

Shifting to Efficient and Zero Emissions Vehicles in the Global South

13-15 June 2022, UNEP Headquarters, Nairobi, Kenya

Background

Over 60 participants attended in-person and virtually a global meeting on promoting a shift to more efficient vehicles and electric vehicles in the Global South. Participants were drawn from regional bodies, national and local government, the private sector, academia and non-governmental organization from Africa, Asia-Pacific, Eastern Europe and the Caucasus, and Latin America and the Caribbean regions.

Participants noted that:

- Over one billion additional vehicles are expected to be added to the global vehicle fleet in the next three decades, with the highest fleet growth happening in the Global South;
- The highest growth segments in many countries in the Global South is in 2&3 wheelers;
- Many cities in the Global South are also planning efficient public transport mainly through dedicated bus corridors;
- Many of the countries in the Global South for example Uruguay and Costa Rica have 100% of their electricity from renewable energy sources;
- Increasing global fuel prices and the covid-19 pandemic present good opportunities to shift to zero emission vehicles;
- The abundance of renewable energy (electricity) is critical in the support of electric mobility transition:
- Some of the countries in the global south like in Africa have in abundance raw minerals that are used in electric vehicles production like lithium;
- There are many co-benefits to promoting zero emissions vehicles including green jobs, better air quality, improved energy efficiency, climate change mitigation etc.
- While a significant number of countries in the Global South started with better fuel economy baselines, subsequent fuel economy improvement trends are shrinking mainly due to increase in engine displacement and kerb weight;
- Many of the countries in the Global South rely on used vehicle import. As EV sales are ramping up rapidly in the Global North, the number of used imported EVs will increase rapidly in the Global South as well and countries need to get ready to absorb these vehicles; and
- Access to finance is an important hurdle to the introduction of low and no-emission mobility

All this provides good justification to shift to efficient and zero emissions vehicles as:

- ***A significant share of vehicle fleets in the global south are yet to be imported or produced, hence an opportunity to introduce cleaner zero emissions vehicles.***
- ***Local value addition opportunities exist; hence the Global South needs to play a role in the global value supply chain for zero emission vehicles.***

- *Locally available electricity can be utilized in zero emissions mobility instead of more expensive fuel:*
- *A differentiated modal approach is possible with a focus on 2&3 wheelers and buses where the highest growth will continue.*
- *Cities present opportunities to introducing zero emissions mobility, even as national programs are pursued.*
- *The import of used electric vehicles provides both opportunities and challenges – to bring affordable e-mobility to the Global South and to tackle the issue of second life and end-of-life for EVs.*

Key Recommendations

1. Data

- a) Countries are urged to carry out fuel economy baseline assessments as data is needed for evidence-based policy and decision making e.g. highlighting the cost of inaction, and savings from more efficient vehicles.
- b) Countries are encouraged to update their fuel economy baselines post covid as the situation may have significantly changed.
- c) Expected savings in terms of health improvements from low emission vehicles and fuel consumption need to be qualified.
- d) Feasibility studies are encouraged to support policy towards electric vehicle technology shift. Feasibility studies can look at cost-benefit analysis of zero emission vehicles, capital infrastructure needs including charging infrastructure.
- e) Data from vehicle inspection programs can support policies to restrict polluting vehicles.
- f) There is need to strengthen MRV frameworks to quantify transport emission reductions, evaluate demonstration pilots and to conceptualize scale up. MRVs should be used for public awareness.
- g) There were discussions on economic versus environmental argument to shifting to cleaner more efficient vehicles targets. There needs not be a conflict between the need for increased affordable mobility and need for cleaner low emission vehicles. Targeting cleaner vehicles imports or production needs not to be expensive, if fiscal incentives are used to lower the cost of cleaner vehicles through revenue collected from polluting vehicles, resulting in sustainable growth.

2. Policy

- a) Countries are encouraged to introduce minimum fuels and vehicle emission standards to improve emissions from internal combustion engine (ICE) vehicles. A minimum of Euro 4/IV equivalent standards are recommended. Age limits are proposed to complement the technology restriction. To introduce these standards and strategies, countries will require support (technical assistance and capacity building) in implementing the new requirements.
- b) Used vehicles play an integral part in vehicle growth in the global south, which could be an opportunity to encourage import of efficient and zero emission vehicles.

- c) Both the Global North and South have a shared responsibility to promote efficient and zero emission vehicles through restricting exports or imports of substandard ICE and zero emission vehicles. These may include safety and battery standards. Equally important is enforcement of these standards.
- d) In the absence of minimum standards, the Global South may also become the dumping ground for old technologies for newly imported vehicles.
- e) Countries are also urged to in tandem set target dates to phaseout ICE vehicles and shift to electric vehicles. It was noted that already the global north has/is setting ICE phaseout targets and Global South will be left behind. Roadmaps to achieving these targets are equally important.
- f) Countries and cities are urged to develop e-mobility strategies. There is also need for a legal framework to support zero emission vehicles.
- g) Local governments are encouraged to develop policies to support a shift to zero emission vehicles for example through provision of land for public charging infrastructure.
- h) The surge in 2&3 wheelers in the Global South presents an opportunity to shift to electric modes as these are easier to implement.
- i) Countries are required to provide reliable, adequate, and sustainable electricity for electric vehicles roll out. This can be linked to solar and mini-grid solutions including for rural communities. Countries are also encouraged to support decarbonization of the national grid.
- j) Shift to zero emissions vehicles can be embedded in different national policy frameworks including energy, transport, finance, industry, urbanization, and environment.
- k) It was noted that public procurement is a big driver to shift markets, thus countries are encouraged to procure efficient and zero emission vehicles.
- l) Fleet renewal can target zero emissions vehicles for example in public transportation.

3. Fiscal Incentives

- a) Taxes play an important role to shift vehicle purchase to efficient and zero emissions modes. Countries need support to identify optimal tax incentives that work in local circumstances.
- b) Other incentives need to complement taxation to promote zero emission vehicles and penalize dirty vehicles. This will address the issue of high upfront costs of electric vehicles.
- c) Countries need to define clear budgetary commitments to support zero emissions vehicles.
- d) Shifts to efficient and zero emission vehicles can provide green jobs opportunities in manufacturing or assembling, charging infrastructure etc.
- e) Countries are encouraged to review their electricity tariffs, to support a shift to electric vehicles through lower charging costs.
- f) Incentives for private sector investment in charging infrastructure is critical to ensure wide coverage and alleviate range anxiety among consumers.
- g) Innovative funding and financing models that are cost effective need to be explored including leasing and battery swapping schemes.

4. Enhancing Capacity

- a) There is need for capacity enhancement of all stakeholders on the importance of shifting to efficient and zero emissions vehicles. Governments specifically need capacity building to implement the requirements of new legislation on zero emission vehicles.

- b) Capacities need to be targeted to different stakeholders like parliamentarians, private sector importers, governments etc.
- c) Setting up of inter-sectoral national teams is encouraged to support development and implementation of cleaner fuel and vehicle policies.
- d) Global and regional exchanges and experience sharing are encouraged.
- e) It was noted that some countries in the Global South are ahead in introducing cleaner and zero emission like Mauritius and Chile. Sharing of lessons from these countries is welcomed to support the upscale of efficient and zero emissions vehicles in the Global South.
- f) Training of mechanics and garage owners is critical to alleviate the fear of lack of repair services for electric mobility.
- g) There is need to enhance R&D to support local manufacturing or assembly and design of electric vehicles for durability. Such R&D is needed to adapt electric vehicles to local conditions like extreme heats, dust etc.
- h) Considerations for gender parity important.
- i) Effective transfer of technology from the Global North to South needs to happen.
- j) Safe disposal of end-of-life vehicles, batteries need to be addressed and can be tied to vehicle scrappage programs. Case of Egypt was provided where old polluting taxis were replaced with newer cleaner fleets. In addition, Extended Producers Responsibility schemes might be a good solution for the safe disposal of end-of-life vehicles and batteries.
- a) Piloting of zero emissions vehicles is recommended as proof of technology and to support upscaling.
- b) Zero emission vehicles need to match social, cultural, terrain and economic needs for the regions.

5. Consumer awareness

Consumer behavior was noted as critical in the shift to efficient and zero emissions vehicles. Majority of the population in the Global South still fear electric vehicles as they see the technology as new. Hence need avert such perceived risks.

- c) Programs to educate consumers such as through vehicle labeling are proposed.
- d) Development of communication tools targeting decision makers, automobile associations and public are proposed.
- e) It was noted that electric vehicle associations in some countries have also played a role in educating consumers on the viability and repair of electric vehicles.
- f) Communication materials need to be tailored in several languages for various regional uses.

6. Regional Approach

- a) A regional approach may be appropriate for implementation of some standards and regulations. However, it was noted that some of the policies still need to be adapted to local and national conditions.
- b) There is need to take advantage of regional initiatives such as SICA's sustainable energy program and regional ministerial meetings to promoting zero emissions vehicles.
- c) There are various Support and Investment Platforms formed under the global electric mobility project that will be important platforms for training and to share regional experiences.

- d) UNEP is requested to coordinate national submissions of actions taking place in the Global South towards zero emissions vehicles at the COP27.

7. Sustainable Mobility

- a) It was noted that no car is better than an efficient car hence the need to promote efficient and zero emissions public transport and non-motorized transport. This can be done through safe and adequate walking and cycling lanes. The avoid-shift-improve approach to sustainable mobility is recommended.
- b) Sustainable mobility plays an important role in ensuring development goals in the Global South are met. International organizations and development partners are requested to support this shift to efficient and zero emissions vehicles in the Global South to support these development goals as well as meet global climate targets.

8. Access to finance

- a) It was noted that access to capital in all forms is a barrier for the introduction of sustainable mobility. Often, this restricted access to finance is a result of a lack of bankable projects rather than absence of resources. It is therefore important to build on relatively small grant projects to put in place the conditions - including capacity, awareness, policy and planning readiness – to access sustainable mobility finance.