

TRAINING ON

Planning and Design of Smart Infrastructure for Biodiversity Protection

ADB

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Sushil Babu Dhakal, Project Director

Transportation infrastructure in Nepal:

Current and future planning

Outline of the Presentation

Overview of Transportation Sector

Challenges

Current Periodic Plan :Expected Results

Opportunities

Long term Vision 2043

Key Initiatives

Legal Framework

Way Forward

Institutional Framework

Issues/Problems

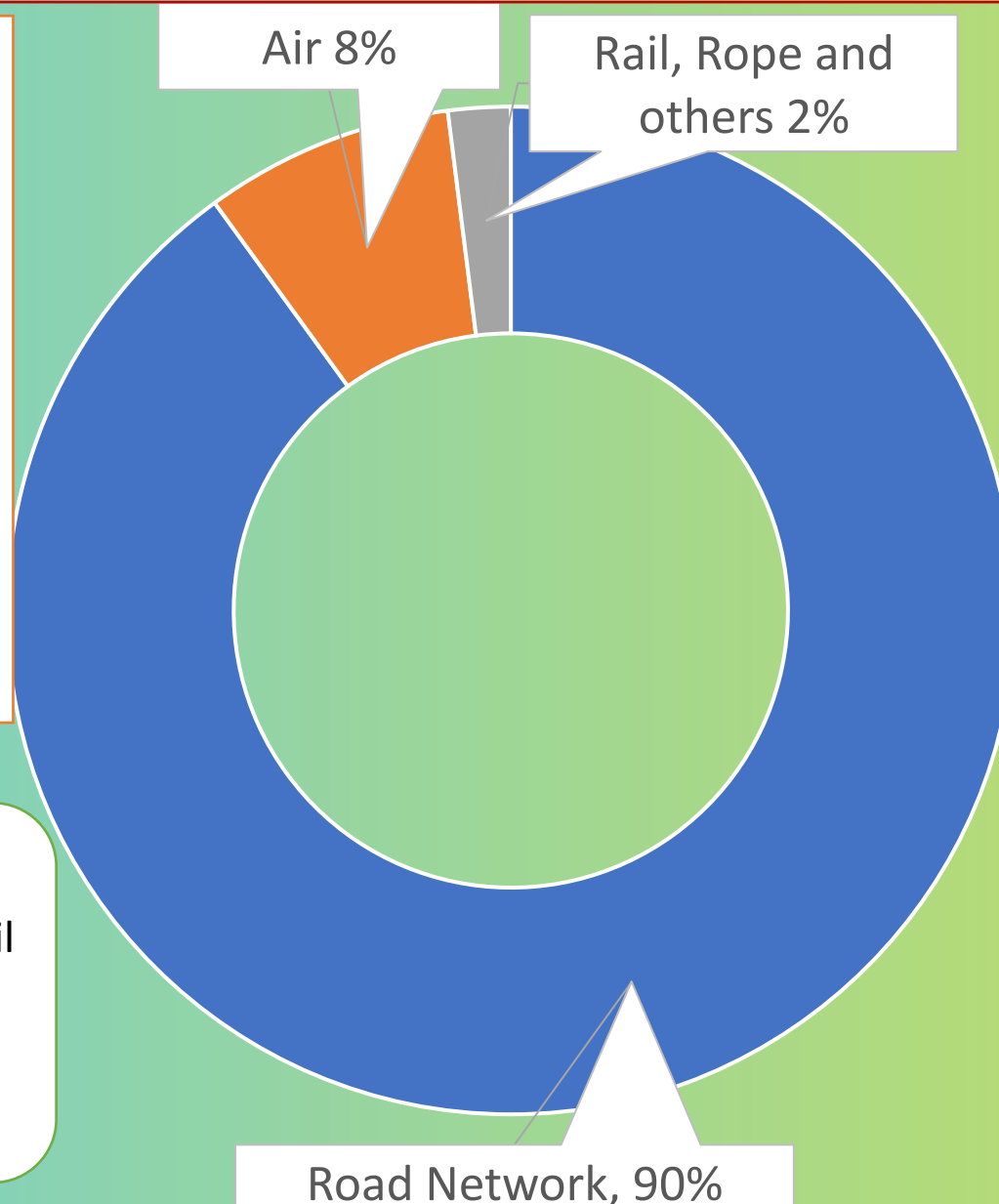
Overview of Transportation Sector

Transport (Roads)

- 90% of Goods & Passenger Transport Services by Roads
- Total Road Length: 74,756 Km
- SRN (80% all-weather & 64% paved)
- LRN (49% operational, 18% paved)
- General Accessibility: 97 % Tarai (2 Hrs.) & 77 % Hills/Mountain (4 hrs.)
- 84.87% of population reaching all seasoned road within 2 hrs.

Railway

- Jainagar-Janakpur-Kurtha: 35 Km (Rail service started from 2nd April 2022)
- Bijalpura – Bardibas Section: 17 Km Completed



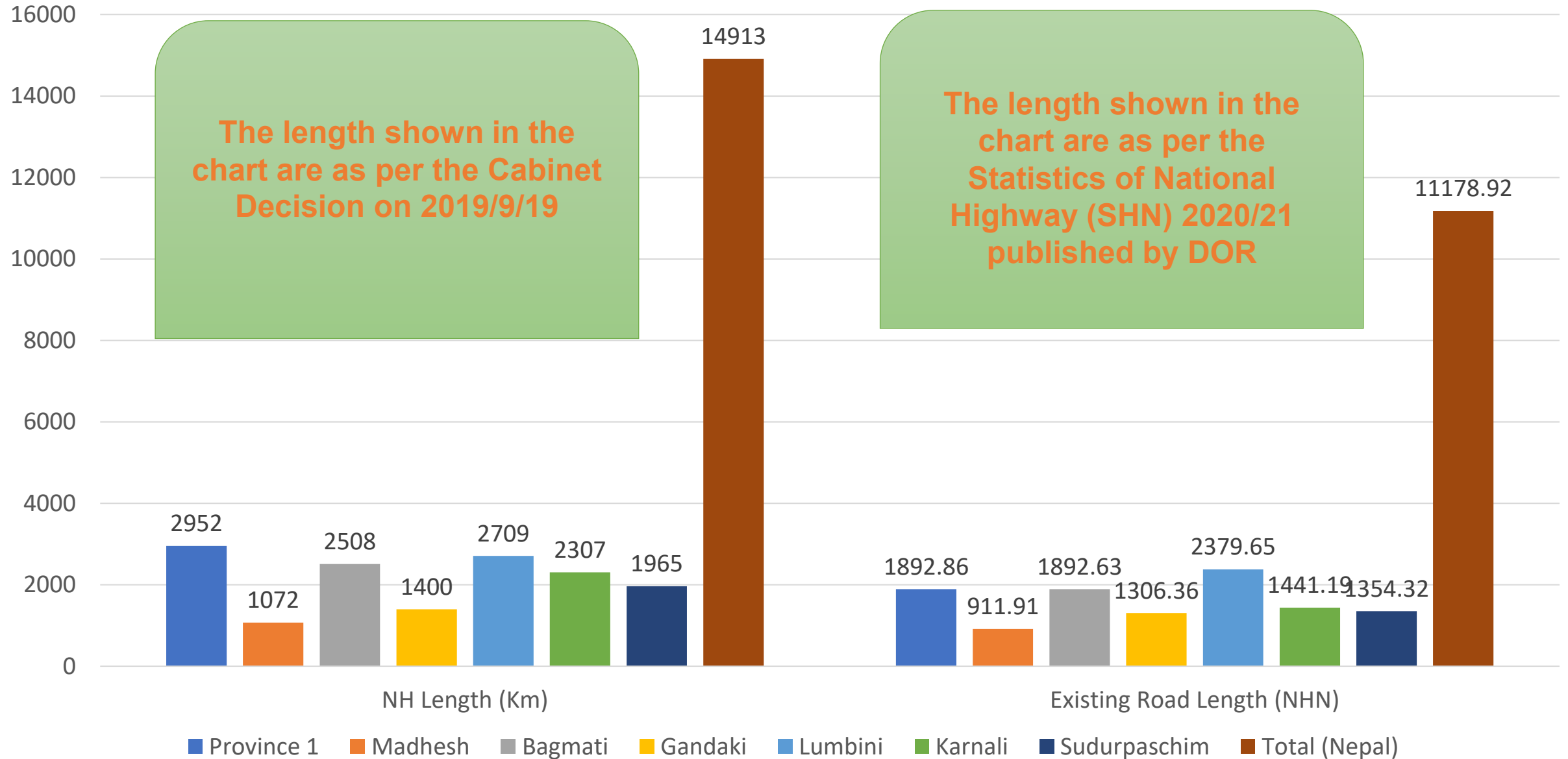
Air Transport

- Two International/4 Regional Hub Airports;
- 7 High Traffic Regular Domestic Airports/10 Regular Domestic Airports;
- 7 Non-Scheduled/Chartered Domestic Airports;
- 20 Non-Operational Airports; and
- > 50% of airports sealed with bitumen.

Waterway

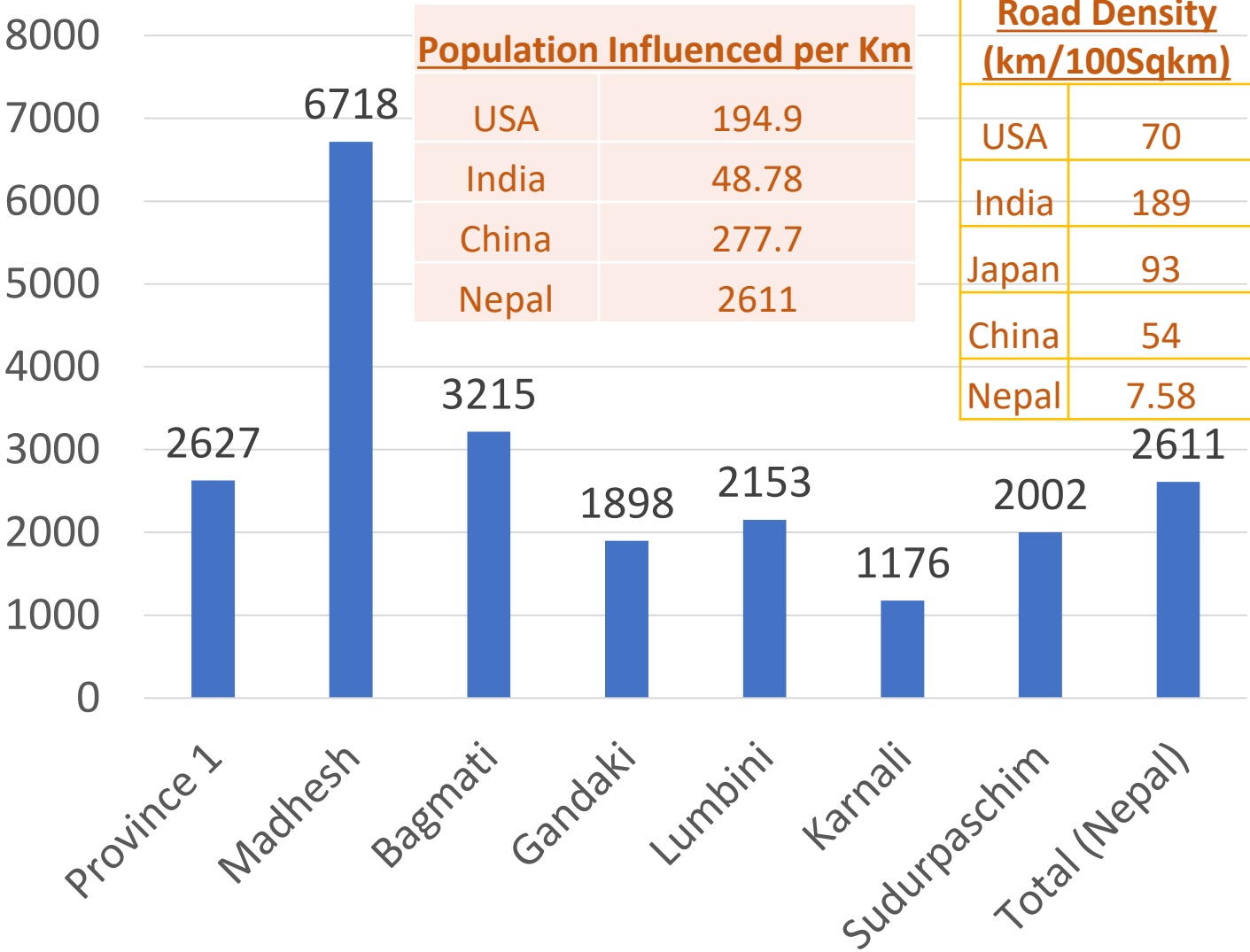
- No Commercial water transport in Nepal
- However, rafting in the Trishuli and the Kaligandaki rivers is very popular.
- Some lakes like Phewa, Rupa, Begnas have boat services.

Overview of National Highway Network



Overview of National Highway Network

Population influenced per Km Road (Nos)



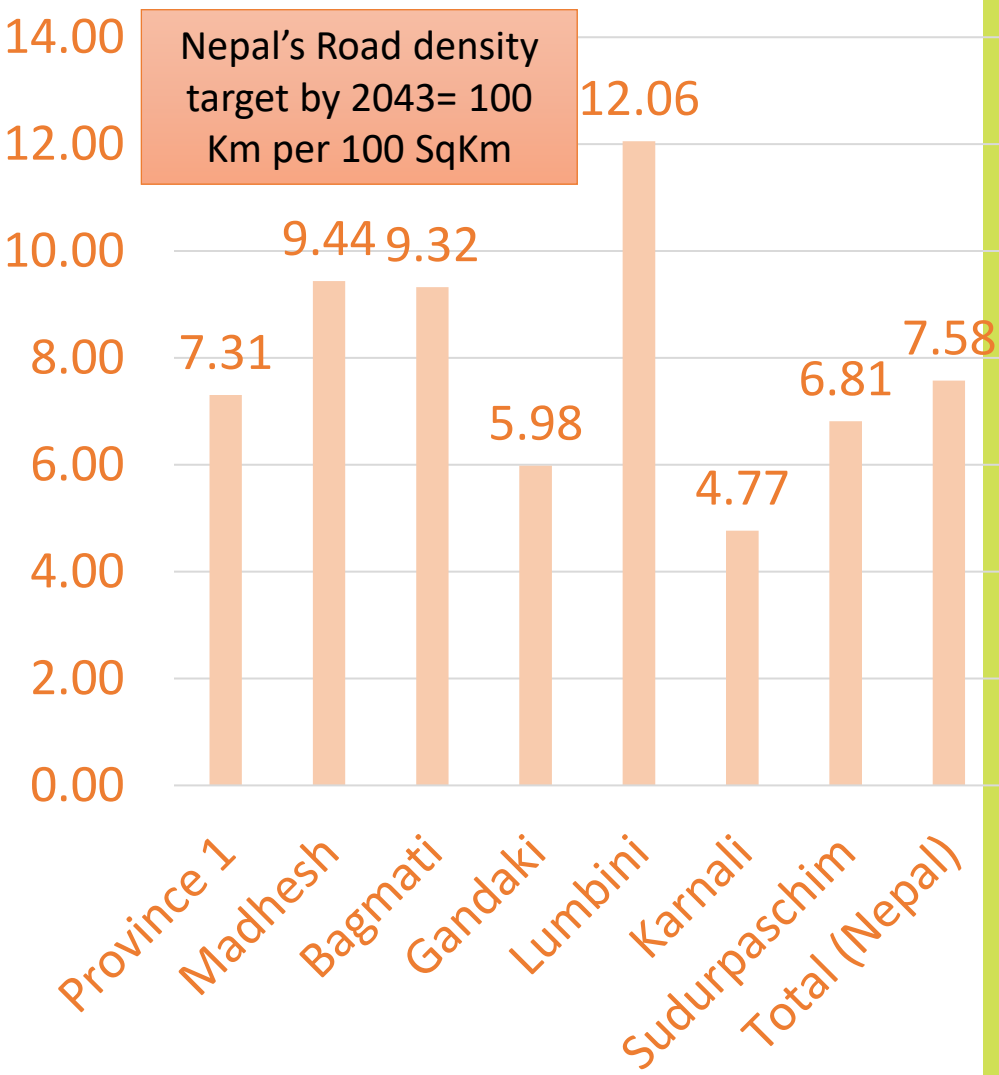
Population Influenced per Km

USA	194.9
India	48.78
China	277.7
Nepal	2611

Road Density (km/100Sqkm)

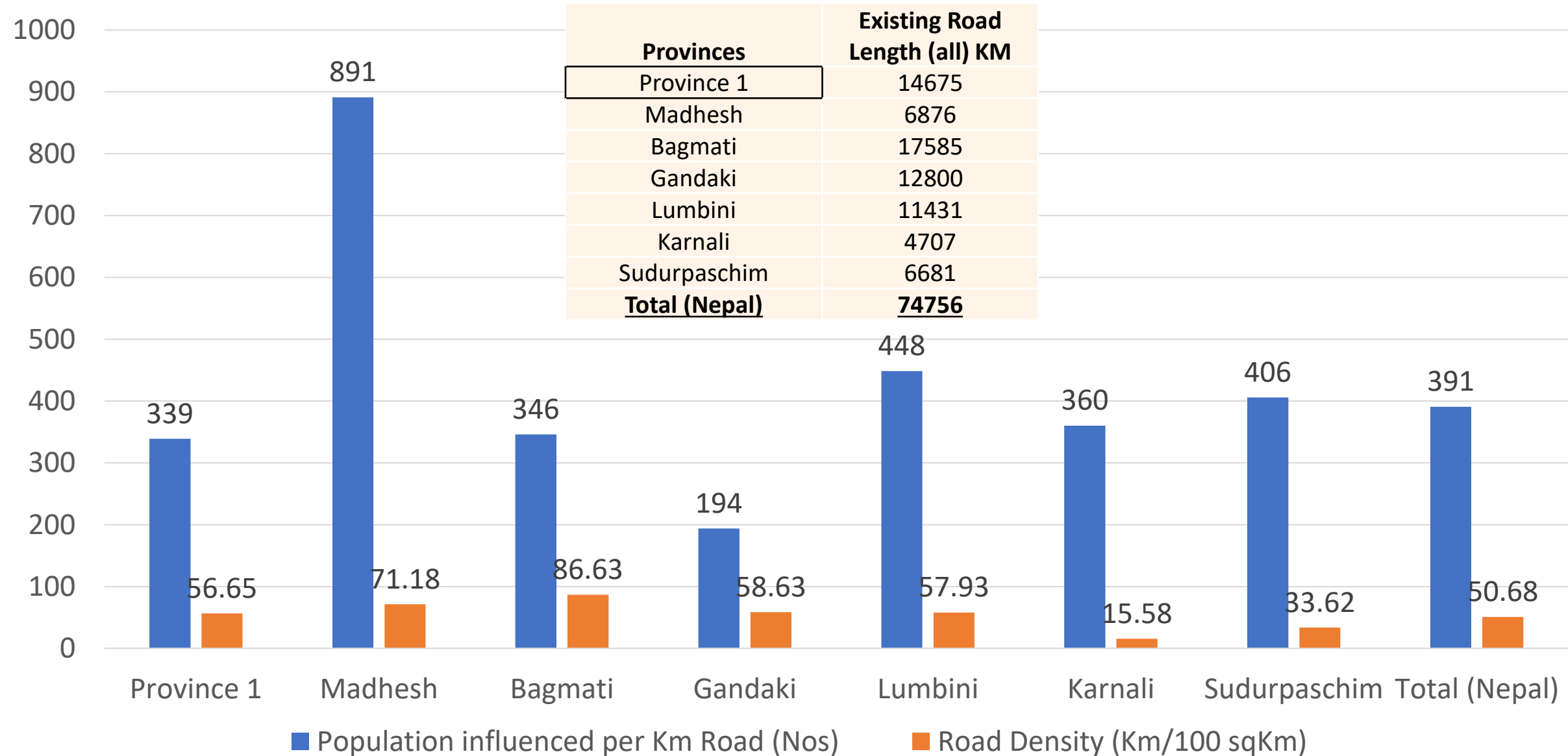
USA	70
India	189
Japan	93
China	54
Nepal	7.58

Road Density (Km/100 sqKm)



Nepal's Road density target by 2043= 100 Km per 100 SqKm

Overview of all road Networks



Expected Results from 15th Plan implementation :Road Transport

- The number of households with access to transport within a distance of 30 minutes will have increased from 82 to 95 %
- A total of 1,078 KM of national highways including EastWest Highway, Kathmandu- Tarai Madhesh Expressway will have been upgraded to 4 or more lanes

- Mid-Hill (Pushpalal) Highway, Postal Highway, and North-South Highway (Koshi, Kaligandaki, and Karnali Corridor) will have been constructed and upgraded to two lane highways

- Standards for national highways, provincial highways, and local road network will have been prepared and implemented.
- Roads connecting to Manang, Mustang, Mugu, Dolpa and Humla District headquarters will be blacktopped

Expected Results from 15th Plan implementation :Air & Rail Transport

1. Air Transport

- Gautam Buddha International Airport and Pokhara International Airport will have completed and operations started
- construction of Nijgadh International Airport will have started
- Tribhuvan International Airport will have been upgraded

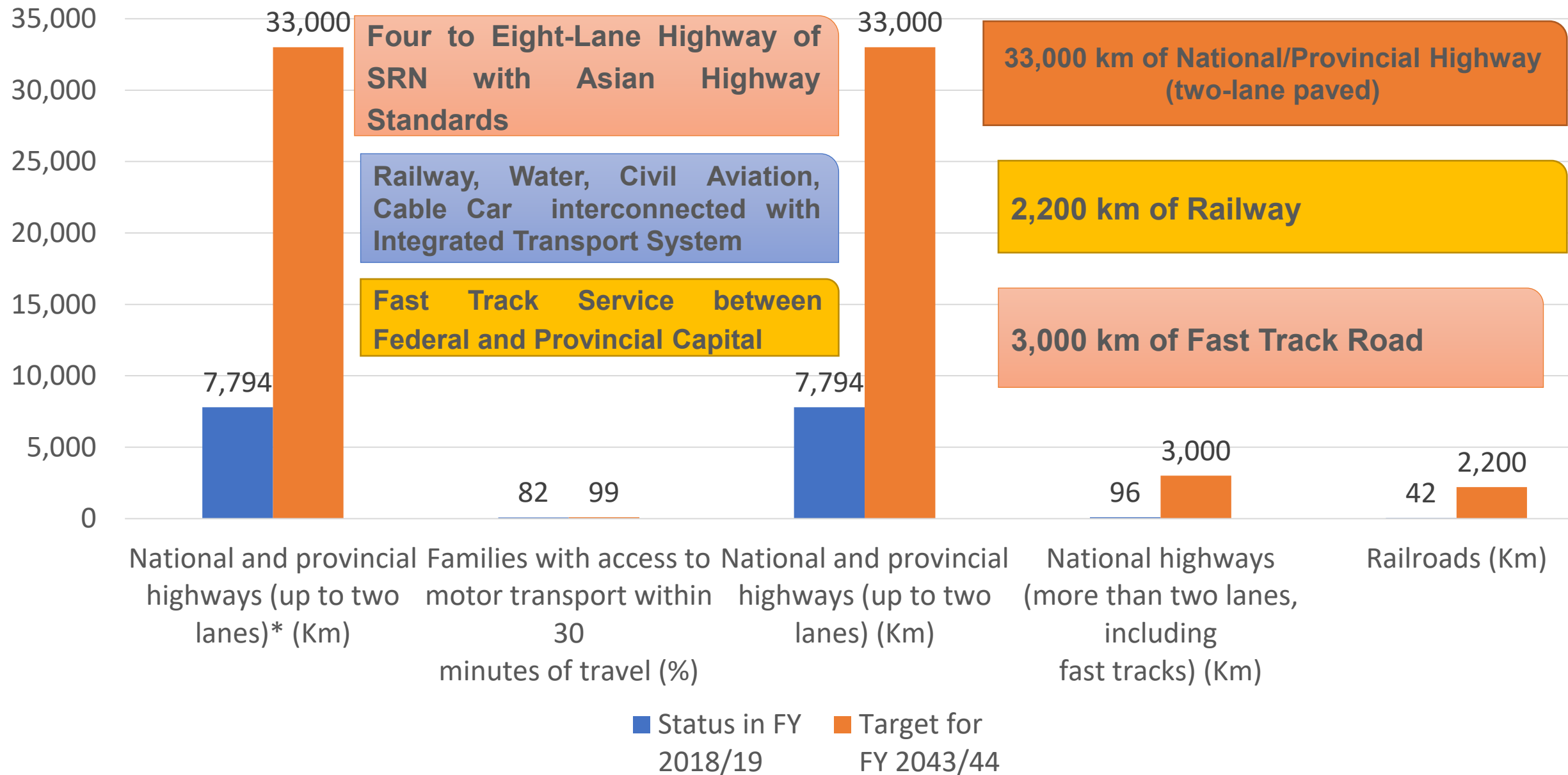
2. Rail Transport

- East-West Railway : Preparatory work will be completed
- Total of 306 KM of railways connecting the Kakarvitta Inaruwa section, Jayanagar-Janakpur-Bardibas-Nijgadh-Birgunj section, and Jogbani Bathnaha-Biratnagar section will have been completed and brought into operation

2. Rail Transport

- Crossborder railways
 - (i) Jalpaiguri-Kakadvitta,
 - (ii) Nautanwa-Bhairahawa, and (iii) Nepalgunj Road-Nepalgunj Railway will have been constructed and brought into operation
- DPR and investment modality for (i) Birgunj-Kathmandu (ii) Rasuwagadhi-Kathmandu and (iii) Lumbini-Kathmandu-Pokhara

Long term Vision 2043



Legal Frameworks

**First National Aviation Policy in 2050 (1993),
amendment in 2053 (1996)**

Public Procurement Act 2006/Regulation 2007

National Transportation Policy 2058 (2001)

Environment Protection Act/ Regulation 2019

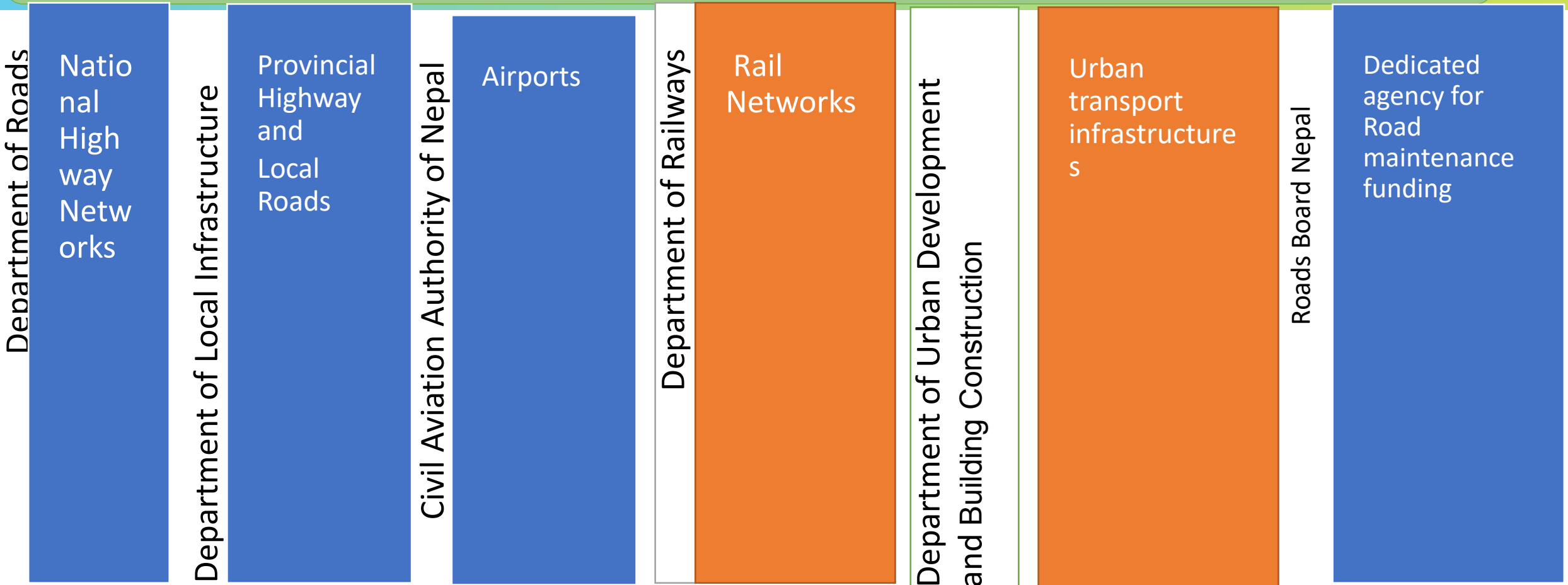
National Civil Aviation Policy 2063 (2006)

**Private Financing in Build and Operation of
Infrastructures, 2063 (2006)**

**Local Infrastructure Development Policy 2061
(2003)**

Sustainable Development Goals

Institutional Frameworks



Investment Board Nepal:

IBN functions as a central fast-track government agency established to facilitate economic development in Nepal by creating an investment-friendly environment, mobilizing and managing domestic as well as foreign investments.

Issues

Inability to achieve integrated development of transport infrastructure as expected

Implementation of projects without proper preparation

lack of availability of quality construction materials and river-based construction materials under the jurisdiction of local governments

lack of public ownership of roads as expected

Inability to meet the increasing needs for resources for operation and maintenance with the increase in the length of road

Lack of interagency coordination

Frequent transfer of Project officials

Weak Contract Management @ Lack of skilled technical Manpower and court interventions

No integrated transport masterplan

Challenges

Maintain a balance between technology, cost and quality of construction of road infrastructure in view of **limited availability of investment**

Address challenging geological and geographical conditions

Selection of prioritized projects despite political pressures on small scattered projects

Implement the concept of project bank

Attract investment through public-private partnership in transport infrastructure

Ensure necessary inter-agency coordination in planning and in implementation

Complete all preparatory phases before project implementation

Enhance the professional capacity of the private sector and attract private sector investment

Build balanced, safe, sustainable, environment friendly, and quality road infrastructure in prevailing condition (without enhancing institutional capacity)

Opportunity

Mandates of all three levels of government about road construction already mentioned in the Constitution

Government has given high priority for the development and strengthening of the road network in the periodic plan and long-term vision

Dedicated department and professional management of national highway network

Interest of the bilateral and multilateral development partners in investing in road infrastructure

Use of technology in project management

Avoid possible risk, and adopt best practice from the experience of the neighboring and developed countries

Engage youth in works and creates social stability, prevents brain spill

Growing interests of neighboring countries in the operation of cross-border railway services

Sustainable Development Opportunity

Key Initiatives

- East West Highway (Butwal Narayanghat-113 Km, Kamala Kanchanpur -87 Km) is under upgradation (ADB financing)
- **Ambukhaireni-Pokhara -90 Km of Prithivi Highway is under construction (ADB Financing)**
- East West Highway (Kakadbhitta-Laukahi 120Km) is under the process of procurement (ADB Financing)
- **Mugling-Ambukhaireni-10 Km of Pritivi Highway is under the process of procurement (ADB Financing)**
- Road Safety Policy Documents have been prepared under TA- ADB
- **National Highway Network Master Plan and Priority Investment Plan is under Preparation under TA- ADB**
- Design of Pathalaiya Narayanghat (100 KM) and Butwal-Gorusinghe (50KM) for upgradation of those stretches of EWH upto 4-lane standard are under going (ADB Financing)
- **Pathalaiya Narayanghat (100 KM) of EWH is a pipeline project for starting implementation 2023/24 (ADB Financing)**
- Butwal-Gorusinghe (50KM) is a pipeline project for starting implementation 2022/23 (WB Financing)

Key Initiatives

- Feasibility Study of East West Railway and Kathmandu and Pokhara Railway
- **Completion of DPR of E/W Electrified Railway, Completion of two Cross Boarder Railways: Jaynagar Janakpur Bardibas and Bathnaha Biratnagar Railway with Indian Assistance;**
- Completion of DPR for Development of Kathmandu Valley Metro Rail under PPP model
- **Detailed Project Study of Kathmandu Valley Metro Rail (Satdobato -Narayan Gopal Chowk: 12.1 Km) is underway**
- Jainagar Kurtha Rail service (cross boarder) started from 2nd April 2022
- **Feasibility study of Gorushinghe Gaddachauki Section of EWH (WB financing)**
- Construction of Nagdhunga Tunnel (JICA Financing)
- **Kathmandu-Nijgarh Fast track in under construction by Nepal Army (GON funding).**
- Parallel of the East West highway Mid Hill Highway, Hulaki Highway and Madan Bhandari Highway are under construction (GON funding).

Key Initiatives

- Siddhartha International Airport at Bhairahawa in operation from 21 April 2022
- **Pokhara International airport will be in operation by the end of this year**
- The issues in Nijgarh International Airport are being narrowed.
- **Janakpur-Bardibas railway Construction: Completed**
- Bardibas-Nijgarh railway (69 Km) : under Construction
- **Raxaul- Kathmandu Electrified Railway (135.886 Km) Project: Preliminary Engineering and Traffic (PET) survey Completed. MOU signed for Final location survey in Oct 2021 (GOI Grant)**
- Bardibas-Nijgarh railway (69 Km) : under Construction
- **Kerung-Kathmandu Railway (total=599.4 Km, Nepal Part=72.2 Km) Project: Prefeasibility study Completed, Feasibility study stopped due to COVID 19. (Government of China Grant)**

Key Initiatives to wards sustainable development

- Provision of “**Procurement through users’ committee**” in Public Procurement Regulation
- **Strict compliance with Environment and Social issues as recommended by the respected studies**
- Design considering the wild life (Narayanghat Butwal, Narayanghat Mugling, Kakadbhitta Laukahi, Pathalaiya –Narayanghat, Hulaki highway etc.)
- **Consideration of Climate Change on the design**
- Consideration of the vulnerable users in the Design
- **Capacity development training within the project contract**
- Compensations to the affected
- **Strict compliance with safety protocol**

Way Forward

Formulation of Integrated National Transportation Master Plan

Implementation of projects incorporated in the master plan, sectoral plan, and PIP only after completing all preparatory works

Exploration of appropriate alternative methods of financing needs to fulfill the national resource gap.

Need capacity building, technology transfer, research in all institutions in a coordinated manner.

Formulation of new policies and/or modification of current policies, plans, rules, and regulations

Adherence with quality assurance and, monitoring and evaluation framework in all transport infrastructure projects

Towards Sustainable Development

- Support for Tourism, Agriculture, hydroelectricity
- Carbon Emission and Climate Change issues
 - SDGs Goals and poverty reduction
 - Linking neighbours and beyond



THANK YOU

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