



UNITED
NATIONS

ADVANCE UNEDITED VERSION

UNEP/EA.6/3



United Nations
Environment
Programme

Distr.: [Distribution]
[Date]

Original: English

United Nations Environment Assembly
of the United Nations Environment Programme
Sixth session
Nairobi, 26 February–1 March 2024
Item 5 of the provisional agenda*
**International environmental policy and governance
issues**

Progress in the implementation of resolution 4/3 on Sustainable Mobility¹

Report of the Executive Director

Introduction

1. In paragraph 4(f) of its resolution 4/3 on Sustainable Mobility, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP to prepare a report on actions undertaken within the scope of the present resolution for submission to the Environment Assembly at its sixth session.
2. This report provides an update on progress made in the implementation of this resolution in terms of the request in paragraph 4(f)².

I. Progress in the implementation of resolution 4/3

3. **The transport sector is responsible for nearly a quarter of all energy-related CO₂ emissions, with emissions growing faster than any other sector.** An integrated approach that combines electric vehicles, cleaner fuels and vehicles standards, public transport, and adequate infrastructure for activity mobility (walking and cycling) is needed to promote sustainable mobility to meet the targets of the Paris Climate Agreement. Actions taken to move toward sustainable mobility will not only result in a reduction of greenhouse gas emission and short-lived climate pollutants but will also greatly contribute to improving air quality and human health particularly in urban areas. It will also contribute to a sustainable pathway towards achieving the Sustainable Development Goals.
4. **According to the Intergovernmental Panel on Climate Change (IPCC), to remain in line with 1.5-degree Celsius pathway, electric vehicles will have to displace fossil-fueled vehicles by 2035-2050.** Thus, to meet the targets of the Paris Climate Agreement, it is essential that low- and middle-income countries (LMICs), where vehicle growth is highest, are part of a global shift to zero emissions electric mobility.
5. **In recent years, electric vehicles have undergone significant technological improvements.** These improvements have not only lowered their costs but also reduced their environmental footprint

* UNEP/EA.6/1.

¹ <https://wedocs.unep.org/bitstream/handle/20.500.11822/28469/K1901060.pdf?sequence=3&isAllowed=yg>

² (f) Preparing a report on actions undertaken within the scope of the present resolution for submission to the Environment Assembly at its sixth session.

and increased their utility, especially for electric two- and three-wheeler motorcycles, and electric buses. Targets to fully shift to electric mobility have been set by many developed countries, for example Norway that has set a target to fully phase out conventional new vehicle registration by 2025³. The “COP26 Declaration on Accelerating the Transition to 100% Zero Emission Cars and Vans” provides an overview of all developed and low and middle-income countries, which aim at transitioning to 100% zero emission vehicles (new registrations) by 2040⁴. Similarly, with increasing affordability of electric vehicles, coupled with the opportunities to utilize locally produced renewable energies and to reduce expenditure on fuel imports, among many other co-benefits, there is an increase in the uptake of these vehicles in more LMICs.

6. **Traditionally, emissions from fossil-fueled vehicles are and have been a major source of outdoor air pollution especially in urban areas.** While cleaner fuels and vehicle emission standards to reduce these harmful air pollutants have been in place in the developed world for many decades, the same is not true in developing countries. In addition, a majority of LMICs rely on imported used vehicles to meet their increasing mobility needs. The lack of minimum standards to incentivize import of cleaner vehicle technologies, coupled with poor fuel quality, is a leading cause of high vehicle emissions in many cities in LMICs. Sustainable mobility in LMICs has been at the core of UNEP’s work for the past 20 years. UNEP has continued to support governments at all levels to develop and adopt sustainable mobility policies and strategies through the Sustainable Mobility Unit that is housed within the Economy and Industry Division in UNEP. This work is undertaken through partnerships, including with other UN agencies and multilateral Development Banks and major actors at regional and global level. In all its sustainable mobility work areas, UNEP provides LMICs with (i) technical support to collect and analyze sustainable mobility baseline data and trends; (ii) training and capacity building support to develop and implement sustainable mobility policies and standards; and (iii) outreach and awareness raising support to sensitize the public and decision makers on low-carbon mobility options.

A. UNEP’s sustainable mobility activities can be categorized into 4 main areas as detailed below:

7. **Promoting Cleaner Fuels and Vehicles Standards:** UNEP has been promoting cleaner fuels (unleaded petrol and low Sulphur fuels) and low emission vehicles standards in LMICs since 2002. Through the Partnership for Clean Fuels and Vehicles (PCFV) whose Secretariat is at UNEP, leaded petrol was eliminated worldwide in July 2021. The phase out of leaded petrol in Algeria in 2022 brought to completion a process that began for 117 countries that were still using leaded petrol in 2002. UNEP’s collaborative approach with partners at all levels, as well as a sub-regional approach to the harmonization of cleaner fuels and vehicles standards are part of the reasons for this success.

8. **For optimal vehicle emissions reduction, a systems approach that combines cleaner fuels with stricter vehicle emission standards is promoted.** Using this approach, UNEP is working with LMICs to adopt and implement low Sulphur petrol and diesel fuels (50 parts per million and below) and EURO 4/IV equivalent and higher vehicle emissions technologies. To date, forty-three countries have adopted low Sulphur fuels and thirty-eight countries stricter vehicle emission standards. About half of these countries adopted these standards since 2019 during the implementation of this resolution. However, some countries, particularly in Africa, are yet to fully implement regionally adopted harmonized fuels and vehicles standards.

9. **Urban buses are a major source of particulate matter and black carbon emissions,** accounting for 25% of transportation-related black carbon emissions worldwide. An urban bus is estimated to emit 250 times or more black carbon compared to a petrol passenger vehicle travelling the same distance. Trucks have also been identified as another important source of these two pollutants. UNEP is one of the lead implementing partners of the Climate and Clean Air Coalition (CCAC) Heavy Duty Vehicle Initiative that primarily focuses on reducing emissions from buses and trucks. Heavy-duty vehicle technologies already exist today in the global market to minimize these two pollutants. Through this initiative and working with the International Council on Clean Transportation (ICCT), a non-profit research think tank based in the USA, and other partners, cities in Africa, Asia and Latin America have been supported to commit to soot-free buses technologies. Since 2019, six African cities have been supported to develop soot-free buses roadmaps based on cost-benefit analysis of various cleaner bus technologies. A guideline for Africa on financing and procuring soot-free

³ <https://elbil.no/english/norwegian-ev-policy/>

⁴ COP26 declaration on accelerating the transition to 100% zero emission cars and vans: <https://acceleratingtozero.org/the-declaration/>; Signatories of the COP26 declaration: <https://acceleratingtozero.org/signatories-views/>

buses, including electric buses was developed and disseminated at a sub-regional workshop in November 2021. The Association of Southeast Asian Nations (ASEAN) sub-region is also being supported to develop cleaner standards for trucks.

10. Regulating the quality of Used Vehicles: In 2020, UNEP published a report that analyzed the flow and scale of used light duty vehicles (LDVs) from the three largest exporters of used vehicles – the European Union (EU), Japan, and the United States of America (USA)⁵. The report also reviewed the regulatory environment in 146 countries that import used vehicles. The key findings were these three exporters of used LDVs exported 14 million used LDVs worldwide between 2015 and 2018. The EU was the largest exporter with 54 per cent of the total followed by Japan (27 per cent) and the USA (18 per cent). Seventy per cent of exported LDVs head to developing countries. Africa imported the largest number (40 per cent) in the period studied followed by Eastern Europe (24 per cent), Asia-Pacific (15 per cent), the Middle East (12 per cent) and Latin America (nine per cent). An update of this report was published in 2021.

11. In support of UNEP's study, the government of Netherlands also undertook a study on the quality of used vehicles exported from Dutch ports⁶. The study found that some of the used vehicles exports especially to West Africa match end of life vehicles under disposal in the Netherlands. Countries that had put in place regulations such as Morocco were importing good quality used vehicles. In July 2023, the EU adopted a proposal for a new Regulation on End-of-Life Vehicles, which contains new measures on the export of used vehicles. This will have an impact on the quality of used vehicles exported from the EU as each year over six million vehicles reach their end of life in Europe.

12. UNEP is working with both used vehicles importing countries and exporting countries to put in place minimum standards for used vehicles import/export. UNEP, with funding from the UN Road Safety Fund, the CCAC, the Netherlands and Sweden is supporting countries and sub-regions to put in place standard to ensure import of cleaner and safer used vehicles. Training and capacity building have been carried out in West and East Africa. Plans are underway to support Mongolia and Cambodia in Asia; the Latin America and Caribbean region; and Southern and Central Africa.

13. Supporting the shift to Electric Mobility: Since the launch of the Global Fuel Economy Initiative (GFEI) in 2009, UNEP has supported over 70 LMICs to develop fuel economy policies. A UNEP-funded report⁷ that analyzed the fuel economy trends in all these countries was published in June 2023. This work to improve fuel economy eventually included the first policies and regulations for electric vehicles in low and middle income-countries (LMICs) and evolved to what is now UNEP's Global Electric Mobility Programme. As of today, the UNEP led programme is active in 60 countries, implementing more than USD 130 million in grants to support the shift to electric mobility in LMICs.

14. UNEP's Global Electric Mobility Programme is active at the global, regional and country levels including four global thematic working groups and partnerships on: i) electric two and three-wheelers; ii) electric light duty vehicles, iii) electric heavy-duty vehicles; and iv) vehicle charging infrastructure, renewable power integration and batteries; four regional support and investment platforms in i) Africa; ii) Asia & the Pacific; iii) Eastern Europe, Central & Western Asia; and iv) Latin America & the Caribbean, and 60 national electric mobility projects.

15. The national electric mobility projects are focusing at: i) Building capacity and creating awareness; ii) Establishing roadmaps and strategies, iii) Developing national policy frameworks; iv) Creating business models and financing schemes; v) Tackling the issue of used EV import, battery end-of-life and circularity; and vi) Piloting electric vehicles on the ground. At the national level, the programme has resulted in numerous policies and standards being drafted and adopted around the world. The policy options promoted in countries include vehicle taxation based on vehicle efficiency, fast tracking of new technology introduction through fiscal incentives and improved regulation and other measures such as fuel economy labelling.

16. The regional support and investment platforms are implemented in partnerships with development banks such as the Asian Development Bank (ADB) and the European Bank for Reconstruction and Development (EBRD) to accelerate the introduction of e-mobility through development of bankable projects and implementation support. Capacity building and training programmes are implemented via these platforms – for example, a first e-mobility forum was recently

⁵ <https://www.unep.org/resources/report/used-vehicles-and-environment-progress-and-updates-2021>

⁶ <https://www.ilent.nl/documenten/rapporten/2020/10/26/rapport--used-vehicles-exported-to-Africa>

⁷ <https://www.unep.org/resources/report/fuel-economy-passenger-cars-global-south>

held in Tanzania, bringing together more than 100 e-mobility practitioners from countries across the African continent⁸.

17. **The global thematic working groups are supporting the development of reports, studies and analytical tools.** Recently, the programme has published a first report on “Electric Vehicle Lithium-ion Batteries in Lower- and Middle-income Countries – Life Cycle Impacts and Issues”⁹.

18. **The on-line electric mobility toolbox**¹⁰ developed under the programme makes accessible reports, studies and tools developed by UNEP and partners such as the Urban Electric Mobility Initiative (UEMI), the International Energy Agency (IEA), the German development agency GIZ, among others.

19. **The comprehensive support has helped countries to leapfrog to cleaner vehicle technologies, including electric vehicles.** Two sub-regions – the 15 countries of the ECOWAS (Economic Community of West African States) countries and the 10 countries of the ASEAN have adopted of fuel economy roadmaps, including the promotion of electric vehicles. Countries such as Kenya have implemented comprehensive incentives and regulations to accelerate the introduction and local assembly and manufacturing of electric vehicles.

20. **Small private sector start-ups have been supported through seed-funding and** technical assistance to develop products and business models adapted to the introduction of electric mobility in LMICs, and vehicles and charging infrastructure have been piloted to generate the much needed on the ground experience with the technology.

21. **Supporting Active Mobility (walking and cycling):** Across the world, many people rely exclusively on walking and cycling as their primary forms of mobility. The modal share of active mobility can be as high as 70-90% in some cities and data shows 1 billion people in Africa walk and cycle every day as their main mode of transport. Despite the high societal costs, increasing the road space for cars continues to be a priority for investors and governments. Lack of prioritization in walking and cycling policies and lack of investment in the necessary infrastructure increases dependence on private cars and other motorized vehicles (even for short journeys) and an increase in traffic congestion. This results in deteriorating air quality, negative climate change externalities, poor access to goods and service and millions of road fatalities and injuries (especially involving pedestrians and cyclists) and economic losses.

22. **UNEP has been supporting national and city governments and other stakeholders to** better prioritize active mobility investment and advocating globally and regionally for the cross-cutting role active mobility plays in contributing to the sustainable development goals and addressing strategic and local priorities – including climate change, air quality, green cities, accessibility, equity, improved health and well-being and beyond.

23. **UNEP’s work on active mobility is delivered through the ‘Share the Road’ initiative** and includes technical assistance, stakeholder engagement, policy development, capacity building, knowledge product and tool development, partnership building and global and regional advocacy. The UNEP’s Share the Road programme¹¹ has also worked with partners to develop a series of knowledge products and reports to improve knowledge and capacity for prioritizing active mobility. A recent report¹² prepared jointly with UN HABITAT and Walk21 baselines the conditions of active mobility in all 54 African countries and shares inspiring best practice from within the region.

24. **The Pan African Action Plan for Active Mobility (PAAPAM) is a first of its kind** regional action plan which sets out commitments for African governments to work towards over the next ten years. It was drafted in 2023 by UNEP in consultation with government and other stakeholders and will be published in 2024. The Action plan is a follow-on initiative of UNEP’s and partners support for countries including Kenya, Burundi, Uganda, Ethiopia, Rwanda, Zambia and Egypt in developing national and city policies for walking and cycling and other technical assistance. Other countries supported with policy development and technical assistance include Brazil, Mexico and Indonesia. UNEP also led the establishment of an Africa Network for Walking and Cycling bringing together over 200 organizations with a common goal of making active mobility safe and comfortable for all.

⁸ <https://www.unep.org/events/workshop/africa-e-mobility-forum>

⁹ <https://www.unep.org/resources/report/electric-vehicle-lithium-ion-batteries-lower-and-middle-income-countries>

¹⁰ <https://emobility.tools/>

¹¹ <https://www.unep.org/resources/report/walking-and-cycling-africa-evidence-and-good-practice-inspire-action>

¹² <https://www.unep.org/resources/report/walking-and-cycling-africa-evidence-and-good-practice-inspire-action>

II. Lessons learned

25. **A harmonized approach at sub-regional, regional, and international levels has proven** to be a catalyst for more countries shifting to sustainable mobility policies and programmes. While efforts and progress have been made at local, sub-national and national levels, there are unlocked opportunities for countries to shift to more sustainable mobility options through developing and implementing harmonized commitments and agreements at sub-regional, regional and international levels. UNEP's work on promoting cleaner fuels and vehicles, electric mobility and active mobility shows that while sustainable mobility solutions must be embedded in local context, their formulation, implementation and impact will be enhanced through a sub-regional approach.
26. **Demonstration projects can propel the uptake of sustainable mobility technologies and practices.** Demonstration projects, in particular in LMICs, are able to showcase tangible results and the potential to upscale and mobilize greater support to transition to sustainable mobility. One example is how electric 2&3 wheelers demonstration projects implemented by UNEP have helped countries to adopt these technologies at a larger scale.
27. **Stakeholder engagement and public participation are critical. UNEP's campaign on phasing out lead in petrol worldwide** is an example of how meaningful engagement of all stakeholders and the public can shape policies. Continuous efforts should be made in communication, awareness-raising, and information and knowledge sharing to leverage the expertise of various stakeholders, gain public support, and place sustainable mobility on the agenda of decision-makers across sectors and around the world.
28. **Training and capacity building tailored to country-specific needs are key to the full** implementation of sustainable mobility strategies. Although more countries have put in place standards, regulations, and laws to promote sustainable mobility, implementation and enforcement have not always been guaranteed. Tailored training and capacity building on implementation mechanisms will support countries to comply to adopted sustainable mobility regulations. In addition, capacity building on data and information collection, analysis and assessment is vital to informing decision makers of the need to act now. Efforts should also be made to enhance coherence and coordination of various capacity-building activities carried out by different actors.
29. **Technical assistance in cooperation with financing institutions to develop bankable** projects is much needed. Very often, slow uptake of sustainable mobility measures is not caused by absence of funding but by the capacity to develop bankable sustainable mobility projects. It is therefore essential to provide targeted support to build the capacity for the development of sustainable mobility projects.

III. Recommendations [and/or conclusions] and suggested actions

30. As a result of high urbanization and motorization rates in LMICs, sustainable mobility will continue to play a critical role in ensuring that these countries achieve the desired economic growth while minimizing the negative impacts including of air pollution and climate. A multipronged approach that includes low carbon public transportation, safe and adequate infrastructure for active mobility, and zero emissions vehicles are key to shifting to more sustainable mobility.
31. Due to high growth rates in vehicle fleets and energy use in the transport sector, and a lack of requisite standards in LMICs, governments particularly in Global South are encouraged to develop and implement sustainable mobility policies and regulations.
32. UNEP will continue to promote a global shift to electric mobility, while focusing on issues of used electric vehicles, battery end-of-life, circularity, links to renewable energy, opportunities for local manufacturing, electrifying public transportation and job creation that are a priority in the Global South.
33. A global transition to cleaner fuels and vehicle standards is recommended. UNEP will continue to support LMICs to transition to low Sulphur fuels and stricter vehicle regulations for both new and used vehicles.
34. Member states are urged to prioritize active mobility as part of the solution to shifting to low carbon urban mobility. UNEP will continue to promote national and city level policies and programs for increased investments for active mobility.
35. UNEP will continue to carry out training and capacity building for LMICs on policies and innovative technologies to sustainable mobility.

36. Communication and awareness raising through knowledge sharing platforms, sharing of best practices, technical reports, toolkit, and websites will continue to be prioritized to support North – South and South-South cooperation.

37. Multiple partners are engaged in UNEP’s sustainable mobility actions including regional and international partners, civil society organizations, member states, local governments, the private sector, and academia. UNEP will continue to engage with all these partners.

IV. Suggested Actions

38. Member states are urged to:

(a) Join international efforts to switch to low carbon mobility to help them meet the Paris Climate Agreement, improve urban air quality and support sustainable development goals.

(b) Shift to cleaner fuels and vehicles standards to minimize harmful emissions.

(c) Set targets to zero emissions mobility and develop roadmaps to phase out fossil-fuels vehicles.

(d) Support the global shift to electric mobility, while ensuring that Global South is not left behind by including issues of used electric vehicles, battery end-of-life and circularity.

(e) Encourage investments in and regulation of public transport to be safe, licensed and efficient. Considering that a commuter bus carries between 40-80 passengers, such investments can translate to a considerable reduction in the burden of private vehicle traffic, reduction of CO₂ emissions and significantly enhance road safety for walkers and bikers.

(f) Adopt integrated urban low carbon mobility pathways that prioritize active mobility; and

(g) Make available financial and technical resources to fulfil the ambitious mandate of UNEP’s sustainable mobility programme.
