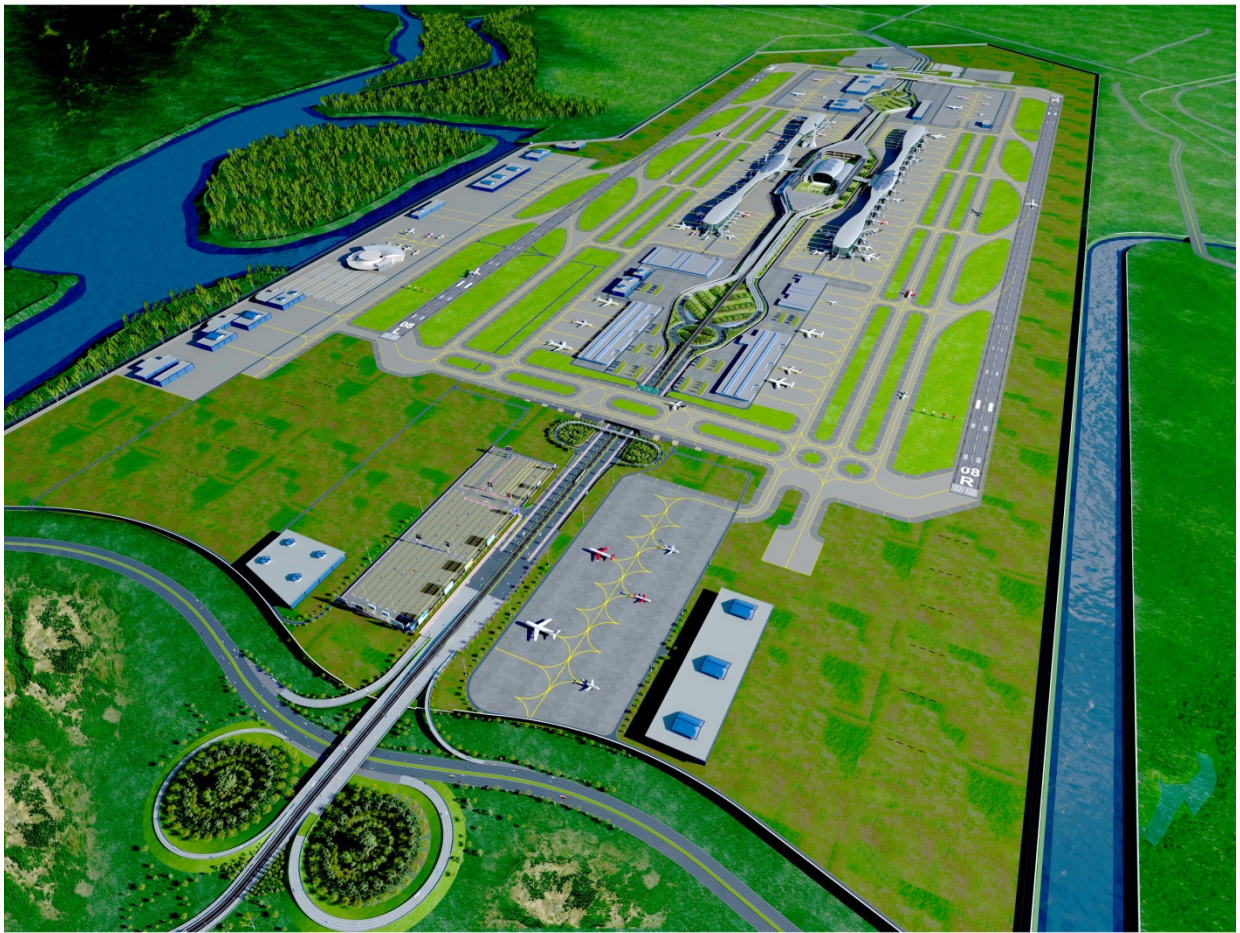


**DEVELOPMENT OF  
NAVI MUMBAI INTERNATIONAL AIRPORT (NMIA)  
MAHARASHTRA, INDIA  
ON PUBLIC PRIVATE PARTNERSHIP (PPP)  
PROJECT INFORMATION MEMORANDUM**



**TRANSPORTATION AND COMMUNICATION PLANNING DEPARTMENT,  
CIDCO LTD., C.B.D. BELAPUR, NAVI MUMBAI**

**FEBRUARY 2014**

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**GLOSSARY**

<b>AAI</b>	Airports Authority of India
<b>AERA</b>	Airports Economic Regulatory Authority
<b>DBFOT</b>	Design, Build, Finance, Operate and Transfer
<b>DGCA</b>	Directorate General of Civil Aviation
<b>DFC</b>	Dedicated Freight Corridor
<b>DMIC</b>	Delhi Mumbai Industrial Corridor
<b>DPR</b>	Detailed Project Report
<b>CAGR</b>	Compound Annual Growth rate
<b>CIDCO</b>	City and Industrial Development Corporation of Maharashtra Ltd.
<b>CSIA</b>	Chhatrapati Shivaji International Airport
<b>Crore</b>	10 million (10,000,000)
<b>CRZ</b>	Coastal Regulation Zone
<b>EHVT</b>	Extra High Voltage Transmission
<b>FDI</b>	Foreign Direct Investment
<b>GDP</b>	Gross Domestic Product
<b>GOI</b>	Government of India
<b>GOM</b>	Government of Maharashtra
<b>GSDP</b>	Gross State Domestic Product
<b>ICAO</b>	International Civil Aviation Organisation
<b>INR or Rs</b>	Indian Rupee
<b>IT/ITES</b>	Information Technology/Information Technology Enabled Service
<b>JNPT</b>	Jawaharlal Nehru Port Trust
<b>Km</b>	Kilometre
<b>KNT</b>	Khopta New Town
<b>MIAL</b>	Mumbai International Airport Private Limited
<b>MLD</b>	Million litres per day



<b>MMC</b>	Multi Modal Corridor
<b>MMRDA</b>	Mumbai Metropolitan Region Development Authority
<b>MMR</b>	Mumbai Metropolitan Region
<b>Mn.</b>	Million
<b>MoCA</b>	Ministry of Civil Aviation
<b>MoEF</b>	Ministry of Environment and Forests
<b>MoD</b>	Ministry of Defence
<b>MPPA</b>	million passengers per annum
<b>MRO</b>	Maintenance Repair and Overhaul
<b>MSEDCL</b>	Maharashtra State Electricity Distribution Company Ltd.
<b>MTHL</b>	Mumbai Trans Harbour Link
<b>NAINA</b>	Navi Mumbai Airport Influence Notified Area
<b>NMIA</b>	Navi Mumbai International Airport
<b>NMMC</b>	Navi Mumbai Municipal Corporation
<b>PAP</b>	Project Affected Person
<b>PIM</b>	Project Information Memorandum
<b>PPP</b>	Public Private Partnership
<b>RFQ</b>	Request for Qualification
<b>RFP</b>	Request for Proposal
<b>ROW</b>	Right of Way
<b>R&amp;R</b>	Resettlement and Rehabilitation
<b>SEZ</b>	Special Economic Zone
<b>Sq. m</b>	Square metre
<b>Sq. km</b>	Square Kilometre
<b>SPA</b>	Special Planning Authority
<b>SPV</b>	Special Purpose Vehicle
<b>TEU</b>	Twenty-Foot Equivalent Unit

## **Project Information Memorandum**

### **1. Introduction**

The NMIA is a project of national importance besides being a flagship project of the GOM. It is one of largest greenfield international airports proposed for development in the world. The PIM is a succinct compendium about the project which includes, inter alia, information about the aviation sector in India, more specifically in the metro cities. Further it provides the demographic and socio-economic highlights of MMR and an overview of CIDCO - the project proponent for NMIA. The project background, its location, salient features of the master plan, availability of basic services like water supply, power and Airport ground access are also described. Details of the proposed project structure, clearances and approvals received, airport related pre-development works and links to related websites are also included in the PIM.

### **2. Aviation Sector in India**

Aviation in India has been transformed from an over regulated and under managed sector to a more open, liberal and investment friendly sector since 2004. Entry of private airlines including low cost carriers due to the open skies policy of the GOI, increased urbanisation and a growing middle class population with higher disposable house hold incomes, strong and sustained economic growth in the country, increased FDI inflows, surging tourist inflows, increased cargo movement, sustained business growth and supporting government policies are the major drivers for the growth of aviation sector in India. The airport sector has been one of the most dynamic spheres of investment in recent times. This sector has witnessed a shift from being a completely government owned sector to a PPP framework by privatisation of the major metro airports of Delhi, Mumbai, Hyderabad and Bangalore by the AAI. The Greenfield Airports Policy of the GOI gave further impetus to the development of greenfield airports by state governments. The important Acts and policies concerned with regulation and development of Airports in India are the Aircraft Act 1934, the Greenfield Airports Policy, 2008 of the MoCA, and the Airports Economic Regulatory Authority (AERA) Act, 2008. The MoCA and the DGCA, GOI are the nodal departments involved in the policy making and regulation of the civil aviation sector in India.

The passenger traffic in India is growing at a healthy rate mainly due to the economic boom witnessed in the country in the recent past and the resultant increase in the propensity for air travel both domestic and international. Domestic air traffic evaluated for a time frame of twenty years (from 1990-91 to 2010-11) suggests that it grew at an annual average rate of 10.4%, During the same period, international passenger traffic grew at 9.4% and total passenger traffic at 9.9%. Overall air traffic is set to grow at an annual average growth rate of 10.1% in the next two decades. (2010-11 to 2030-31). The MoCA, forecast for 2031-32 suggests that domestic air passengers to be

carried in India will be 448 million and international passengers will be 237 million (excluding transit passengers). The air cargo industry witnessed an annual average growth rate of 8.6% during the twenty year period from 1990-91 to 2010-11. Cargo traffic is estimated to grow at a CAGR of approximately 10-11% till the period 2031-32.

The passenger air traffic in the country is mainly shared between the 6 international gateway airports situated in the metropolitan cities of Delhi, Mumbai, Hyderabad, Bengaluru, Chennai and Kolkata. These airports together handled about 68% of the total passengers handled by all airports in India including 65% of the domestic traffic and 75% of the international traffic in the year 2012-13. The Mumbai airport alone accounted for 28% of the total passenger traffic at the 6 metro airports and 19% of India's airport passenger throughput in 2012-13. It handled 27% of the domestic traffic and 31% of the international traffic of the 6 major gateway airports mentioned above, last year. Thus, the Mumbai Region has a major influence on the aviation sector of the country as reflected by the major share of the country's passenger throughput handled by the city's airport.

### **3. Mumbai Metropolitan Region (MMR) and Navi Mumbai**

**3.1 Mumbai Metropolitan Region:** The MMR, an area of about 4355 Sq. km, encompassing the entire city of Mumbai and parts of Thane and Raigad districts, stretches from Virar in the north to Pen & Alibag in the south and from Mumbai city in the west to Kasara & Khopoli in the east. It consists of about 20 urban local bodies which include the municipal corporations of Greater Mumbai, Thane and Navi Mumbai. A little more than half the land in Greater Mumbai (52%) is built-up followed by the Navi Mumbai Region (11%). The percentage of industrial land is maximum in Navi Mumbai (12.2%) followed by Greater Mumbai (5%). The map of MMR is shown in **Fig. 1**.

The MMR, which includes the cities of Mumbai, Navi Mumbai, Thane, Kalyan - Dombivli, Vasai - Virar and Alibag, is one of the most densely populated urban regions in the world. The population of MMR as per the 2011 Census of India is about 22 million with an employment of 9.5 million. The projected population and employment for the MMR region is expected to be about 34 million and 15 million respectively for the year 2031. At the heart of MMR is Mumbai city, also known as "the *Maximum City*" or "*the City that never sleeps*", the commercial and entertainment capital of India. It is also one of the world's top 10 centres of commerce in terms of global financial flow, generating 5.5 % of India's GDP and accounting for 25% of industrial output, 70% of maritime trade in India (Mumbai Port Trust & JNPT) and 70% of capital transactions to India's economy. The city houses important financial institutions such as the Reserve Bank of India, the Bombay Stock Exchange, the National Stock Exchange of India, the Securities and Exchange Board of India (SEBI) and the corporate headquarters of numerous Indian companies and multinational corporations. Mumbai (also termed as Greater Mumbai or the island city) is the highest contributor to India's income tax and corporate tax revenues. The Mumbai Stock Exchange and the National Stock exchange which together account for over 92% of the total turnover of the stock exchanges are located at Mumbai. It is also home to some of India's premier scientific and atomic research institutes like Bhabha Atomic Research Centre (BARC), Nuclear Power Corporation Limited

(NPCL), Indian Rare Earths Limited (IREL), Tata Institute of Fundamental Research (TIFR), Atomic Energy Regulatory Board (AERB), and the Department of Atomic Energy. The city also houses India's Hindi (Bollywood) and Marathi film and television industry. MMR contributes about 40% to the GSDP of Maharashtra state. Thus historically, Mumbai city and the region have been driving economic growth of not only the state of Maharashtra but of the country as a whole.

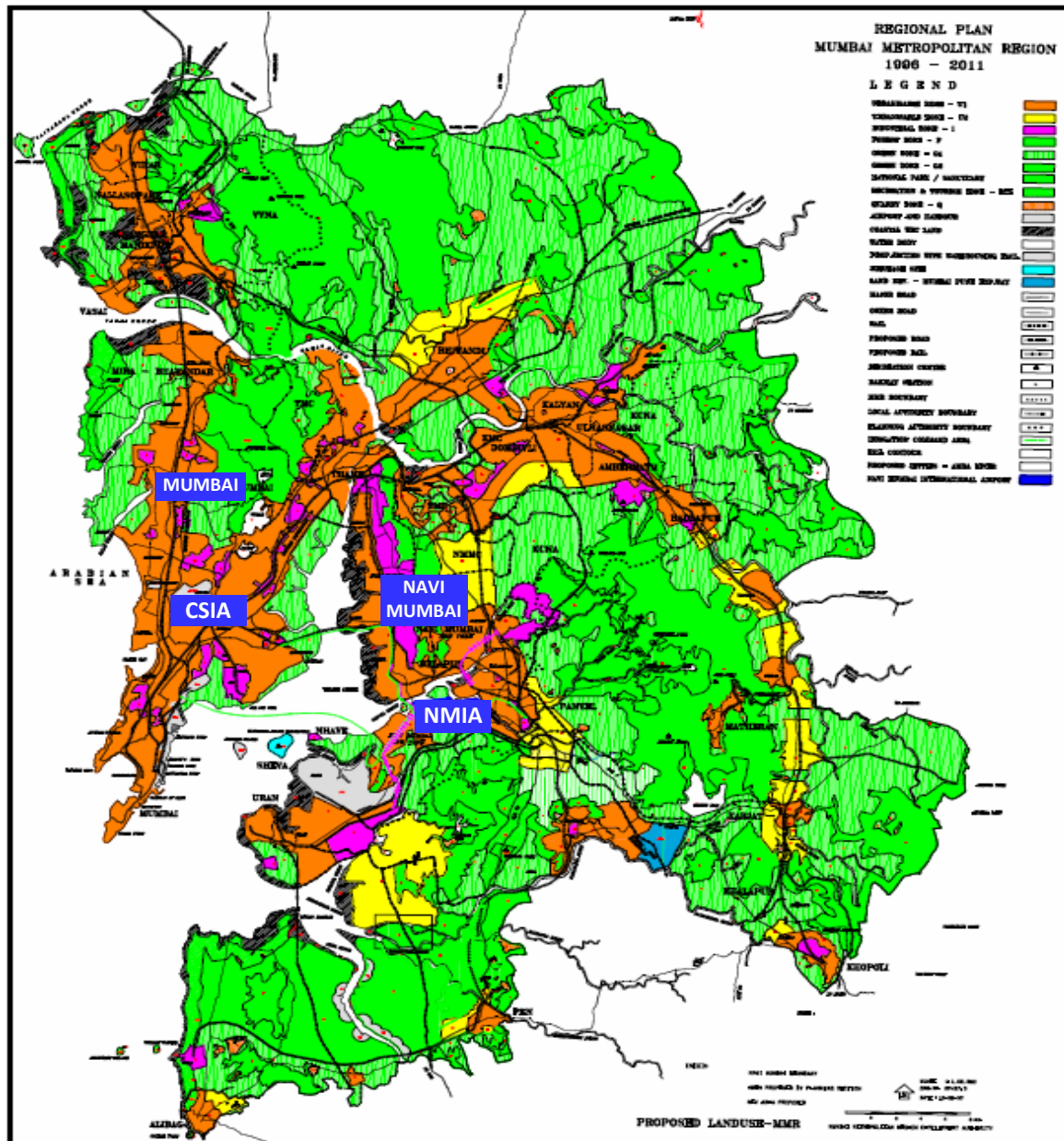
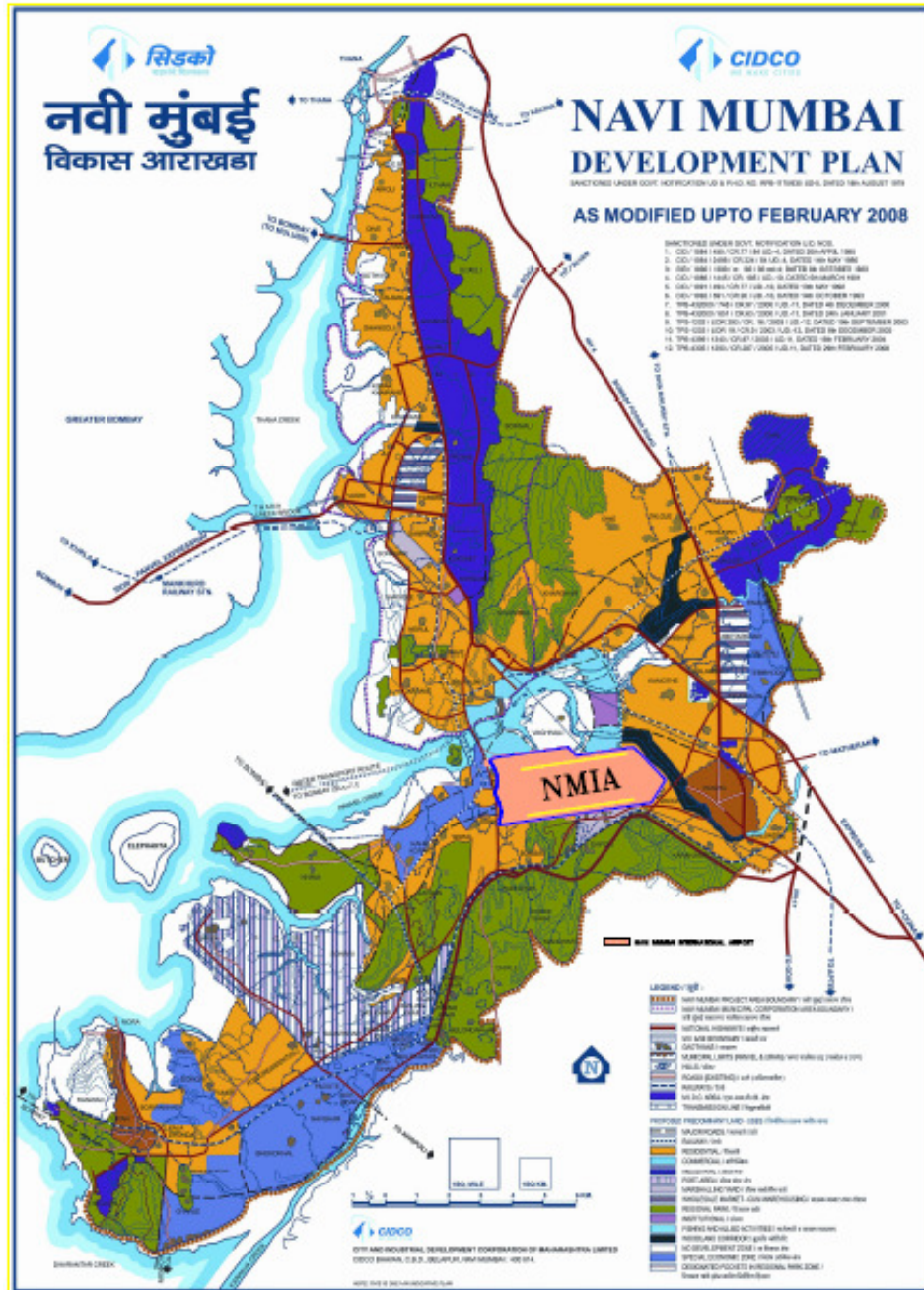


Fig. 1: MMR, Mumbai & Navi Mumbai



**3.2 Navi Mumbai – A World Class City:** Navi Mumbai, located on the eastern trans-harbour of Mumbai covering an area of about 344 Sq. km, is one of the largest planned cities in the world with excellent infrastructure to match the current and future needs of its citizens. The city is composed of 14 small townships, known as nodes, strung along mass transport corridors that effectively serve civic needs of the population. The city provides direct access to all parts of India through road and rail. The Navi Mumbai development plan is shown in **Fig. 2**.



**Fig. 2 Navi Mumbai Development Plan**



The population of the city as per the 2011 census is about 1.9 million and has an employment of about 1.0 million. The projected population and employment figures for 2031 are 4.26 million and 2.32 million respectively. Navi Mumbai is increasingly contributing to the economic growth and prosperity of MMR. The major business hubs in the city are CBD Belapur, Vashi, Nerul, and Mahape. Most of the major software companies in India have their offices in Navi Mumbai. The Government of Maharashtra has set up software parks in Navi Mumbai to cater to this growing demand. The International Infotech Parks at the Vashi and Belapur railway station complexes house many international IT companies. The New Millennium City near Mahape forms a major part of the Knowledge Corridor that spans Mumbai and Pune. Many large institutions both in the Government and private sector have their offices in Navi Mumbai.

As a part of long-term planning, major commodity markets have begun moving from the heart of Mumbai city to Navi Mumbai. Kalamboli (a node in Navi Mumbai) is home to a major steel market. Vashi has Asia's largest fresh fruits and vegetables market, spread over a sprawling 122 hectares, and is the entry point of all food grains and vegetables meant for the extended region of Metropolitan Mumbai. One of the important business landmarks is the shipping port of Jawaharlal Nehru Port in the Nhava Sheva – Dronagiri nodes. The Jawaharlal Nehru Port, ranked 24th among top 100 container ports in the world, handles about 60% of total containers handled by all major ports in India. The port is poised to handle 10 million TEUs of containers by the year 2015-16. JNPT is setting up a Rs. 8,000 Crore fourth container terminal through PPP which is expected to be awarded shortly. The Navi Mumbai SEZ located in the nodes of Dronagiri, Ulwe and Kalamboli is expected to boost commercial growth and employment opportunities in the city. The Thane - Turbhe and the Taloja industrial belts comprise highly sophisticated manufacturing and IT/ITES industries.

**3.2.1 MICE (Meetings, Incentives, Conferences, and Exhibitions) Tourism:** Navi Mumbai has all necessary infrastructure facilities to support MICE tourism. The city has large integrated conference and exhibition centres, auditoria, world class hotels and hospitality facilities, state-of-the-art IT/ITES support services, excellent transportation infrastructure providing seamless and fast connectivity, excellent recreation and relaxation facilities like the 18 hole international standard golf course spread over an area of 103 hectare, large green areas like the Kharghar central park developed on a 200 acre plot on the lines of central park in New York and Hyde Park of London, with jogging tracks, walkways, a stadium, amusement park, sports complex, clubs, botanical garden, recreation garden and much more. About 45% land in the city is reserved for green zones and open-to-sky activities. A science park is also proposed for development on a 20 acre plot. Navi Mumbai has excellent healthcare facilities in every node and is also an established educational hub. Availability of ample and reasonably priced commercial and residential real estate makes the setting up of businesses and the promotion of MICE tourism very convenient and an attractive proposition in Navi Mumbai.

**3.2.2 Proposed Mega Economic Growth Centres:** A number of committed mega economic growth centres are in the planning stage in and around Navi Mumbai. They are the Navi Mumbai SEZ, the Airport Business and Logistics Support Park, the 600 Sq. km Navi Mumbai Airport Influence Notified Area (NAINA) and the Delhi – Mumbai Industrial Corridor (DMIC). Industrial corridors along the expressways linking Mumbai with the metro cities of Pune and Nashik are also under development. The Navi Mumbai SEZ is a special duty-free enclave designed in accordance with the global economic policies to promote foreign investment and will greatly enhance economic activities in the region and the Airport Business and Logistics Support Parks are specially designated areas around the proposed Navi Mumbai airport catering to all kinds of aviation support activities. These proposed growth centres are expected to provide a further fillip to the economic and overall growth prospects of MMR.

The DMIC is India's most ambitious Infrastructure programme aiming to develop new industrial cities as "Smart Cities", along the Mumbai – Delhi Dedicated Freight Corridor (DFC) which end points at Dadri in the National Capital Region of Delhi and JNPT at Navi Mumbai. The extent of influence is about 150 km on either side of the DFC alignment. The area of influence of the DMIC in Maharashtra is around 56,000 Sq. km, most of which is in and around MMR. The timeline for development of the first phase of seven new industrial cities, of the size and scale of Singapore, is 2019.

### **3.2.3 NAINA and KNT**

CIDCO has been appointed as SPA for NAINA comprising approx. 600 Sq. km area of Thane and Raigad districts and Khopta New Town (KNT), encompassing over 93 Sq. km. area. Both the towns are neighbouring Mumbai and Navi Mumbai; and are within MMR. In anticipation of the NMIA project, it is proposed to develop these two areas in a planned, environmentally sustainable manner. The major transportation links passing through NAINA include National Highways (4, 17), State Highways (54), Mumbai - Pune Expressway, Mumbai - Goa and Mumbai - Karjat - Pune Rail link. As the SPA, CIDCO has to plan, control and regulate the development in the project area. In order to have an integrated development both in NAINA and KNT, CIDCO has commenced the preparation of a comprehensive plan for the entire area; formulate planning and development strategies and the preparation of a draft development plan through a reputed international urban and regional planning Consultant. The map of NAINA and KNT area is shown in **Fig. 3**.

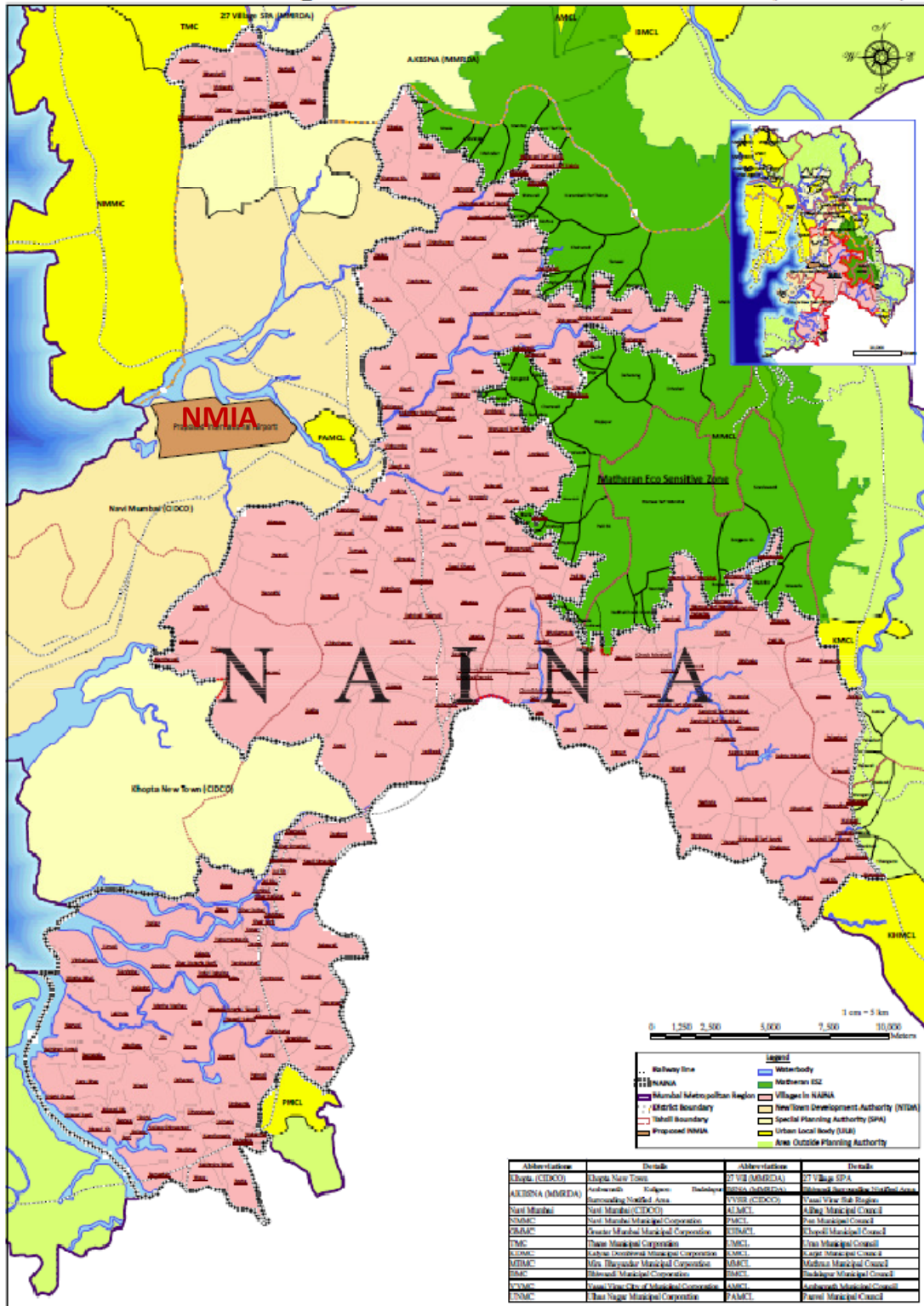


Fig. 3 NAINA & KNT

#### **4. CIDCO – An Overview**

CIDCO, a wholly owned Company of the GOM, was set up in 1970 as a New Town Planning and Development Authority with a mandate to decongest the megapolis of Mumbai, by creating the satellite city of Navi Mumbai. CIDCO is a multi faceted and multi disciplinary organization with strong in house capabilities required for the planning and development of modern cities of the 21st century like Navi Mumbai. The corporation is controlled by its highest body of management - the Board of Directors - appointed by the State Government and the day-to-day management is looked after by the Vice Chairman and Managing Director supported with a team consisting of Joint Managing Director, Chief Administrator (New Towns) and Heads of various departments like urban and transportation planning, engineering, finance, marketing, estate, economics, social services, horticulture, etc. CIDCO's corporate mission is to plan and create environment friendly model urban settlements with full fledged physical and social infrastructure to meet residential, commercial and industrial needs of the population at present and in the years to come. CIDCO's philosophy has ensured that Navi Mumbai is self-sufficient in each and every aspect through the formation of self-sufficient nodes and thus making the city a world-class model for planned development. Following the Navi Mumbai success story, CIDCO's expertise is unsurprisingly sought out for development of other cities as well. CIDCO has so far commissioned projects in New Aurangabad, Waluj, New Nashik, New Nanded, Sindhudurg district headquarters Oros, Vasai-Virar and Meghdoot City (New Nagpur) in Maharashtra. CIDCO is also actively taking consultancy assignments for New City Development Projects in other states of India. Affirming CIDCO's overall capability in the planning and development of world class cities and transport infrastructure, the GOM has mandated CIDCO as the project proponent and nodal agency for NMIA. More details on CIDCO and its achievements can be obtained from the website [www.cidco.maharashtra.gov.in](http://www.cidco.maharashtra.gov.in)

#### **5. Project Background and Airport Master Plan**

The Chhatrapati Shivaji International Airport (CSIA) in Mumbai is one of the two largest gateway airports in India alongwith the Indira Gandhi International Airport at New Delhi. The airport handled over 30 million passengers and 635,000 tonnes of cargo in the year 2012-13. The airport is the 2<sup>nd</sup> largest in India in terms of passenger throughput and the largest in terms of cargo handled.

The Airport was privatised in the year 2006 through grant of a long term lease to the MIAL by the AAI. The CSIA is presently being modernised and expected to cater to about 40 million passengers per annum.

The air traffic forecast for the MMR carried out by CIDCO, by developing an econometric model through its Prime Consultant M/s Louis Berger Group (LBG), Inc USA, states that the demand will exceed 40 million passengers by the year 2017 and will exceed 100 million by the year 2030. The present day air trips per capita in MMR is 1.4 which is expected to triple by 2030, due to the economic growth in the region and the resultant rise in the disposable income levels of the population. Due to constraints to capacity expansion at CSIA to meet this future air travel demand of MMR, the MoCA approved the development of a greenfield international airport for the region, as proposed by CIDCO, at Navi Mumbai.

The proposed Airport is situated in the geographical centre of Navi Mumbai, at latitude 18° 59' 40" N and longitude 73° 04' 13" E on the National Highway No. 4B near Panvel at a distance of approx. 35 km from the existing CSIA.

The **Fig. 4** shows the location of NMIA along with the location of CSIA.

As part of the planning process, CIDCO has through a reputed international consultant; M/s LBG, prepared the Master Plan for NMIA. The Navi Mumbai International Airport is envisaged to be state-of-the-art, with modular facilities for both domestic and international passengers and cargo capacity to accommodate the projected demand throughout the planning period. The airport will accommodate two parallel runways for simultaneous and independent operations with provisions for full length parallel taxiways and conform to ICAO Aerodrome Code 4F.

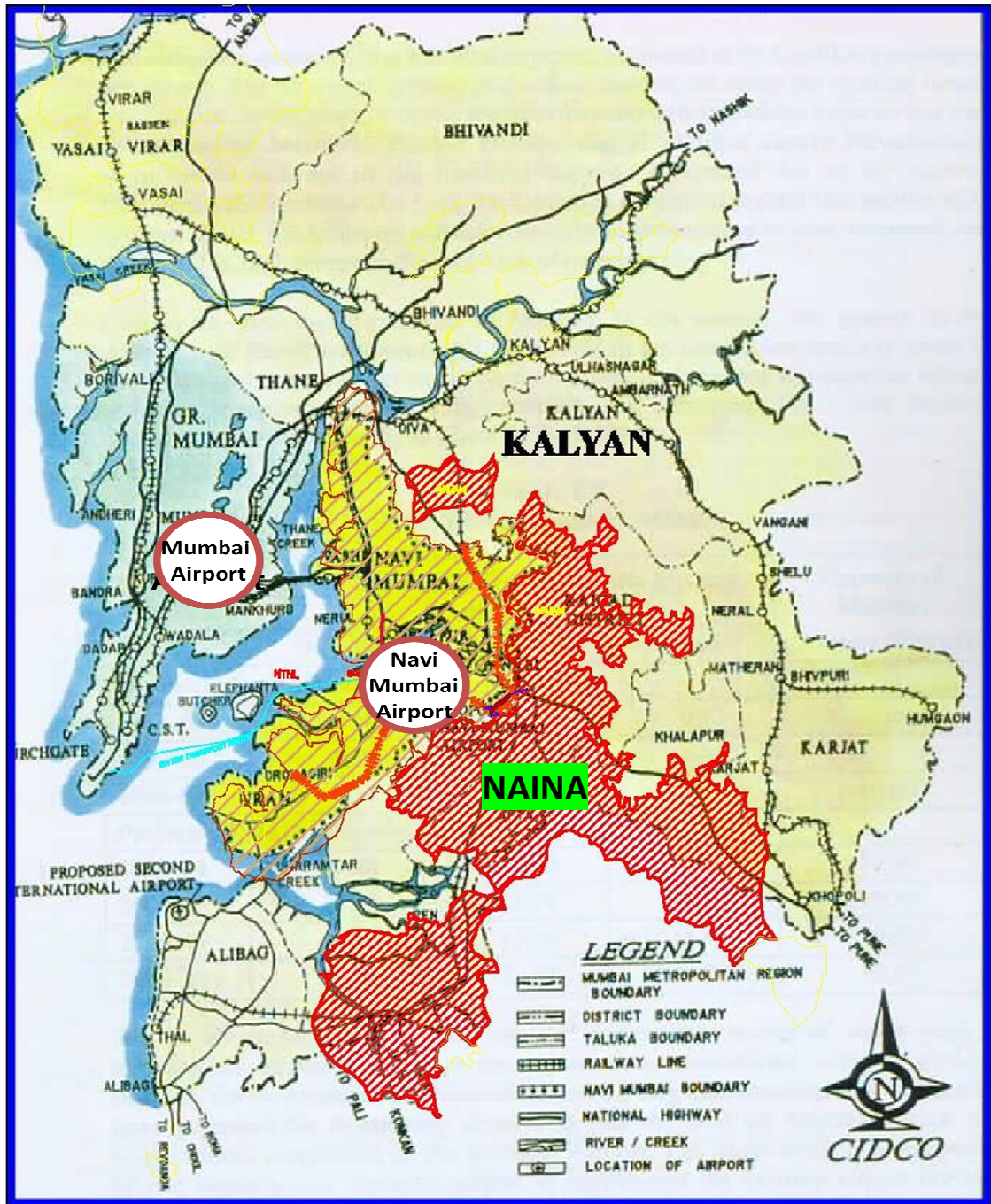
The project is proposed to be developed over an area of 1160 hectares in four phases as indicated in the **Table 1**.

**Table 1: Proposed Airport Development Phases**

<b>Proposed Development Phase</b>	<b>Airport Capacity (MPPA*)</b>
I	10
II	25
III	45
IV	60

\* million passengers per annum





**Fig. 4: Airport Locations in Mumbai Metropolitan Region**

The master plan for NMIA provides for the development of a full-scale passenger terminal building of 10 MPPA and a low-cost carrier terminal of 2 MPPA in Phase I.

Further, the Airport has been designed to accommodate the various requirements that bulk cargo loading and un-loading would require. The airport will have a cargo handling capacity of 1.5 million tonnes with parking stands for about 20 wide-body aircrafts. The ultimate apron area for cargo, both domestic and international, would be around 2,00,000 Sq. m. Enhanced aviation facilities, particularly, for Cargo, will open up vast opportunities for export of agriculture produce, flowers & ornamental plants and high tech – high value products from MMR and the nearby areas. The presence of NMIA at its doorstep would make the export/import of time sensitive cargo from the proposed Navi Mumbai Special Economic Zone economical, efficient and fast thereby boosting cargo volumes. Availability of dedicated logistic and cargo support services in the airport vicinity is expected to attract large volumes of business to NMIA.

The airport is expected to be made operational in 2017. The airport facilities proposed for development in each phase as per the master plan are given in **Table 2**:

**Table 2: Proposed Phasewise Airport Facilities Development**

Sr. No.	Facility	Phase I	Phase II	Phase III	Phase IV
		Area/ No.	Area/ No.	Area/ No.	Area/ No.
1.	Runway	North (08L – 026R)	South (08R- 026L)	—	—
2.	Taxiway	North Parallel Taxiway	South Parallel Taxiway	—	—
3.	Comm. Apron	2,85,923 Sq. m	1,23,617 Sq. m	3,47,331 Sq. m	1,90,842 Sq. m
4.	Passenger Terminal	1,15,000 Sq. m	1,15,000 Sq. m	1,50,000 Sq. m	1,10,500 Sq. m
5.	Contact Gates	20 Nos.	20 Nos.	33 Nos.	5 Nos.
6.	Remote Stands	5 Nos.	6 Nos.	10 Nos.	8 Nos.
7.	Low Cost Carrier Terminal (LCCT)	34,500 Sq. m	—	—	—
8.	LCCT Apron Area	44,717 Sq. m	22,683 Sq. m	—	—
9.	LCCT Aircraft Positions (ICAO Code “C”)	7	3	—	—
10.	General Aviation Apron	23,340 Sq. m	—	9,010 Sq. m	—
11.	Air Traffic Control Tower (ATCT)	√	—	—	—
12.	Cargo Complex	37,580 Sq. m	20,750 Sq. m	71,844 Sq. m	71,407 Sq. m

**Fig. 5** shows the proposed master plan of the airport in the final phase.



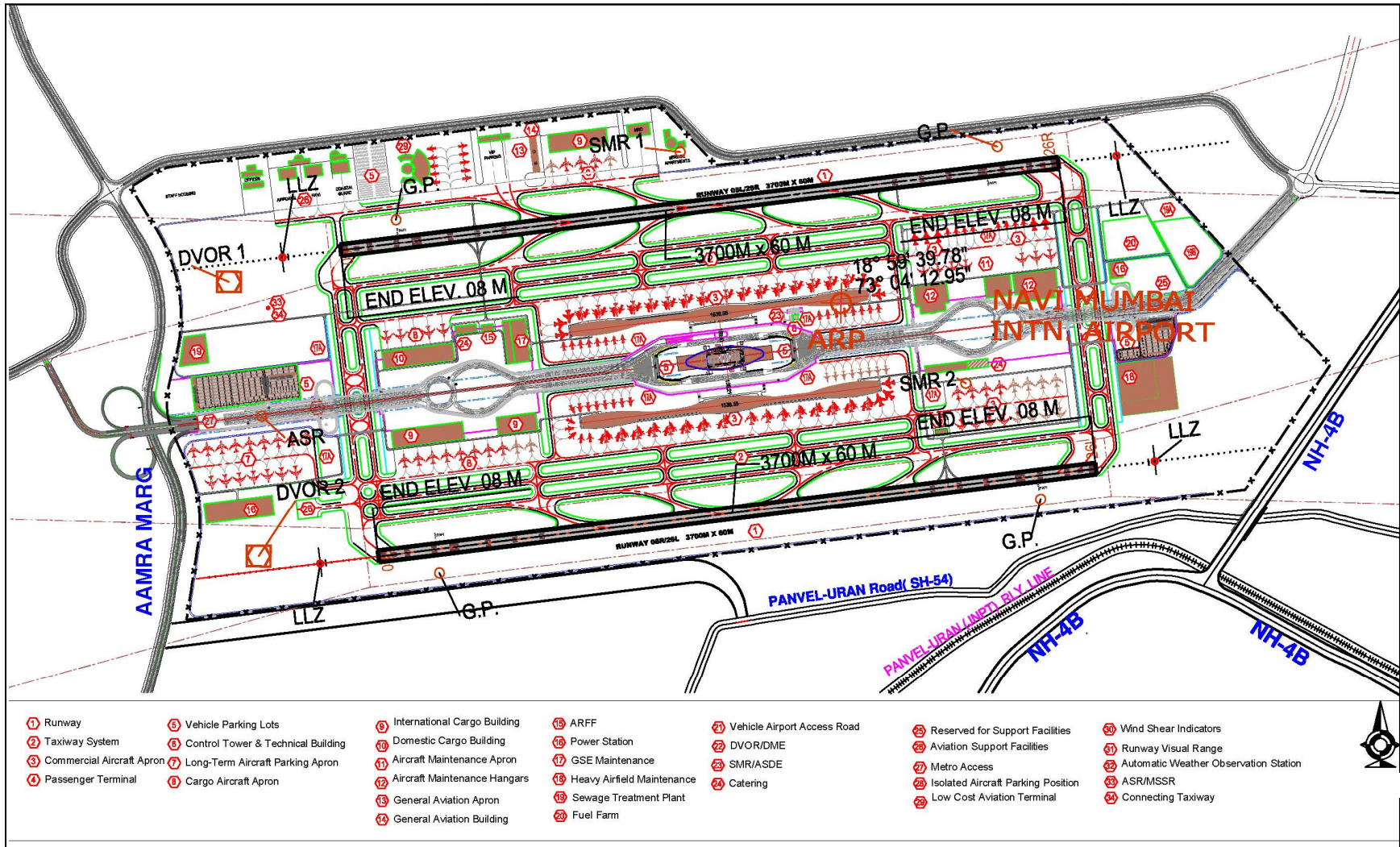


Fig. 5: NMI Master Plan – Ultimate

## **6. Essential Services and Infrastructure**

The city of Navi Mumbai has been planned by CIDCO with adequate basic infrastructure facilities to cater to the present and future development needs. Adequate sources of electricity and water supply have been developed to ensure uninterrupted 24x7 supply with adequate backup. The city has a well developed and extensive sewer and storm water drainage system alongwith sophisticated facilities for treatment of sewage and solid waste disposal. The NMIA is expected to be developed phase wise over a 20 year period and adequate provisions have been made to meet the water supply and power requirements of the airport at all times during its service life.

**6.1 Water:** The CIDCO developed Hetawane Water Supply project, with a capacity to provide 185 MLD of water, is the major source of water supply to Navi Mumbai at present. Other sources of water include – the Maharashtra Industrial Development Corporation (MIDC) (100 MLD), Maharashtra Jeevan Pradhikaran (MJP) (65 MLD) and the Morbe dam developed by the NMMC which has an installed capacity of 450 MLD. CIDCO is also developing the Balganga water supply project with an capacity of 250 MLD to supply water to CIDCO areas which shall be available by 2014. Thus, it shall be ensured that the water supply requirements of the airport zone shall be fulfilled from the existing and proposed water supply sources through the pipe network running along the airport boundaries.

**6.2 Power:** The main power supply source for NMIA can be availed from MSEDCL. The company has their electrical infrastructure in the area and can provide the required power reliably to all the new airport facilities. Government policies allow purchase of power from any agency based on a power purchase agreement.

**6.3 Airport Accessibility:** Efficient, fast and reliable multi- modal transport linkages form the backbone for successful development and operations of any major traffic generator like the Airport. The multi-modal transport connectivity has been planned in such a way that any person should be able to access the airport within a reasonable time span.

The site is presently accessible by road through the 4 lane National Highway NH4B from the east and the 4 lane major arterial concrete road namely Aamra Marg, from the west. The main connectivity to Navi Mumbai from Mumbai is the Sion - Panvel expressway which is also being widened to 10 lanes, thereby providing accessibility to the airport site of the highest order. Connectivity to the airport is also available through the existing suburban rail lines in the vicinity. The existing Mankhurd - Belapur - Panvel and Thane – Panvel commuter rail corridors provide access to the airport from Khandeshwar Railway Station and the Nerul - Uran Railway line presently under development shall provide access to the airport from the Targhar Railway Station. The Metro Rail access to the Airport from Mumbai is planned to be provided from the west side of the airport. The existing road and rail network in the vicinity of NMIA is shown in **Fig. 6**.







The new expressway projects proposed for implementation are the Vasai to Alibaug Multi Modal Corridor (MMC) which provides connectivity to the outer fringes of MMR with NMIA (DPR is being prepared by the MMRDA) and the Mumbai Trans-Harbour Link (MTHL), also an MMRDA project, from Sewri to Nhava which provides connectivity to the business hubs of South, Central & Western parts of Mumbai with NMIA. CIDCO is providing a coastal road with 60 metre ROW for connecting the MTHL with NMIA and thus providing a direct access to the Airport.

New Transit Corridors (Metro & Suburban Rail) are also being proposed to cater to the demand during the later phases of the Airport development. They are the fast suburban corridor on harbour line from Chhatrapati Shivaji Terminus (CST) to Panvel for which the Mumbai Rail Vikas Corporation (MRVCL) is the nodal agency & is presently preparing the DPR. CIDCO has planned the first metro system in Navi Mumbai on the Belapur – Kharghar – Pendhar – Taloja - Khandeshwar route with a connection to NMIA. The Phase 1 of the project from Belapur to Pendhar is under implementation and is expected to be operational by 2015.

Passenger Water Transport (PWT) by Hovercrafts is also being considered. Water transport projects on the east and west coasts of Mumbai are being implemented by the Maharashtra State Road Development Corporation (MSRDC) with a terminal at Nerul in Navi Mumbai.

More details on the connectivity projects are available on the websites of the concerned implementing authorities provided under **Section 10**. The airport connectivity projects are being planned for implementation in phases and dovetailed with the airport development requirements.

**6.4 Pre-development Works:** The project involves pre-development activities to be co-ordinated with the Airport development works. They include land development by blasting of hills in the project area, filling / reclamation of the airport area, re-coursing of the Ulwe river flowing through the airport site and shifting of the Extra High Voltage Transmission (EHVT) lines crossing airport land. The land development work involves ground improvement works, blasting of the hill and filling of airport area with graded material upto about +5.5 metre reduced level (RL) to facilitate the laying of utility services, construction of protection structures, peripheral roads, etc. It is proposed that CIDCO shall carry out the above mentioned pre-development works to expedite the commencement of Airport operations and are expected to be completed within a period of 18 months. In the case the pre-development works are ongoing as on the date of appointment of the Concessionaire, the contract shall be assigned to him for completion of the balance works. The details of such arrangement shall be spelt out in the Concession Agreement at the RFP stage. It is clarified here that the Airport site development from + 5.5 metre RL to the proposed Airport top level of + 8.0 metre RL shall be carried out by the Concessionaire as part of the Airport development works.

## 7. **Project Structure**

### 7.1 **Concession Framework**

NMIA is proposed to be developed as a PPP project under a design, build, finance, operate and transfer (DBFOT) concession framework. A long term project concession will be awarded by CIDCO to a SPV wherein 74% of the paid up and subscribed equity will be held by the selected Airport developer and the remaining 26% will be held by CIDCO & its nominees.

### 7.2 **Phased Development and Mandatory Capacity**

The airport is proposed to be developed in four phases with an ultimate passenger handling capacity of 60 MPPA. The Airport development plan in the first phase shall cater to a peak hour passenger capacity corresponding to a throughput of ten (10) MPPA and the Concessionaire is expected to ensure the commercial operations within a period of four (4) years from the date of appointment.

As per the master plan developed by CIDCO, Phases I and II of the project have been designed to cater to a passenger throughput of 25 MPPA. The estimated project cost for Phases I and II is around Rs. 9,500 Crore (including interest-during construction, cost escalation and physical contingencies; assuming a debt-equity ratio of 70:30). This excludes pre-development costs towards site development and shifting of utilities.

### 7.3 **Treatment of Pre-development Cost**

The pre-development activities are proposed to be undertaken by CIDCO as mentioned above. The cost of pre-development works is estimated as Rs. 2,358 Crore (comprising of part Airport site development and shifting of Extra High Voltage Transmission Lines). Part of the pre-development cost is proposed to be capitalised as CIDCO's equity in the project SPV and the balance amount thereof will be treated as soft loan to the SPV and shall be repayable to CIDCO in five equal instalments commencing from the 11<sup>th</sup> anniversary of the Appointed Date for the project.

The total capital cost of the NMIA project, excluding pre-development costs is estimated as Rs. 12,216 Crore (FY 13 prices).

### 7.4 **Regulation of Aeronautical Tariffs**

Aeronautical tariffs at NMIA will be governed by the tariff determination guidelines of the Airports Economic Regulatory Authority of India<sup>1</sup>(AERA). Efforts are being made by CIDCO and the Government of Maharashtra to secure a tariff regulatory framework on par with CSIA, in order to provide a level playing field.

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<sup>1</sup> Refer AERA's (Terms and Conditions for Determination of Tariff for Airport Operators) Guidelines, 2011. The document can be downloaded from [www.aera.gov.in](http://www.aera.gov.in)

## 7.5 Bid Parameter

The bid parameter shall be the percentage share of annual gross revenues of the SPV offered by bidders to CIDCO. The terms of award will be specified in the RFP document.

## 8. Policy Framework

The Government of India permits FDI upto 100% via the automatic route for setting up greenfield airports in India. Policy also allows 100% FDI in MRO services, flying training institutes and technical training institutions. For ground handling services, FDI upto 49% is allowed through the automatic route and upto 74% with government approval. Indian Income tax rules also allow tax concessions for entities developing, operating and maintaining infrastructure projects, for a period of 10 consecutive years in a block of 15 years from date of operations. Additional tax concessions may be provided by CIDCO/ GOM in line with extant state policies for supporting infrastructure investments. These will be spelt out in the draft project agreements to be issued at the RFP stage.

## 9. Project Clearances and Approvals

Project approvals/clearances, namely from MoCA, Environmental & CRZ clearance from MoEF, Defence clearance from MoD, are in place. The Stage 1 Forest Clearance and Wildlife Clearance have been obtained. The Hon'ble Bombay High Court has permitted the clearance of mangroves in the Airport area. CRZ clearance for off-site infrastructure comprising peripheral roads and interchanges has been received. Route approval for the shifting of EHV lines has been received from the DGCA. A committee, constituted by DGCA, to workout the air space management and procedures for simultaneous and independent operations of the Mumbai and Navi Mumbai airports, has completed the study and its report is expected shortly.

To protect the Obstacle Limitation Surfaces (OLS) of NMIA, CIDCO has been strictly following the laid down norms of AAI. The notification S.O. 84(E) dated 14<sup>th</sup> January 2010, under the Aircraft Act 1934, is also applicable to NMIA. Recently, AAI has produced the Colour Coded Zoning Map (CCZM) for NMIA and authorised CIDCO to permit structures upto specified heights in different zones. The CCZM is provided in **Fig. 7**.

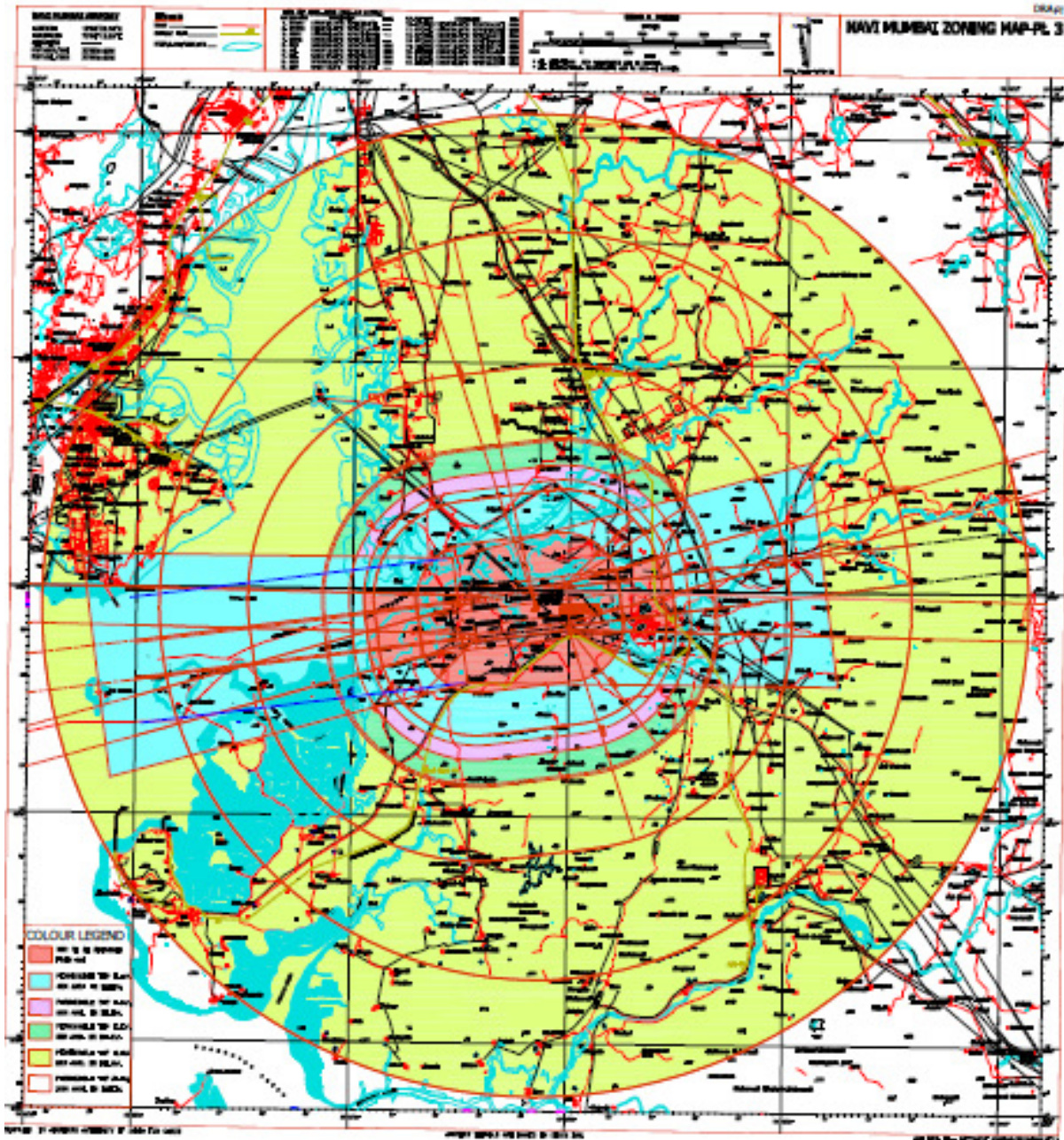


Fig. 7 CCZM for NMIA



### 9.1 Status of Land and R&R

The core airport area to be awarded to the Concessionaire is 1160 Ha, of which presently, 75% is in possession and the balance is in process of acquisition. Notifications under the Land Acquisition Act have been issued. It is proposed to acquire land by Consent Award. The proposed model for acquisition of private land is to allot developed plots of land in lieu of monetary compensation in a modern township “Pushpak Nagar” being developed near the airport. Layout map of “Pushpak Nagar” is shown in **Fig. 8**.



**Fig. 8: “Pushpak Nagar”, Ultra Modern Township for the Project Affected Persons**

A preliminary estimate indicates that approximately 3500 households will have to be re-located due to airport project. CIDCO’s R&R Policy which is in line with extant Central and Maharashtra Government policies has been accepted by the PAPs and the same is under implementation. The development of R & R sites in the vicinity of airport has commenced. Further details on the land acquisition and the R&R for NMIA can be obtained from the website [www.cidco.maharashtra.gov.in](http://www.cidco.maharashtra.gov.in).



## **10. Related Websites**

1. Ministry of Civil Aviation, Govt. of India [www.civilaviation.gov.in](http://www.civilaviation.gov.in)
2. Directorate General of Civil Aviation, Govt. of India [www.dgca.gov.in](http://www.dgca.gov.in)
3. Airports Economic Regulatory Authority (AERA) [aera.gov.in](http://aera.gov.in)
4. Airports Authority of India [www.aai.aero](http://www.aai.aero)
5. Ministry of Finance, Govt. of India [pppinindia.com](http://pppinindia.com)
6. Secretariat for PPP & Infrastructure, Planning Commission, GOI [www.infrastructure.gov.in](http://www.infrastructure.gov.in)
7. Govt. of Maharashtra (GOM) [www.maharashtra.gov.in](http://www.maharashtra.gov.in)
8. PPP Cell, General Administration Department, GOM [www.pppinmaharashtra.com](http://www.pppinmaharashtra.com)
9. Mumbai Metropolitan Regional Development Authority (MMRDA) [mmrda.maharashtra.gov.in](http://mmrda.maharashtra.gov.in)
10. CIDCO [www.cidco.maharashtra.gov.in](http://www.cidco.maharashtra.gov.in)
11. Maharashtra Airport Development Company Limited (MADC) [www.madcindia.org](http://www.madcindia.org)
12. Maharashtra Industrial Development Corporation (MIDC) [www.midcindia.org](http://www.midcindia.org)
13. Maharashtra State Road Development Corporation (MSRDC) [www.msrdc.org](http://www.msrdc.org)
14. Maharashtra Public Works Department [www.mahapwd.com](http://www.mahapwd.com)
15. Navi Mumbai Municipal Corporation (NMMC) [www.nmmconline.com](http://www.nmmconline.com)
16. Jawaharlal Nehru Port Trust (JNPT) [www.jnport.gov.in](http://www.jnport.gov.in)
17. Mumbai Rail Vikas Corporation Ltd. (MRVC) [www.mrvic.indianrailways.gov.in](http://www.mrvic.indianrailways.gov.in)
18. Delhi Mumbai Industrial Corridor Development Corporation Ltd. [www.dmicdc.com](http://www.dmicdc.com)

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