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City possible – Repurposing street and public spaces post pandemic in case of Nashik City in Maharashtra state, India

[1] Ms. Juilee Sugandhi , [2]Ms. Madhuri Nikam

[1]P.G student ,[2]Assitant professor
[1]Civil Engineering Department SOET,Sandip University ,Nashik ,
[2]Assitant professor Civil Engineering Department SOET,Sandip University ,Nashik ,

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Abstract - The Indian urban networks have stood up to various troubles over the time, and such challenges in the field of suitable city masterminding which are unsustainable advancement, unpredictable headway, and lacking system impacts influence the improvement and execution of these urban networks, making plan of issues. In case of Nashik city, **this** paper explains how planning originated as a public health intervention and has since evolved into a unique approach for targeted place-based interventions. As the recovery gains pace, planning approaches based on both local and global systems-thinking will be critical for directing investment to solutions which balance economic, social and environmental objectives.

This paper introduces and summarise**z** growing calls for a green and inclusive recovery, and why planning is essential for delivering change on the ground.

Keywords—post pandemic, urban, condition, Nashik, street planning, public spaces, green spaces, homeless.

1.INTRODUCTION

The Covid-19 pandemic has caused a huge amount of suffering around world, from both the impact of the virus and the necessary measures to control its spread. Despite the current generalised growth as national economies emerge from the shock of last year's restrictions, forecasts are now grappling with uncertainty about the global economic outlook. Key variables include the ability to vaccinate the global population, the length of the vaccines' effectiveness, the protection they warrant against new variants as well potential subsequent waves of infection, and the psychological impacts on behaviour.

In the aftermath of the 2008 global financial crisis, recovery measures saw massive injections of liquidity to prop up the economy, followed by a decade of austerity. In the UK, during this period, high levels of borrowing saw house prices inflate beyond average incomes, while wages stagnated and vital public services were cut - a pattern similar to that of many other places around the world. This created economic and social fragility, which has undermined resilience to the current pandemic. This recovery must be different: with no alternative but to rebuild in a way that creates a more sustainable, resilient and inclusive society. A failure to act now will defer costs to future generations and the most vulnerable, with the tangible risks of a climate and ecological breakdown to a weak economy and society becoming potentially unmanageable in scale and complexity.The introduction summarises growing calls for a green and inclusive recovery, and why planning is essential for delivering change on the ground. It explains how planning originated as a public health intervention and has since evolved into a unique approach for targeted place-based interventions. As the recovery gains pace, planning approaches based on both local and global systems-thinking will be critical for directing investment to solutions which balance economic, social and environmental objectives.

1.1 Introduction to Study Area:

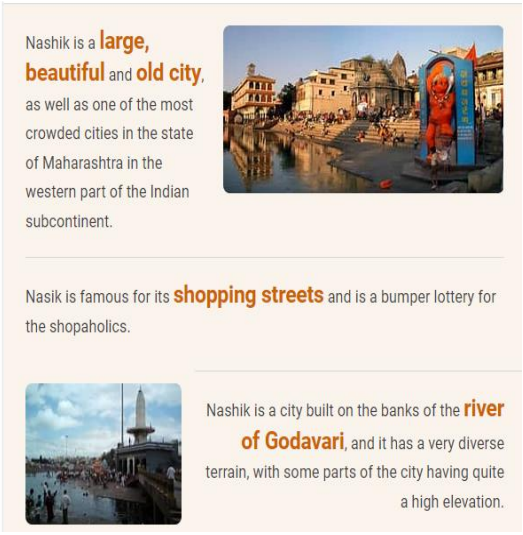


Fig.1 Nashik glimpse

Nashik district, also known as Nasik district, is a district in **Maharashtra**, **India**. The city of **Nashik** is the administrative headquarters of the district. Nashik is well known for the production of wine. Nashik is also known as Mini Maharashtra, because the climate and soil conditions of Surgana, Peth, Igatpuri resembles with Konkan. Niphad, Sinnar, Dindori, Baglan blocks are like Western Maharashtra and Yeola, **Nandgaon**, Chandwad blocks are like Vidarbha Region. Nashik is the biggest city in the district while **Malegaon** is the second biggest city.

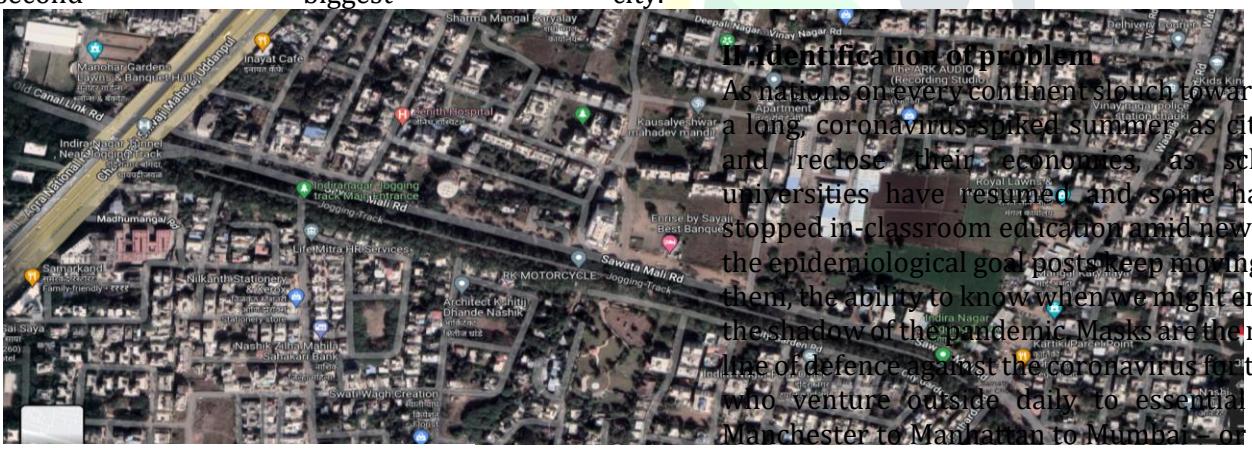


Fig 1.1 Study area image

Image source : satellite image

1.2 About the study area :

Govind Nagar is a well-known area in Nashik. A number of reputed schools, educational institutes, and hospitals are established here. Restaurants, banks, and other utility shops are also located in the vicinity.

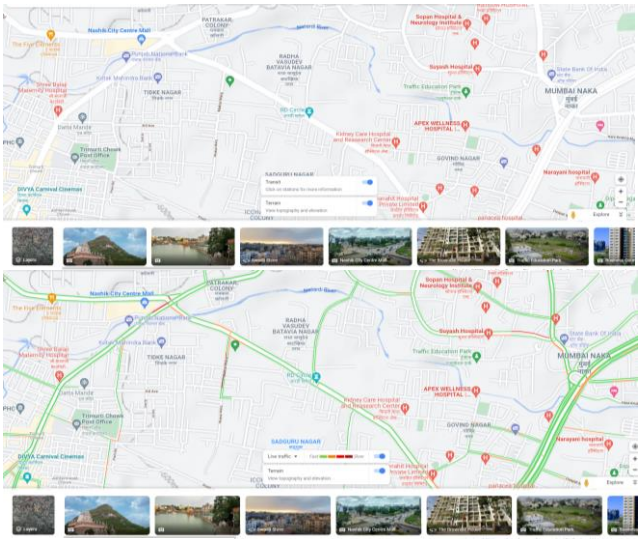


Fig 1.2 traffic flow
Image source : satellite image

1.3 Demographics

According to the 2011 census Nashik district has a population of 6,107,187, roughly equal to the nation of El Salvador or the US state of Missouri.[1] This gives it a ranking of 11th in India (out of a total of 640). The district has a population density of 393 inhabitants per square kilometre (1,020/sq mi) .Its population growth rate over the decade 2001-2011 was 22.33%.Nashik has a sex ratio of 931 females for every 1000 males, and a literacy rate of 80.96%. Scheduled Castes and Scheduled Tribes make up 9.08% and 25.62% of the population respectively.
The district is 75.64% urban as of 2007.

II. Identification of problem

As nations on every continent slouch toward the end of a long, coronavirus-spiked summer, as cities reopen and reclose their economies, as schools and universities have resumed and some have already stopped in-classroom education amid new outbreaks, the epidemiological goal posts keep moving, and, with them, the ability to know when we might emerge from the shadow of the pandemic. Masks are the most visible line of defence against the coronavirus for the millions who venture outside daily to essential jobs from Manchester to Manhattan to Mumbai – or to shop for food and supplies, and get exercise. But physical distance is the invisible yet even more crucial barrier against infection, and the greatest resource for staging a global recovery.
Cities where it's possible to conduct many of life's public activities safely – while maintaining the six feet [1.8 metres] of distance from one another that medical experts recommend – can mean the difference between a sputtering recovery that disrupts daily life, the global economy and democratic institutions, and a sustained, surging reopening that enables nations to grow and thrive, and not just survive. Space shouldn't be the limitation of safe, healthy cities, and creating a six-foot city is a challenge not of epidemiology but of the geometry of street design. On most city streets,

maintaining six feet of distance is a physical impossibility not because there isn't enough space, but because the street space is poorly allocated. About 80% of public space in cities are its streets, an area equivalent to entire cities unto themselves. streets as critical assets that could be used for more than just moving and parking cars. In less than seven years, we created 400 miles [644 km] of bike paths, seven rapid bus routes, and launched 70 plazas citywide – reclaiming 180 acres [73 hectares] of former street space. they acted quickly, with projects arriving in just days or weeks and using temporary materials. The result was traffic that moved as well or better than before, the fewest recorded traffic deaths in New York history, and substantial improvements in local business.

Cities around the world have since adopted this playbook, and reclaiming lanes was the first step for many cities responding to the pandemic. Cities like Milan, Paris and London emerged from lockdown by transforming hundreds of miles of streets and creating safe room to walk, bike and take public transportation. vilnius was one of the first cities in the world to turn road space into open-air restaurant and cafe seating, giving people a safe place to escape their homes and struggling businesses a way to reopen. The subsequent success of in-street dining in cities like New York, Chicago and San Francisco reveal new possibilities hidden within urban lanes that could outlast the pandemic and serve cities in their rebirth.

Streets in the time of Covid-19 offer the precious territory needed to relocate more of our inside lives into the outside – and to reimagine our avenues for a new, safer, more inclusive and equitable century.

III Research Methology:

Fig 3.1 phase wise study area

3.1 Proposal :

fig 3.1,3.2,3.3 proposal in phases

Streets can be adapted into instruction areas, permitting smaller class sizes indoors where space can be limited. Roads can be converted into schoolwide assembly and event spaces, and staging areas for children arriving to and departing from school, or auxiliary playgrounds, allowing gymnasiums to be converted into classroom space. Instead of hard infrastructure, curbside classrooms made with inexpensive, movable materials can be adapted for different uses or fitted with temporary heating and cooling equipment.

In many cities, a local library, school gym or other public building typically serves as the neighbourhood polling place. Streets provide similar options for open-air queuing and voting on a large scale without crowding while waiting. Public-facing government offices can also reopen by moving operations out of the office and into communities, where they can be more accessible to constituents to obtain licences, permits and information on accessing public services.

Dedicated, strictly enforced zones for immediate pickup for customers arriving in cars can help reduce or eliminate long-term parking that forces other motorists to search for parking on side streets. Curb lanes can also be converted into specific time-of-day

delivery zones, allowing trucks and vans unfettered access to the curb before shops open. Businesses can convert streets into pedestrian-only retail arcades, and neighbourhood commercial groups can help tailor the spaces to bring more customers to the street

A single parking lane that stores a few dozen idle cars for hours or even days can move thousands of people in buses, on bikes and walking. Road lanes can also be repurposed for bike lanes, allowing people to commute safely on bikes, e-bikes and scooters, and helping reduce crowding in city bus and metro systems. A network of bus lanes can allow buses to operate more frequently and with less crowding, relieving trains and trams. Former parking or driving lanes can be adapted to provide more room for pedestrians to walk and queue at businesses without crowding each other

The pandemic has revealed that parks alone are not enough to accommodate city residents. The very idea that people must retreat from their homes and travel to a destination park is outmoded; placemaking strategies can bring parks to neighbourhood streets.

Each city contains thousands of acres of space that could be used for healthy recreation. In some neighbourhoods, play streets can make roads safe enough for a child to bike unsupervised, while also making the same road attractive for residents to jog or bike safely and comfortably, reducing the number of people who travel to public parks and tracks for exercise.

The differences between a tree- and bench-lined park path and a city street can be solved by design and bringing low-cost, rapid-implementation lane reallocation, artistic designs and landscaping to streets, which can put community open space within reach of every address.

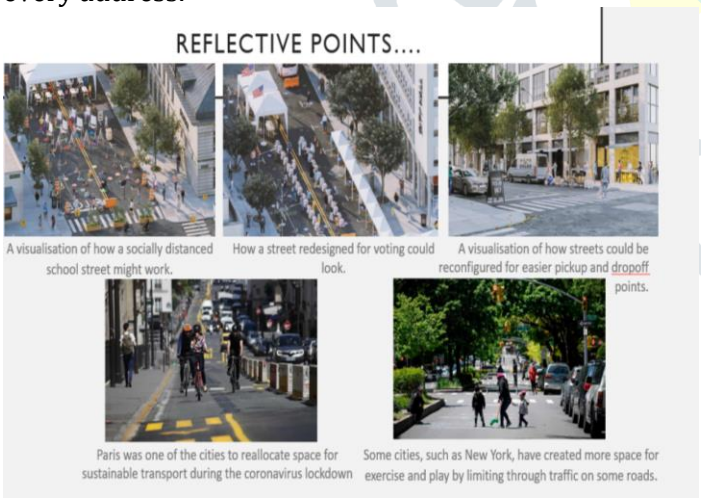
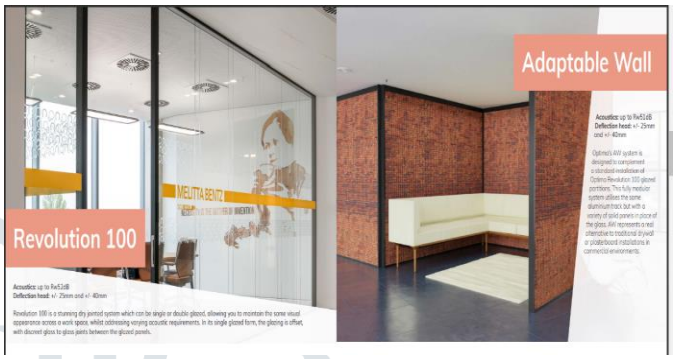


fig 3.2 proposal

3.2 Installation of adaptable walls:

- Adaptable wall:

Adaptable wall is a stunning solid wall, modular, dry jointed system which achieves outstanding acoustic ratings. It is demountable and reconfigurable which means it is perfect for projects where the environmental aspects of the materials used, are a key design element. It has its own range of specially designed high acoustic doors. This 100mm wide system easily connects with double and single glazed partitions allowing you to maintain the same visual appearance across a work space, whilst addressing varying acoustic requirements. It can be reused in another design or refurbished by us for use by someone else.



- **Centralized filtration system:**

The centralized filtration system is a single filtration unit that supplies clean coolant to a small group of machines or an entire shop floor. It is a combination of various coolant filtration systems and their accessories. This system facilitates the use of the same fluid on all the machines and creates a uniform pressure. Centralized filtration systems are an economical and convenient option for large facilities. Any of our filtration systems can be designed to perform as a centralized unit. We customize designs to fit your shop space requirements.

- **HEPA filter:**

HEPA is a type of pleated mechanical air filter. It is an acronym for "high efficiency particulate air [filter]" (as officially defined by the U.S. Dept. of Energy). This type of air filter can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (μm). The diameter specification of 0.3 microns responds to the worst case; the most penetrating particle

size (MPPS). Particles that are larger or smaller are trapped with even higher efficiency. Using the worst case particle size results in the worst case efficiency rating (i.e. 99.97% or better for all particle sizes).

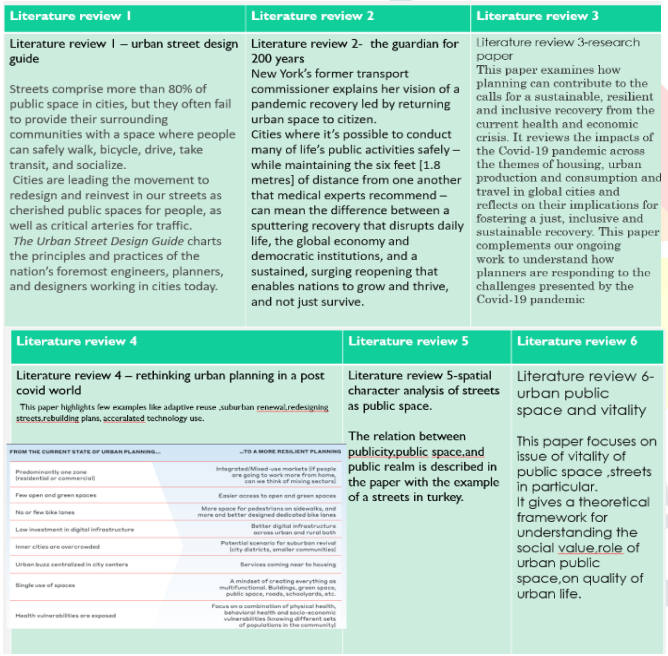
All air cleaners require periodic cleaning and filter replacement to function properly. Follow manufacturer's recommendations on maintenance and replacement.

- **Portable ICU:**

A mobile intensive care unit is a **movable diagnostic and treatment structure you can use to serve patients who need critical care**. They are fitted in independent or existing structures. Since a mobile intensive care unit unit is on wheels, it can be easily transported to the scene of disaster faster through a ship, train, or tractor.

IV. Data collection:

For this various research papers and magazines were read.



3. CONCLUSIONS

In a time when we're required to maintain physical distance to protect public health, streets need to do more than ever.

Streets must be configured so that people are able to move safely around the city. The mobility needs of essential workers are paramount; we must ensure that the people who provide medical care, food, and the services that allow most of us to stay at home can move safely and efficiently. As we transition slowly from crisis to recovery, our streets must provide better, safer options for everyone. Configuring our streets to support walking, biking, and high-frequency transit will be essential to our economic recovery. These policies are key to ensuring that our streets do not become gridlocked and that we can continue our efforts to reduce roadway fatalities and greenhouse gas emissions.

Our streets are key to our mental, physical, and immunological health. In cities across the globe, streets are places for essential outdoor respite for people without yards or balconies. Streets are fundamental tools in a risk-reduction public health approach that creates space for people to exercise and play in close proximity to their homes, and provides them with the resources they need to realistically comply with physical distancing guidelines. When the first wave of this pandemic wanes, policies that re-envision streets as public spaces can help people safely gather and reduce the traffic injuries and fatalities that will come with increased vehicle use.

Finally, streets in the COVID-19 era provide space for the social services that will allow cities to safely re-open sooner. Streets provide space for pop-up medical and testing locations and distribution points for food and potable water. Streets provide space for WiFi hotspots so children can attend school remotely and people can work from home. As we plan for recovery, streets can be a place where our social supports—schools, libraries, religious and cultural institutions—can safely resume the services and programs that people need.

The streets and cities we see on the other side of the pandemic will be different from the ones we knew a few short months ago. As city and transportation leaders, our job is not to return to the inequitable, dangerous, unsustainable patterns of the past, but to help shape a better future. The streets we create today will provide the foundation for our recovery for years to come.

ACKNOWLEDGEMENT

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