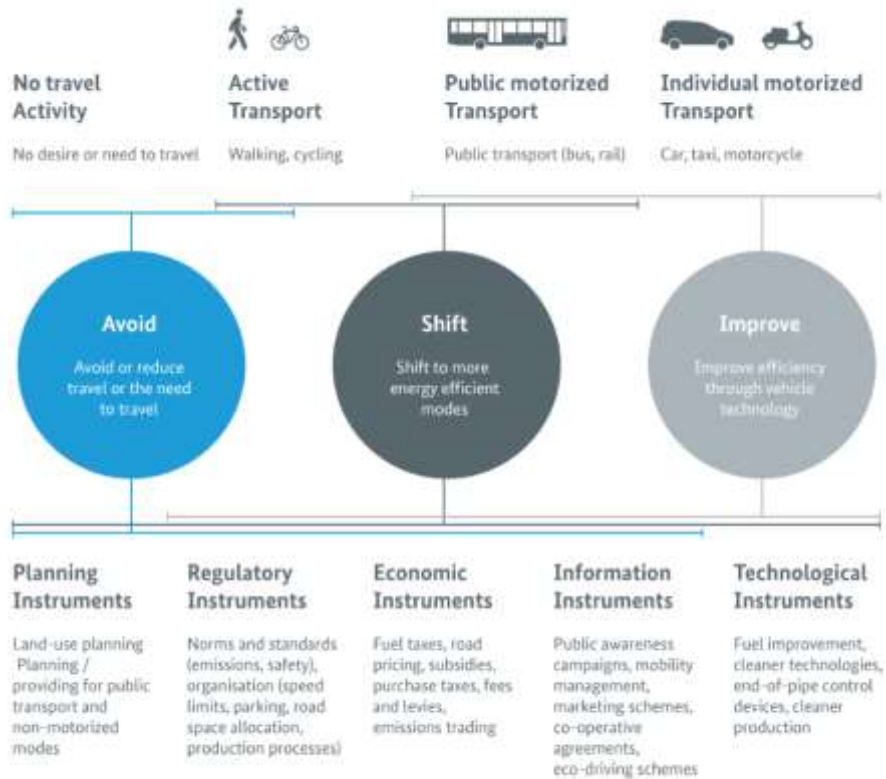


UNEP and decarbonizing transport in India

Bert Fabian
Sustainable Mobility Unit
UNEP Regional Office for Asia Pacific

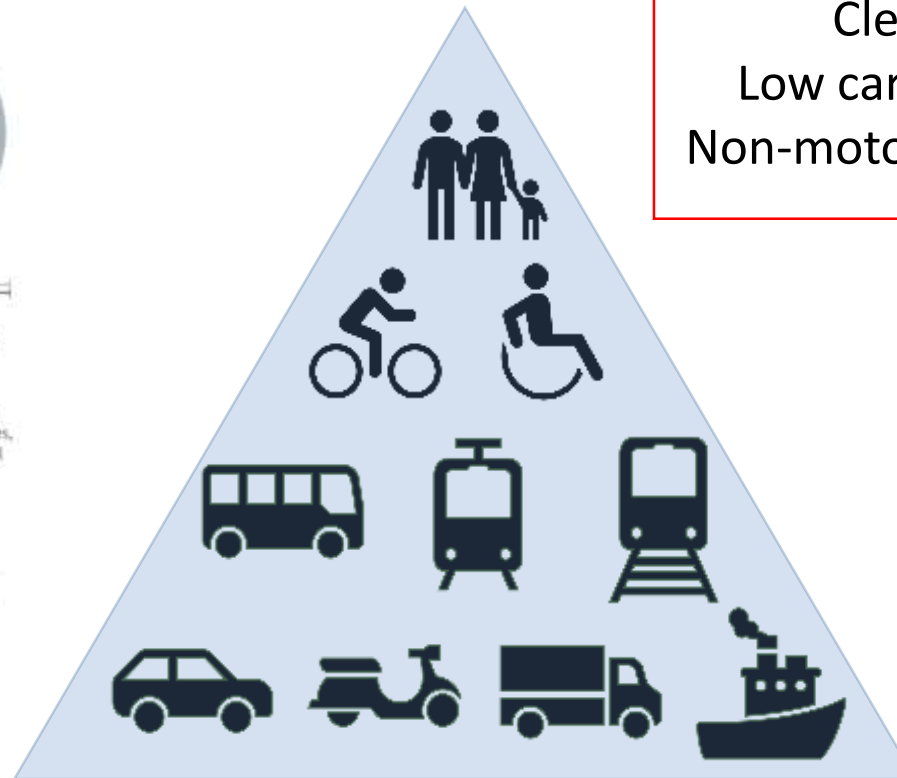
24 February 2021
Decarbonising Transport in India: DTEE + NDC-TIA
Scenarios and policy strategies for transport decarbonisation in India

Acknowledging the need to focus on improving movement of people and goods over vehicles



UNEP
Sustainable Mobility Unit

Clean fuels and vehicles
Low carbon and electric mobility
Non-motorized and mode integration



Model based on: Williams and Brangan (2011) "Sustainable Transport: A Framework for Policy-makers" (2011) and "Transport and Climate Change" (2011) <http://www.unep.org/transport>



@TUMInstitute
www.institute-for-mobility.org

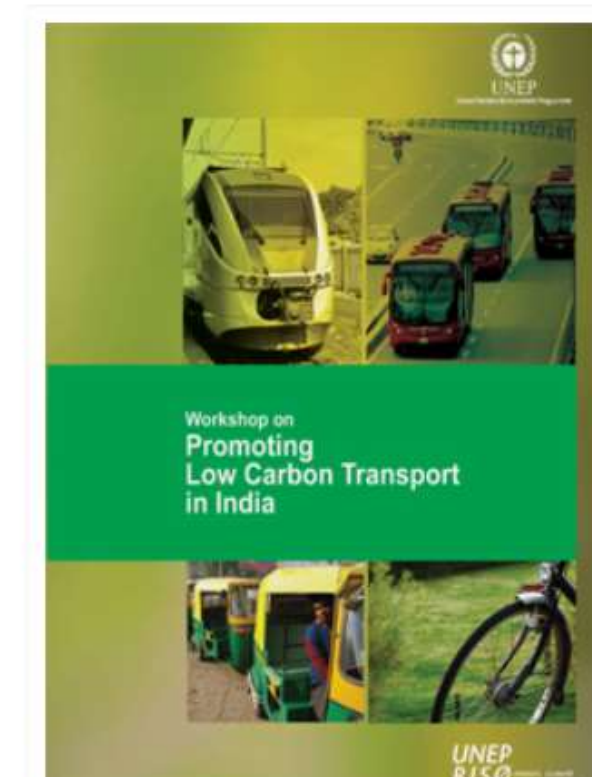
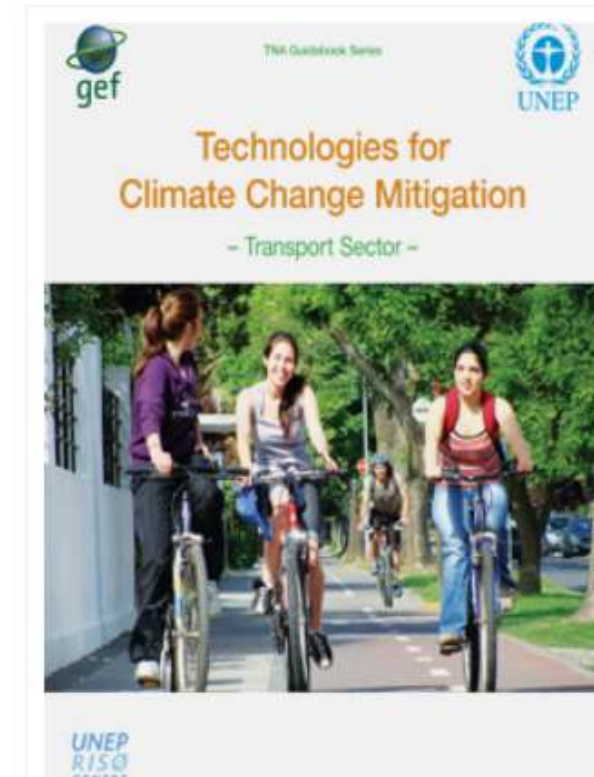
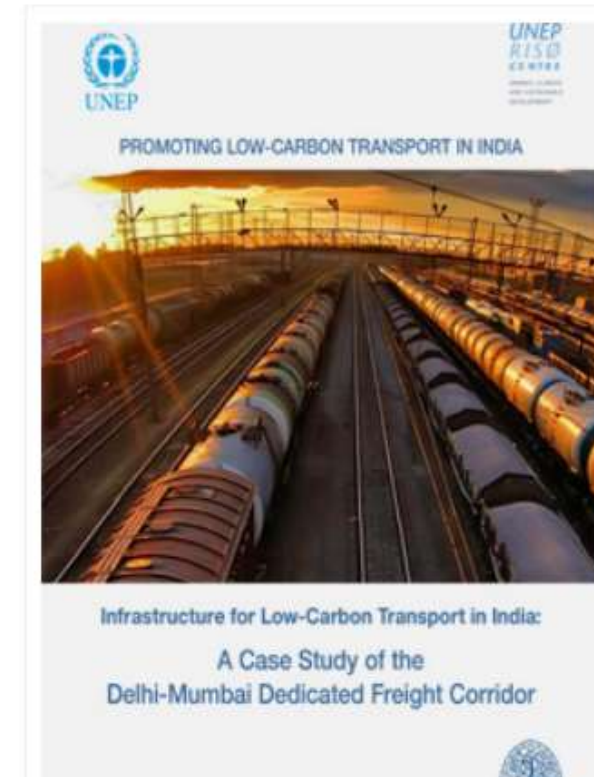
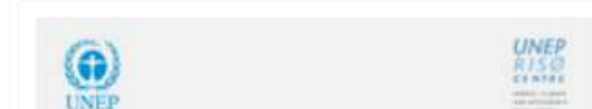
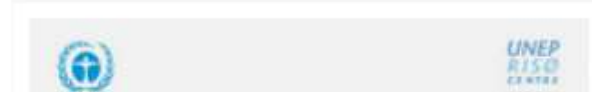
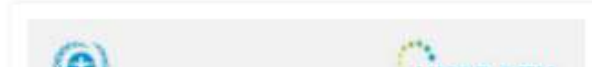
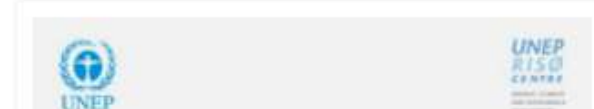
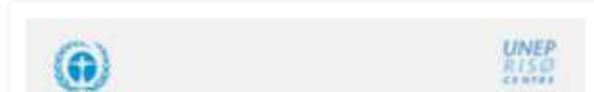
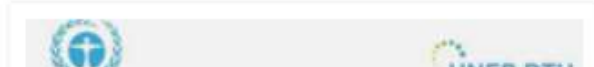
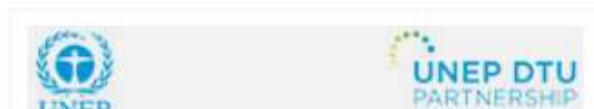
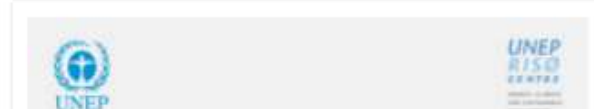
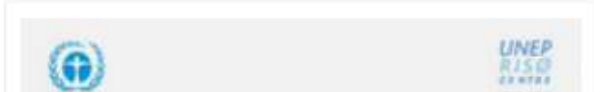
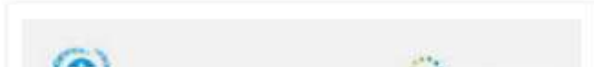
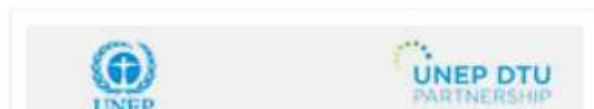
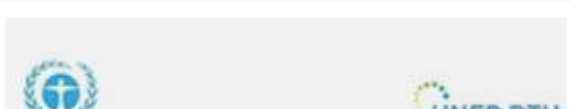
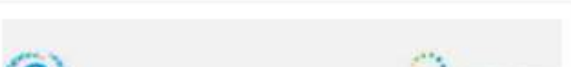
Selected key developments on transport in India with impact on decarbonization

- Metro rail – from 2km in 2002 to about 600km in 2019 with 600km under construction and 1000-1500km being planned (2019)
- BRTS – from 2 cities in 2008 to 9 cities at present with 228km
- Bharat VI in 2020 – advanced from earlier plans of 2024 adoption
- Average fuel consumption standard (2015) - 5.49 km/100 liters for 2017/2018 and 4.77 l/100km for 2022; Tyre labeling (2020)
- FAME I (2015), FAME II (2019)
- E-3Ws – more than 2million in operation

UNEP supporting transport decarbonization in India

- Low Carbon Mobility Project in India (2010-2016)
 - Supported by BMU-IKI, implementation led by UNEP-DTU
 - Key achievements:
 - Modelled the country's transport sector contribution to the 2°C stabilization target using the data collected.
 - Revisions to the [Comprehensive Mobility Plan \(CMP\) Toolkit](#)
 - Low Carbon Comprehensive Mobility Plans (LCMPs) for Udaipur, Rajkot, and Visakhapatnam
 - Analysis of the impact of current and proposed transport interventions, including [bus rapid transit](#), [metro rail](#), [high speed rail](#), [dedicated freight corridors](#), and [non-motorized transport](#)

Promoting Low-Carbon Transport in India publications



UNEP supporting transport decarbonization in India (2)

- Supported the development of Uttar Pradesh's Electric Vehicle Manufacturing and Mobility Policy 2019
- MOU for the installation of 200 chargers signed between NOIDA Authority and EESL
- A public charging station in NOIDA was also publicly launched by Ms Ritu Maheshwari (CEO NOIDA Authority)

Supporting Electric Mobility in Uttar Pradesh, India: Charging Infrastructure and Business Models

30 December 2019

Final



Prepared by



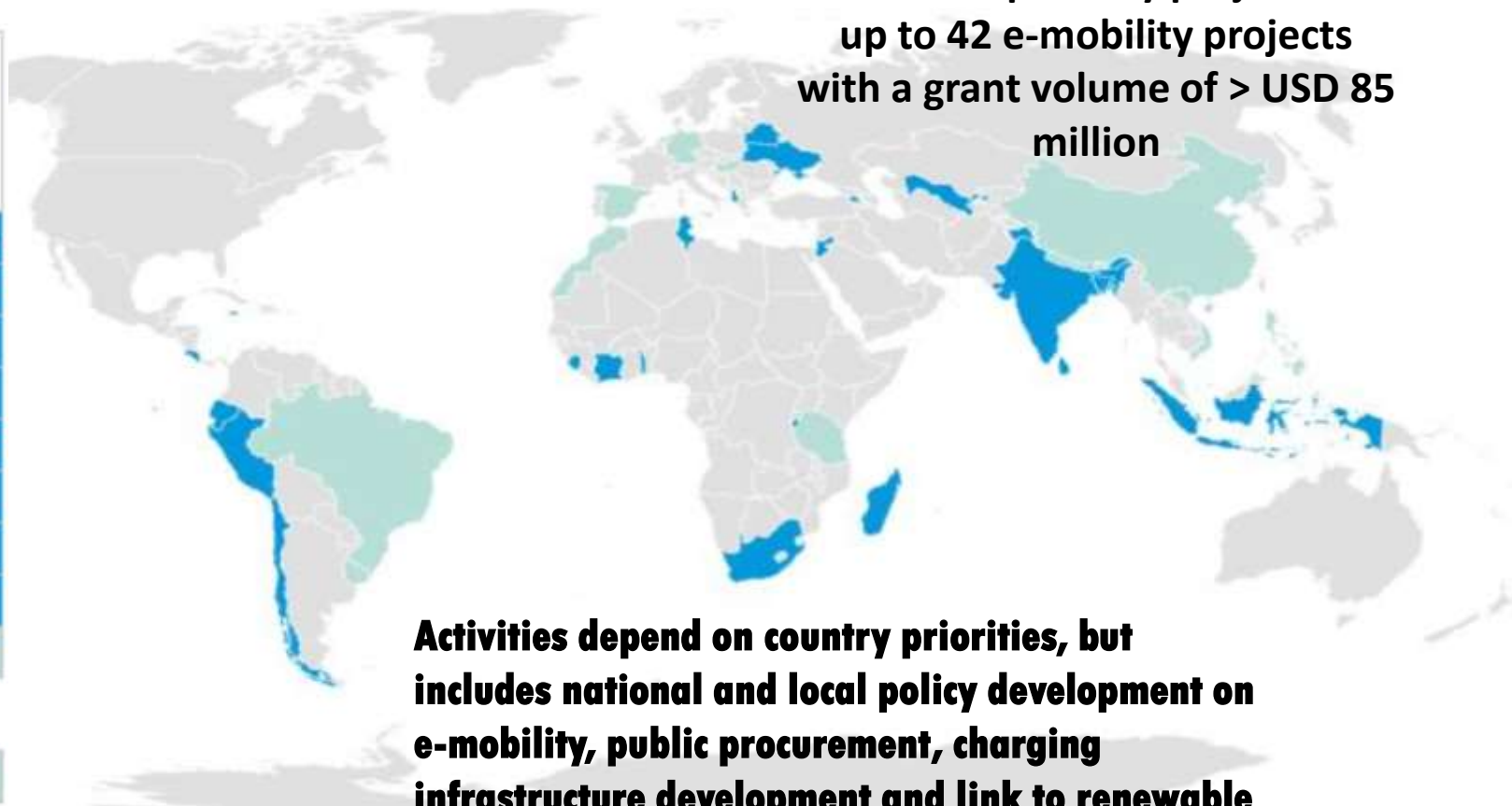
UNEP supporting transport decarbonization in India (3)

- GEF7 Global Electric Mobility Country project: “Electrifying Mobility in Cities: Investing in the Transformation to Electric Mobility in India”
- Jointly implemented by UNEP and ADB
- 5 years, 5.3 million USD from GEF, and 162 million USD co-financing (implementation to start in late 2021 or early 2022)
 - Outcome 1: Government institutionalizes integrated e-Mobility national policy framework and facilitates effective implementation of increased e-vehicle infrastructure, including its measurement and monitoring in Cities
 - Outcome 2: Policy for Lithium-Ion Battery (LIB) reuse and recycling and battery standards for EVs endorsed by the Government
 - Outcome 3: Enabling conditions for e-mobility investments created, new business models and charging infrastructure plans developed at city level
 - Outcome 4: Demand for e-vehicles stimulated through increased capacity and awareness among government, consumers and private sector stakeholders on the benefits and business opportunities for accelerating electric mobility uptake

GEF 7 Global Electric Mobility Programme countries and partners

The GEF7 Global E-Mobility programme, the GEF E-Mobility Standalone Projects and EC SOLUTIONSplus city projects add up to 42 e-mobility projects with a grant volume of > USD 85 million

Africa	Asia	Central & Eastern Europe, West Asia & Middle East	Latin America & the Caribbean
Madagascar	Maldives	Ukraine	Antigua & Barb.
Burundi	India	Armenia	Chile
Sierra Leone	Indonesia	Uzbekistan	Saint Lucia
Seychelles	Mauritius	Albania	Costa Rica
Togo	Sri Lanka	Jordan	Peru
Ivory Coast	Bangladesh	Belarus	Jamaica
Tunisia	Philippines	Germany	Grenada
South Africa	Nepal	Spain	Ecuador
Tanzania	Vietnam		Uruguay
Rwanda			
GEF 7		EC SOLUTIONSplus	

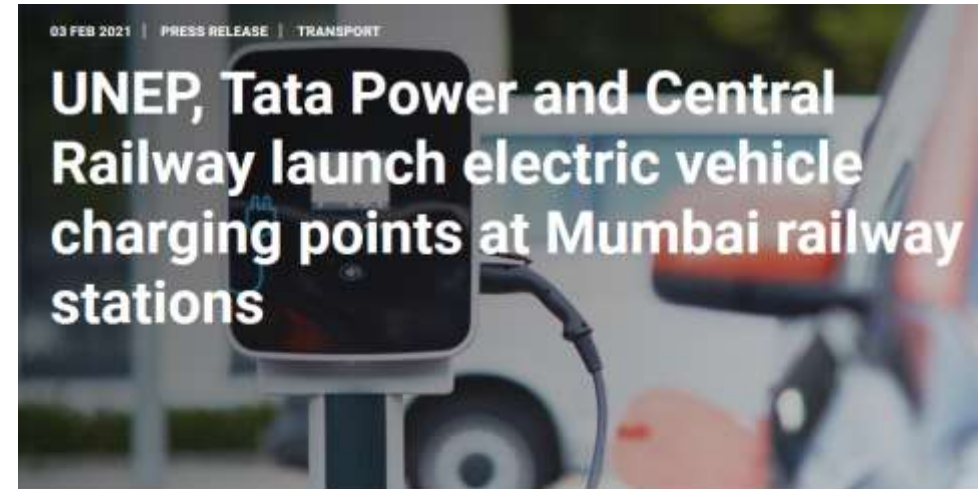


Activities depend on country priorities, but includes national and local policy development on e-mobility, public procurement, charging infrastructure development and link to renewable energy, battery management



UNEP supporting transport decarbonization in India (4)

- Central Railway, Mumbai, in association with the UNEP and Tata Power announced the launch of their novel green initiative for promoting e-mobility in Mumbai
- Charging points for electrical vehicles will be made available at all important railway stations in the island city, the suburbs and adjoining Mumbai Metropolitan Region



Mumbai, 03 February 2021 - Central Railway, Mumbai, in association with the UN Environment Programme (UNEP) and Tata Power have announced the launch of their novel green initiative for promoting e-mobility in Mumbai. As a part of this initiative, charging points for electrical vehicles will be made available at all important railway stations in the island city, the suburbs and adjoining Mumbai Metropolitan Region.

The charging points will cover a wide geographical area and offer a seamless experience for electric vehicle (EV) owners to charge their vehicles through a pay-per-use model. The collaborative venture aims to boost the overall e-mobility sector and encourage green mobility around railway stations, which are transport modal hubs.

In the first phase, contracts have already been awarded for railway stations including Thane, Dadar, Parel and Byculla. For the second phase, tenders have been floated for the next set of stations including Lokmanya Tilak Terminus (LTT), Bhandup, Panvel and Kalyan. Areas at the entry-exit points of railway stations with parking facilities have been earmarked for the charging

Summary

- **Since early 2000s, national, state, and local governments have started developing and implementing sustainable transport policies**
- **Many programs have been developed – JNNURM, FAME**
- **Many international development organizations have supported India – UNEP, GIZ, ADB, WB, WRI, ITDP, ICCT, EDF, RMI, etc..**
- **There is now broader support from civil society, private sector, and other relevant stakeholders to advance sustainable and low carbon transport policies**
- **Time is now to consolidate policy and government support at local government levels focusing on improving urban planning/ TOD, cycling, and walking facilities**
- **Keep an eye on the implementation of national programs and policies**

Opportunities for more decarbonization

- Electrification of transport linked to renewable energy use
- Promoting modal shift to rail, and inland waterways
- Urban planning, public transport, cycling, and walking
- India's leadership on transport decarbonization in the region



Electric vehicles alone not the answer to solve our unsustainable and unequitable transport systems!

Thank you



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