive cases is much higher hence awakening for continuity of all the economic activities.

4. EFFECT OF COVID 19 ON TRANSPORT INFRASTRUCTURE

Transport is a type of infrastructure which is of a concern for an every individual. It allows mobility of people and goods for different functions. During COVID-19 all the public transport facilities of the worlds' countries have stopped completely. As a result of it all the movements across were brought to zero. For emergency health

conditions private vehicles that too with minimum number of occupants were allowed to go social distancing. (Forum,2020)

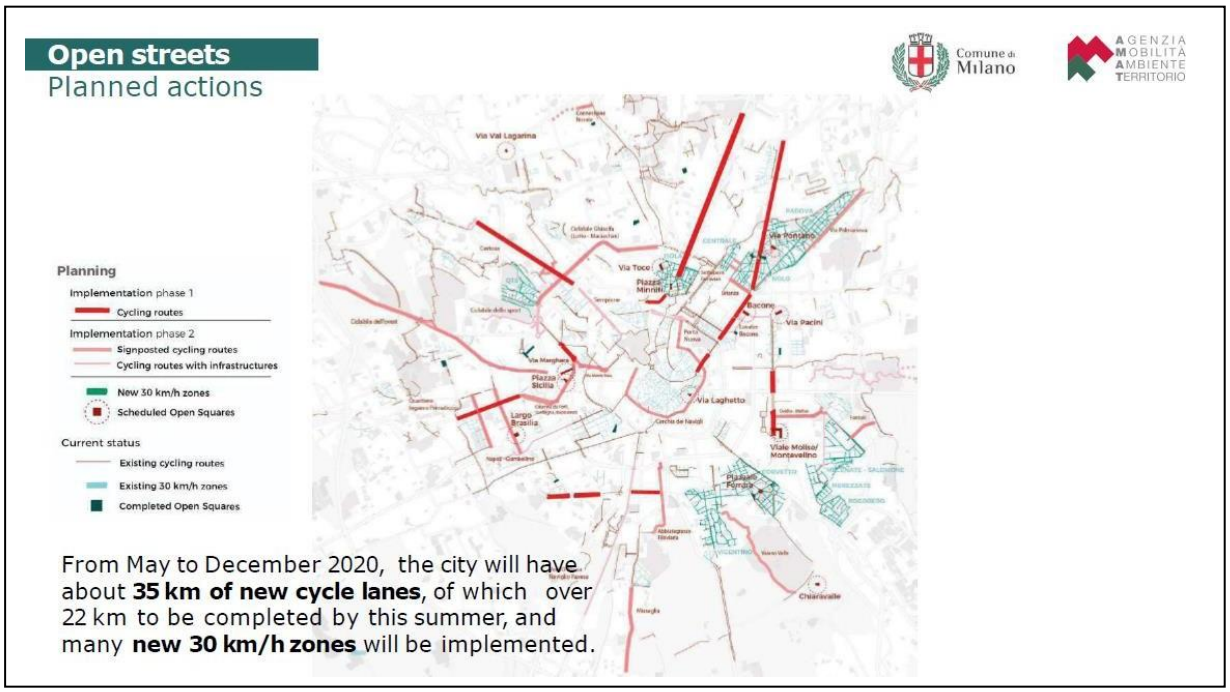
Within a short time of first two months experiencing the COVID 19 pandemic situations the worlds' leading countries have initiated for the solution over social distancing issue of public transport making temporary modifications using urban design tool viz. tactical urbanism to promote physical activities on the roads by altering its use thereby promoting single user transport vehicles viz. bike, bicycle and pedestrian movement further following the social distancing norms. (Forum,2020)

5. THE LEADERS IN TRANSPORT INFRASTRUCTUREACTIONS

Post Covid 19 Immediate transportmeasures:

1. *Tactical* ***Urbanism as the solution to check the public responses before implementing any regul****ations permanently. Eg. Milan,* ***Bristol and Camden, London***

Post COVID 19 the inclusion of NMT lane for cycles and pedestrians on existing roads and rest/ entertainment areas for them with temporary arrangements on road/ square converting it to useful and interactive using Tactical Urbanism. (Chiara Bresciani, March 2020) Thus Safeguarding public transport and making it easier to walk and cycle during Covid-19.



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b c

Figure 1: Tactical Urbanism as the solution to check the public responses before implementing any regulations permanently for NMT lanes inclusion on roads in Milan, Bristol

a. NMT lanes addition in cityplan
b. Segregating NMT lane and stop line forbuses
c. Intersecting junction used for entertainmentspaces

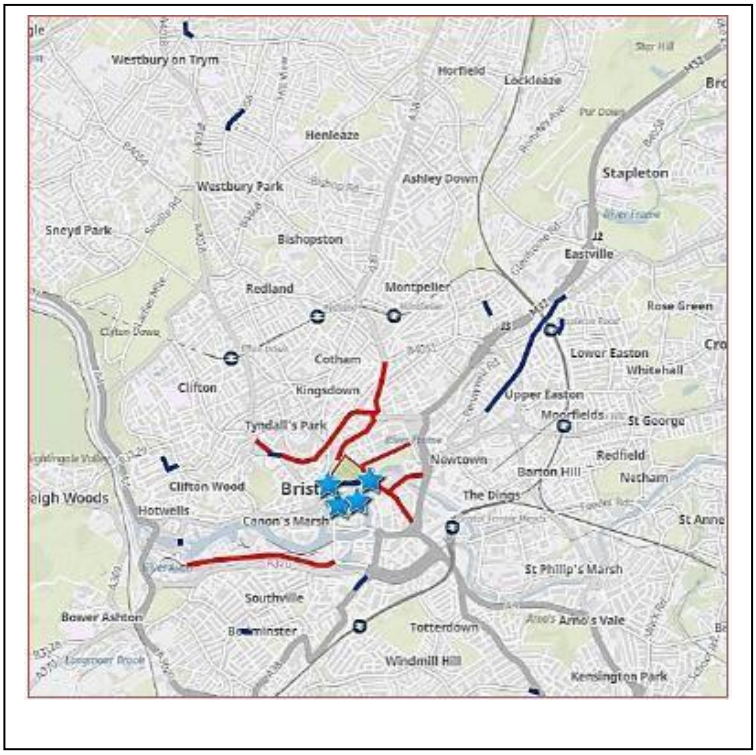

Figure 2: Cycling tracks and walking lanes proposed in the Bristol region.

2. *Tactical Urbanism for making children friendly city reducing deaths drastically at Fortaleza, Brazil:*

(1.Mr. Sreekumar Ramaswamy, 2020)

Figure 3: Tactical Urbanism as the solution to promote children play areas on roads in Fortaleza, Brazil

6. OVERVIEW OF INDIA IN COVID 19: SINCE MARCH 24TH2020

In COVID 19, Public Transport (Air, Rail, Metro, Bus) along with all socio economic activities have been stopped and all individuals are entailed to stay home for being safe. It observed steep drop in public transport ridership volumes by 90% in turn reduction in air pollution upto60%.

India and the world has witnessed the biggest mobility in absence of any Public Transport by Indian workers/ labours who used traditional transport walking and cycling to reach their homes at fardistance.

In consequence to social distancing to be followed due to CORONA pandemic, the immediate measures on mobility transport by various developed and developing countries viz. USA, UK, Italy, France, Germany, New Zealand, Brazil and China etc. gave provisions for single occupancy transport facility infrastructures adding on cycling tracks and walking areas transforming existing traffic roads thereby restricting multi occupancy private vehicles. Public transport will have restrictions on occupancy with distancing norms and sanitization regulations. (Affairs, 2020) (cials, 2013)

According to advisory re-establishing the earlier level of ridership in public transport is a big challenge for cities, as people may be looking for more options especially personal modes that allow for safer travel in the post lockdown scenario. But use of cars and other private vehicles on road may lead to congestion and pollution disobeying social distancing.

As Public transport, both buses and metro, form the backbone of many cities, and with more than halving of capacity, cities will need *to ensure alternative mobility options to keep their cities moving as the economies regain.* This is an opportunity to visit different Public Transport options and come out with solutions, which are green, pollution-free, convenient and sustainable. Such a strategy has to give major focus on Non Motorised Transport and Public Transport with use of technology in a big way for making all kinds of payments before or during the transit and providing information system to commuters. Even the shopping area should and gradually be pedestrianised to decongest them and make them more accessible to public for a pleasant and safe

experience.

Taking the above in cognizance, a three-pronged strategy is advisable in a phased manner:Short (within 6months), Medium (within 1 year) & Long term(1-3 years)

i. To Encourage & Revive Non-Motorised Transport(NMT),
ii. Recommencing Public Transport with greater confidence ofCommuters,
iii. Active utilization of technology to curb the spread ofvirus.

With these strategic guidelines the Indian cities have initiated on tactical urbanism in Chennai **(Anon., n.d.)**, Auroville **(govt, n.d.)** etc. In some cities it is continued along with the NMT integration work as started under Smart city Mission of JNNURM in Pune **(PMC)** , Bangalore, Nanded, Bhopal and others inclusive 98 cities in total. In few cities viz Pune, Bangalore, Nanded pedestrianization has executed some part and witnessed its positive effect on social behavior.

CONCLUSION

In COVID 19 pandemic the leading cities from developed countries have shown the developments to continue physical entertainment activities of a common public. Tactical Urbanism tool for temporary alterations have proved effective to bring life to citizens.

In India unlike other countries the COVID 19 has reached high in September 2020 and the transport measures application has just begun. It has long way to reach for it has to cross the major economic burden.

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