The Urban Commute: A Summary

The Centre for Science and Environment (CSE) has carried out a comparative and diagnostic analysis of key cities of India on how they are positioned on clean and low carbon mobility.

- In a report titled **'The Urban Commute and How it Contributes to Pollution and Energy',** the CSE assessed **14 cities** which are among the most populous in different regions, based on emmission of carbon dioxide, particulate matter and nitrogen oxides, as well as energy guzzling from urban commuting.
- The study tried to understand how the way people travel in cities contributes to air pollution and energy consumption.
- It took **two approaches** to rank the cities — one based on **overall emission and energy consumption** and the other on **per person trip emissions and energy consumption**.

Findings

- The **key factors that influence emissions and energy guzzling** are:
    - Level of **motorization**,
    - **Travel demand** based on population,
    - **Share of different modes of transport** (public transport, walking cycling and personal vehicles),
    - Average **length of daily travel trips**, and
    - **Quality** of vehicle technologies and fuels.
- **Reasons for low overall emissions are:**
    - Lower population, much lesser vehicle numbers and vehicle miles travelled.
    - Low average trip length of different modes.
    - Robust bus and bicycle programmes with an enhanced bus fleet, a bus rapid transit system and public bike sharing schemes.
    - **Example: Bhopal**
- Kolkata and Mumbai emit **least among six megacities** due to high usage of public transport and walking.
    - Kolkata has short travel distances due to its compact city design, high street density and restricted availability of land for roads and parking.
    - The **income levels are not the only reason** for deciding a population's dependence on automobiles. **E.g.: Mumbai**
    - Both Kolkata and Mumbai have a unique advantage of a **public transport system well integrated with existing land use patterns**.
- Delhi, despite being the third highest for high share of public transport trips, is at the bottom as overall emissions and fuel use are highest.
    - This is due to the sheer number of people, high volume of travel and personal vehicles, and long trip distances.
    - This negates per trip emissions improvement derived from its CNG programme and limited public transport strategy.
- Megacities of Bengaluru, Hyderabad and Chennai score poor too.
    - Although they have lower share of public transport compared to Delhi and yet have scored better than it only because of total travel volumes are comparatively lower given their population levels.
    - With growth and without adequate action they can get worse in future.

- Though metropolitan cities have scored better than megacities due to lower population, lower travel volume and vehicle numbers, they are at risk due to much higher share of **personal vehicle trips** and **high growth rate**.

Concerns

- **Increase in greenhouse gas emissions** from **transport sector** is highest among all other sectors in India. Urban traffic is also the source of very high health damaging toxic substances.

- **Motorization in India is explosive**. Initially, it took 60 years (1951–2008) for India to cross the mark of 105 million registered vehicles. But thereafter, the same number was added in a mere six years (2009–15).

- At the same time, the **share of public transport is expected to decrease** from 75.5 per cent in 2000–01, to 44.7 per cent in 2030–31.

- **Growing dependence on personal vehicles** for urban commuting can lead to irreversible negative trends and damage.

Way Forward

- Cities that have a public transport spine, compact urban form, short travel distances, lesser number and usage of personal vehicles and vehicle miles travelled, emit a lot less greenhouse gases and toxic pollutants and guzzle less energy.
- Therefore, for clean and low carbon mobility, cities need policies to stop urban sprawl; reduce distances between residence, jobs and recreation through compact urban forms; scale up integrated public transport, walking and cycling; and put restrains on use of personal vehicles to avert pollution and climate crisis.