



PANVEL – KARJAT CORRIDOR : THE ULTIMATE COMMUTE GLOW-UP

* Ms.Shreya Nitin Pardeshi & **Prof. Shafaq Heyat Khan

* Research Student &

** Guide, KLE Society's Science and Commerce College.

Abstract:

Panvel-Karjat Railway Corridor is another Mumbai Urban Transport Project (MUTP-III) and aims at improving the transport in the Mumbai Metropolitan Region (MMR). There is 29.6 km of double line where five stations will be built, these will be Panvel Karjat which was previously constructed under the Mumbai Metropolitan Region. As of October 2024, Marking the projects completion to be on 2025. The project was to add three tunnels and many bridges but the notable one being the Waverly Tunnel. The project aims to cut the already congested mumbai to Karjat route switching the focus to southern terminus railway station to take the Kalyan route. Kalyan aims to stretch across the suburban railway network in mumbai and support the growth in the region along with reducing the travel time and expense further enhancing the rail network in the southern area.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

Introduction :

The Panvel-Karjat Suburban Railway Corridor is a significant infrastructure project aimed at enhancing connectivity within the Mumbai Metropolitan Region (MMR). Spanning approximately 29.6 kilometer, this double-line corridor will link Panvel and Karjat, facilitating more efficient travel for commuters in Navi Mumbai and the Raigad district.

Key Features of the Project:

- **Stations:** The corridor will include five stations: Panvel, Chikhale, Mohape, Chowk, and Karjat. These stations are currently under construction, with ongoing work on platforms, foot over bridges, and administrative buildings
- **Tunnels:** Excavation for all three tunnels has been completed, with lining work currently in progress. Notably, the 2-kilometer Waverly Tunnel (Tunnel T2) is the longest on the Mumbai Suburban Railway line.
- **Bridges :** The project involves the construction of three tunnels and 47 bridges (comprising six major

and 29 minor bridges). Notably, the Waverly Tunnel (Tunnel T2) is the longest on the Mumbai Suburban Railway line, measuring approximately 2 kilometres.

- **Infrastructure Enhancements:** Additional infrastructure includes road over bridges, road underpasses, and a flyover to improve connectivity and reduce congestion.
- **Land Acquisition:** The project has secured all necessary land, including 56.82 hectares of private land and 4.4 hectares of government land.

Current Status:

As of October 2024, the project has achieved 67% completion. All necessary land acquisitions have been finalized, and significant progress has been made in construction:

- **Earthwork:** Approximately 2 million cubic meters of earthwork have been completed.
- **Tunnels:** Over 3,100 meters of tunnel excavation have been accomplished, with lining work ongoing.

- **Bridges:** Six major and 29 minor bridges have been completed.
- **Road Over Bridges (ROBs):** Four ROBs are finished, with substantial progress on key structures at Mohape and Kirawali.
- **Pune Expressway Underpass:** Construction is complete, with final touches like painting underway.

. **Expected Completion and Benefits:**

The project's deadline is in December 2025, and it is likely to do the following when deployed: Lowering Time Taken to Travel: The travel time between CST and Panvel is expected to be up to one hour and 45 minutes which would result in a rough decrease of around 30 minutes for commuters. Diminish Traffic: The corridor will provide an alternate route to users who would travel between Panvel with Karjat and hence would ease the Paathlagan to Kalyan section. Encourage Area Development: Growth in connectivity is predicted to promote development in the Navi Mumbai Airport Influence Notified Area and adjacent areas, which could subsequently boost the demand for residential and commercial real estate.

To summarize, the Panvel-Karjat Suburban Railway Corridor is a major enhancement to the transport system of Mumbai which after everyone's willing effort will be able to cater the needs of commuters and help develop the economy of the area post the successful installation of the system and is set to improve the ease of traveling there greatly.

Sources - All news channels, Wikipedia .

Literature Review :

Public sentiment towards this project is largely positive, with commuters and local residents anticipating several benefits:

1. **Reduced Travel Time:** The new corridor is expected to cut travel time between Chhatrapati Shivaji Maharaj Terminus (CSMT) and Karjat by approximately 20 to 30 minutes, offering a more efficient route compared to the current path via

Kalyan.

2. **Decongestion of Existing Routes:** By providing an alternative route, the corridor aims to alleviate congestion on the Thane-Kalyan line, which is among the busiest in the central railway's suburban section.
3. **Economic Growth:** The project is anticipated to spur development in Raigad district, including the rapidly developing areas around Panvel and the upcoming international airport, thereby contributing to regional economic growth.

Commuter associations have expressed optimism about the project's potential to improve daily travel. Madhu Kotian, president of the Mumbai Rail Pravasi Sangh, highlighted the expected reduction in travel time and the convenience of a direct local train connection from Karjat to Panvel, facilitating easier transfers to the Harbour line.

Overall, the Panvel-Karjat corridor is viewed as a transformative development that will enhance the efficiency of Mumbai's suburban railway network and support the region's expanding transportation needs. The Panvel-Karjat Suburban Railway Corridor has generated considerable public interest and discussion, with most feedback being optimistic about its impact. Below are additional details reflecting public opinion and project highlights .

Public opinion:

1. Commuters' Expectations :

Many daily commuters traveling between Mumbai and the outskirts (Karjat, Panvel) believe this project will reduce overcrowding on existing routes such as Thane-Kalyan. The prospect of saving nearly 30 minutes of travel time has been a major talking point, particularly for officeholders and students.

2. Real Estate and Business Opportunities

Real estate developers are enthusiastic about the project, expecting it to increase demand for housing

and commercial spaces along the corridor, particularly in Panvel and nearby areas. The Navi Mumbai International

Airport's proximity has amplified expectations that Panvel and Karjat will become economic hubs.

3. Concerns Raised

Environmentalists and local residents have expressed concerns about the impact on green cover and biodiversity during construction. A small section of the population remains skeptical about the timely completion, citing delays in other infrastructure projects.

Detailed Project Benefits :

1. Enhanced Connectivity

Linking Mumbai to Karjat via Panvel creates a direct alternative to the existing Kalyan-Karjat route. This will not only reduce travel time but also distribute commuter load more effectively across the network.

2. Stations

The corridor includes new and redeveloped stations, such as Mohope, Chowk, Chikhale, and Panvel, which will be provided with modern facilities like escalators, footbridges, and parking lots.

3. Infrastructure Improvements

The construction of 47 bridges (6 major, 29 minor) and the Waverly Tunnel (T2) is hailed as a feat of engineering, with the tunnel being the longest in the Mumbai Suburban Railway system.

Road Over Bridges (ROBs) at key points will enhance road connectivity in addition to rail infrastructure.

Economic Impacts :

1. Boost to Local Economy

By facilitating better transportation, the corridor is expected to attract businesses and industries to Raigad and Navi Mumbai. The upcoming Navi Mumbai Airport, coupled with this project, is

anticipated to increase tourism and economic activity.

2. Real Estate Developments

Panvel, Karjat, and nearby regions have already seen a surge in property prices, with developers marketing projects as "well-connected to Mumbai via the new rail corridor."

Concerns and Challenges :

1. Environmental Impact

Clearing forested areas for tunnels and tracks has raised alarms among environmental groups, who are calling for mitigation measures. Authorities have pledged to replant trees and ensure minimal disruption to the region's ecology.

2. Project Delays

While the project is progressing steadily, its initial timeline has been extended from March 2025 to December 2025, raising concerns about potential overruns in budget and time.

Social Media Buzz:

On platforms like Twitter and local news forums, the public has been sharing opinions: Positive comments focus on how this project will decongest the Central and Harbor lines. Some have highlighted the need for better project communication to reassure the public about timelines and environmental impact management.

Overall, the public perceives the Panvel-Karjat rail corridor project as a transformative development that will improve daily commutes, reduce congestion, and promote economic growth in the region while there are concerns about environmental sustainability and project delays, the Panvel-Karjat Rail Corridor enjoys widespread public support due to its anticipated role in easing Mumbai's commuting woes and fostering economic growth in the region.

Research Methodology for the Panvel-Karjat Corridor Rail Project

1. Introduction:

The Panvel-Karjat Corridor Rail Project is a pivotal infrastructure initiative aimed at enhancing connectivity within the Mumbai Metropolitan Region (MMR). This research methodology outlines the systematic approach to investigate the project's planning, implementation, impact, and public perception.

2. Research Objectives:

- **Assess Project Planning and Execution:** Examine the strategic planning, timelines, budget allocation, and execution phases of the project.
- **Evaluate Economic and Social Impact:** Analyze the project's influence on local

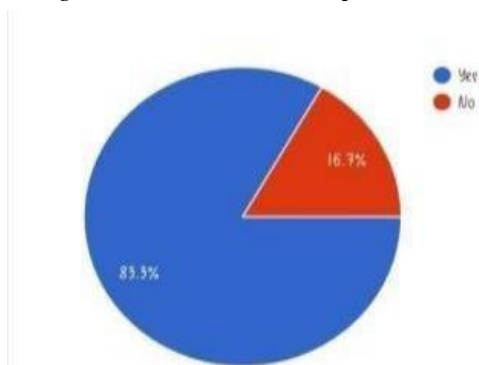
4. Data Collection Method :-

A. Primary data :

The data is collected through Google form by asking 10 questions related to the panvel karjat corridor rail project.

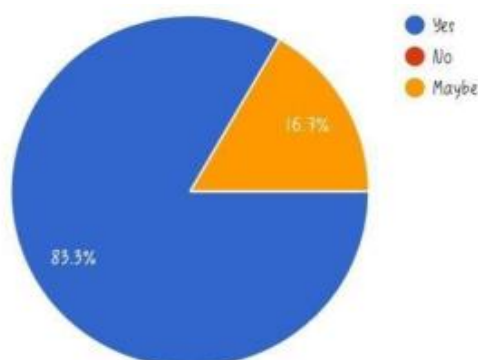
1 . Is there a significant reduction in travel time due to the corridor's development?

Almost 83.3% people have said yes and only 16.7% people have said no so we could assume that yes there is a significant reduction in time travelling due to corridor development



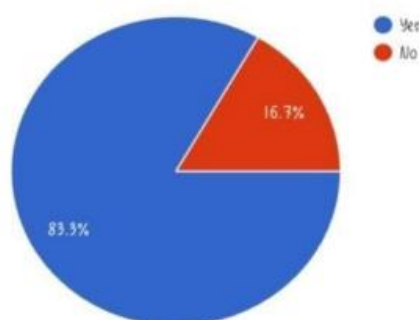
2 . Does the Panvel-Karjat corridor improve connectivity for commuters?

83.3% people had set yes and 16.7 person people have said maybe and there is no answer of no so we could assume that the project improves connectivity for commuters.



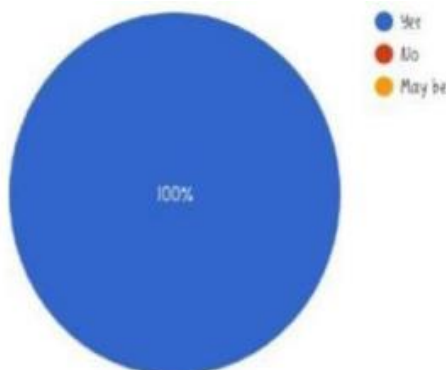
2. *Has the corridor boosted real estate development in the surrounding areas?*

Almost 83.3% people say yes 16.7% people say no so we could assume that yes the corridor boost real estate development in the surrounding areas.



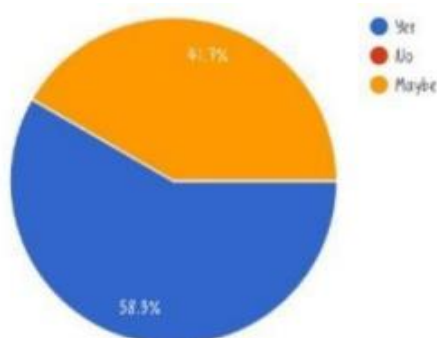
4. *Do local businesses benefit from the improved connectivity ?*

100% people had said yes local business benefits for the improved connectivity .



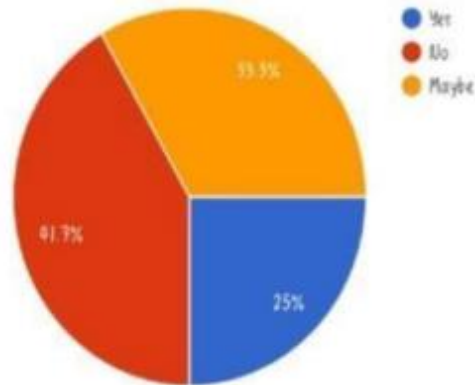
5. *Are there noticeable improvements in the standard of living for local resident?*

Almost 58.3% people had said yes and 41.7% people had said maybe as the project still is in walking condition its fair for people to be confused at this point but till now we can assume that yes there are noticeable improvement in the standard of living for local residence.



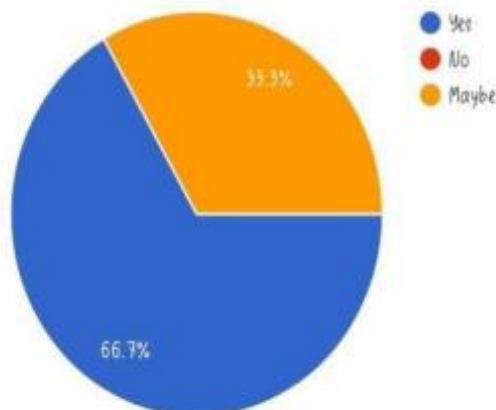
6. *Has the corridor led to a reduction in vehicular pollution ?*

Almost 25% people think yes 33.3 % people think maybe 41.7% people think no



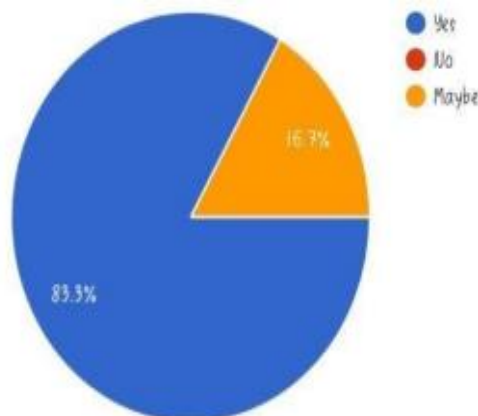
7. *Will the corridor play a key role in the proposed Navi Mumbai International Airport connectivity?*

Almost 66.7% people had said yes and 33.3% people at said no so we could assume that yes the project play a key role in the proposed Navi Mumbai international airport connection .



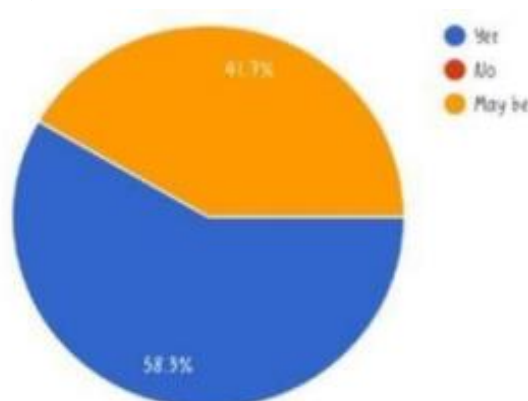
8. *Is the Panvel-Karjat rail corridor expected to reduce travel time between these two points ?*

Almost 83.3% people have said yes and 16.7 people had said maybe so we could assume that yes the Panvel Karjat rail corridor expected to reduce Time travel between these two points .



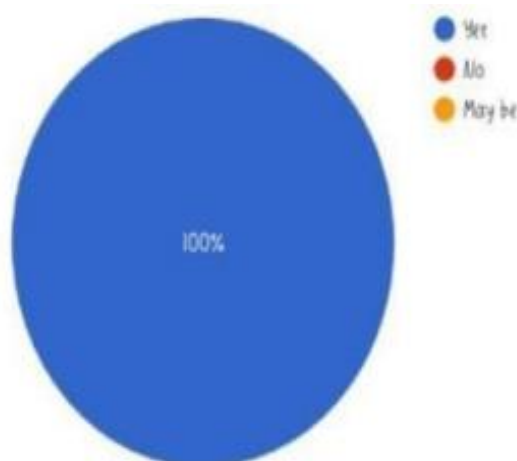
9. Will the rail project reduce travelling cost for daily commutes ?

Almost 58.3% people said yes and 41.7% people said a maybe so we could assume that yes the rail project reduce travelling cost for daily community .



10. Will the project cater to the growing population in the Navi Mumbai area?

100% people have said yes so yes the project will cater to the growing population in the Navi Mumbai area



This is all the primary data given in a pie chart from collected through preparing a Google form and the questions are answered by the student's and the teachers.

B Secondary data :

- Project Documentation: Review official reports, planning documents, feasibility studies, and progress updates related to the Panvel-Karjat Corridor.
- Academic Literature: Analyze existing research on similar rail projects to contextualize findings and identify best practices.
- Media Analysis: Examine news articles, press releases, and social media discourse to understand public discourse and media portrayal of the project.

Limitations :

- Response Bias: Potential for participants to provide socially desirable answers rather than truthful responses.
- Data Availability: Reliance on the accessibility and accuracy of secondary data sources.
- Temporal Constraints: Rapid changes in project status or public opinion may affect the relevance of findings over time.

Conclusion :

This research methodology provides a structured

framework to comprehensively evaluate the Panvel-Karjat Corridor Rail Project. By integrating multiple data sources and analytical techniques, the study aims to deliver actionable insights that can inform future infrastructure projects and policy decisions within the MMR. The Panvel-Karjat rail corridor is more than just another infrastructure project—it's a solution to some of the biggest transportation challenges faced by people in this region. By connecting key areas more efficiently, it promises to make daily commutes easier, faster, and less stressful for thousands of passengers. This project also shows how modern transportation can help balance growth, reduce traffic congestion, and contribute to a greener environment. However, its success will depend on how well it is planned and

executed, with the active involvement of all stakeholders.

In the end, the Panvel-Karjat rail corridor isn't just about building tracks; it's about building a better future for the people who rely on it every day.

Findings / Reference :

1. *Housing* ,
2. *Times of India* ,
3. *Hindustan Times* ,
4. *EI India news* ,
5. *News 18* ,
6. *Project today* ,
7. *Indian express* ,
8. *Free page journal* ,
9. *Wikipedia* .

Cite This Article:

Ms. Pardeshi S.N. & Prof. Khan S.H. (2025). Panvel – Karjat corridor: The ultimate commute Glow-up In Aarhat Multidisciplinary International Education Research Journal: Vol. XIV (Number I, pp. 6–13)