

# Nagpur, India

Partner city

Status of the project: ongoing technical assistance



## Basic Information

Urban area: 217 km<sup>2</sup>

Population: 2,893,000 | Growth rate: 1.5%

GDP per capita: USD 3,000

## Modal Share

Formal public transport: 9.8%<sup>1</sup>

Informal public transport: 26%  
(autorickshaw, minibus, school bus,  
chartered bus etc.)

Walking: 9.5%

Cycling: 6%

Private motorbikes or 2-wheelers: 42.6%

Private cars: 5.7%

National GHG emissions per capita: 2.41 (tCO<sub>2</sub>eq)

Exposure to climate change: HIGH

Region capital city

## Context

Nagpur as known as the Orange city of India, is third largest city in the state of Maharashtra and second capital of the state. It is the seat of annual winter session of the Maharashtra State Vidhan Sabha. Nagpur lies precisely at center of the country with Zero Mile Marker indicating the geographical center of India. It is a major commercial and political centre of the Vidarbha region of Maharashtra.<sup>1</sup>

With nearly 3 million people, Nagpur accounts for 6.5% of the total urban population of the state. The total population of study area, which includes the surrounding towns of Kamptee, Kalmeshwar, Hingna, is 3.6 million in 2020<sup>2</sup>.

Nagpur has been the main center of commerce and is an important trading location. The city is also home to various food manufacturing units. The city is also undertaking the Multi-Model International Passenger and Cargo Hub Airport at Nagpur' (MIHAN) project, which is the biggest economic development project currently underway in India in terms of investments.

Nagpur is one amongst the Indian cities having a Metro Rail System. Majority of commuters currently commute through Buses as the metro project is still undergoing. The share of PT is 9.8%. Informal public transport such as Auto rickshaws however has more share of commuters (26%) and the share of private vehicles is higher compared to public transport and accounts to 50%.

<sup>1</sup> Nagpur Metro Phase 2 DPR

<sup>2</sup> <https://www.macrotrends.net/cities/21347/nagpur/population>

Phase I of Nagpur metro was sanctioned in 2015 and construction began soon after by December 2020, Nagpur metro has started commercial operations at 16 of its station, and also received approval for Phase 2. Nagpur metro has taken initiatives to integrate the metro with other modes, physically through station and area design as well as fare integration through app and Card.

Apart from metro, the city bus services are crucial mode of transport and are run by Nagpur Municipal Corporation (NMC) providing connectivity within the city and nearby suburban areas such as Butibori, Katol, Kalamna etc. NMC recently procured e-buses, and allocated to run under “Tejaswini Scheme” a bus service reserved for woman passengers only. Smart City Corporation of Nagpur (Nagpur Smart and Sustainable City Development Corporation Ltd) is also working to improve transport conditions in the city with various proposals such as PBS, Smart Parking, MLCPs etc. and is working with AFD for preparation of Transition Plan to E-Buses.

A proposal is also sent to Maharashtra Government for establishing Unified Metropolitan Transport Authority (UMTA) in Nagpur and the proposal is under consideration.

As other Municipal Corporations in India, Nagpur Municipal Corporation, the local counterpart, has the mandate and responsibility to finance bus transport infrastructure, whereby it can possibly borrow from international finance sources too. The performance of bus services are monitored and evaluated periodically by Municipal Corporations.

As the ongoing development of a metro will provide a new leap in public transport to counter the negative impact of the increase in private vehicle traffic and provide more sustainable mobility solution for the future, the city also faces significant issues, such as the financial sustainability of the public transport system and the very low walkability of the city which lacks pedestrian infrastructure. Beyond investment and technology, a transformation of mindset and system is required to move beyond the current reliance on individual mobility, for which increased public awareness on the benefits of a more sustainable mobility system will be critical.

Considering last comprehensive mobility plan (CMP) was prepared in 2013 and since CMPs are revised in 10 years, a new CMP may be taken up in coming years. Further mobility needs, patterns and challenges have been changed with introduction of metro in the city. The old CMP did not focus on e-mobility aspect which is gaining traction in last few years.

## Support from the Partnership

**Technical Assistance:** Sustainable Urban Mobility Plan (SUMP)

**Funded by:** European Union

**Funding amount:** EUR 700,000

**Implemented by:** AFD through the MobiliseYourCity India Programme

**Local counterpart:** Nagpur Municipal Corporation via Nagpur Smart and Sustainable City Development Corporation Limited

### Supported Activities:

1. Study of “Transition Plan of Municipal buses to Electric Buses”
2. Creation of a mobility observatory for SUMP project

## Status of implementation

**Project start:** October 2018

**Expected project completion:** Last quarter 2021

### Completed outputs:

- MoU signed - August 2018
- Local Steering Committee meetings were held during November 2019, December 2019, December 2020 and Technical task force committee settled in March 2019
- Training & capacity building workshop - July 2019, December 2019 and February 2020
- Online webinars were conducted during the period of June 2020 – Jan 2021

### Next expected outputs:

- The final report of Priority project “Transition Planning of municipal bus fleet upgrade (Diesel to Electric Buses)” study is in process;
- SUMP-Mobility database

## Core impact indicators baselines

Indicator	Baseline – N /A
<b>Total annual transport related GHG emissions</b> (Mt CO <sub>2</sub> eq)	507,300 Mt CO <sub>2</sub> eq <sup>3</sup>
<b>Annual transport related GHG emissions per capita</b> (kg CO <sub>2</sub> eq)	197 kg CO <sub>2</sub> eq / capita
<b>Air pollution</b> Mean urban air pollution of particulate matter (in µg PM2.5) at road-based monitoring stations	49.2 µg/m <sup>3</sup> of PM2.5 <sup>4</sup>
<b>Road safety</b> Annual traffic fatalities in the urban area, per 100,000 inhabitants	10 fatalities / 100,000 hab
<b>Affordability of public transport</b> Percentage of disposable household income spent on public transport for the second quintile household income group	12% <sup>5</sup>

<sup>3</sup> Working paper 1.5o C Alignment for Indian Cities: Case Study of Nagpur

<sup>4</sup> <https://www.iqair.com/us/india/maharashtra/nagpur>

<sup>5</sup> CMP Nagpur 2013

## Highlights in the past year

Due to Covid-19 pandemic situation and lockdown restriction imposed nationwide, the progress of the project in 2020 has been strongly negatively affected. Nagpur Municipal Corporation, which the local counterpart, was responsible for responding to this health crisis. Visits and meetings originally planned for furthering the MobiliseYourCity India Programme were also delayed. Online and virtual meetings, webinars and presentations have been conducted with counterparts when possible.

One study and one pilot that were identified as priorities for Nagpur during the MobilizeDays held in 2019, are progressing:

- “Transition Planning of Municipal Bus Fleet Upgrade (Diesel to Electric Buses)”: The kick-off meeting to prepare the study on was conducted in January 2020 and the study progressed well despite restrictions due to pandemic. Nagpur Smart and Sustainable City Development Corporation Limited (NSSCDCL) endorsed the deliverables submitted by the consultant for 4 tasks out of 6. The study is supposed to be finalized by the middle of 2021;
- Mobility Observatory-MRV system for Nagpur: To create synergy between 3 indian MYC cities, creation of Mobility Observatory in Nagpur & Kochi have been included along with SUMP preparation study for Ahmedabad. TOR has been launched in June and November 2020 and the consultant will be on board in T1 2021.

### **Two MYC participatory events took place in Nagpur in 2020:**

- 3rd training- ‘Road Safety- Creating Cities Safer by Design’ was undertaken on 17th Feb 2020;
- 3rd LSC meeting held online, on 4<sup>th</sup> Dec 2020.