

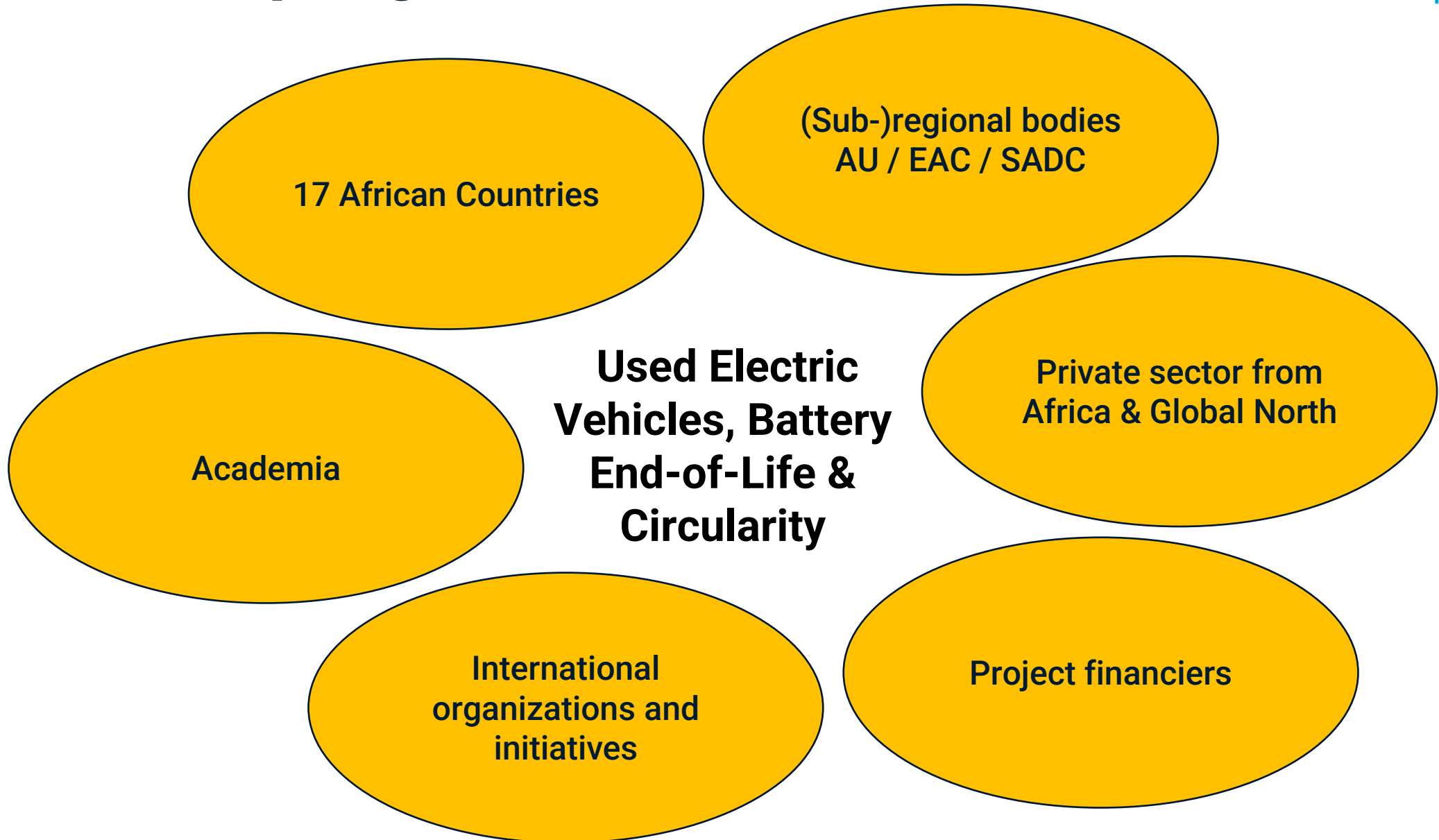
Global Electric Mobility Programme

Used Electric Vehicles,
Battery End-of-Life & Circularity
Africa Workshop
April 24 / 25, 2024

WELCOME



House keeping & Tour de table



17 African Countries

(Sub-)regional bodies
AU / EAC / SADC

**Used Electric
Vehicles, Battery
End-of-Life &
Circularity**

Private sector from
Africa & Global North

Academia

International
organizations and
initiatives

Project financiers

Opening Remarks

Niklas Hagelberg
Climate Change Coordinator
UNEP



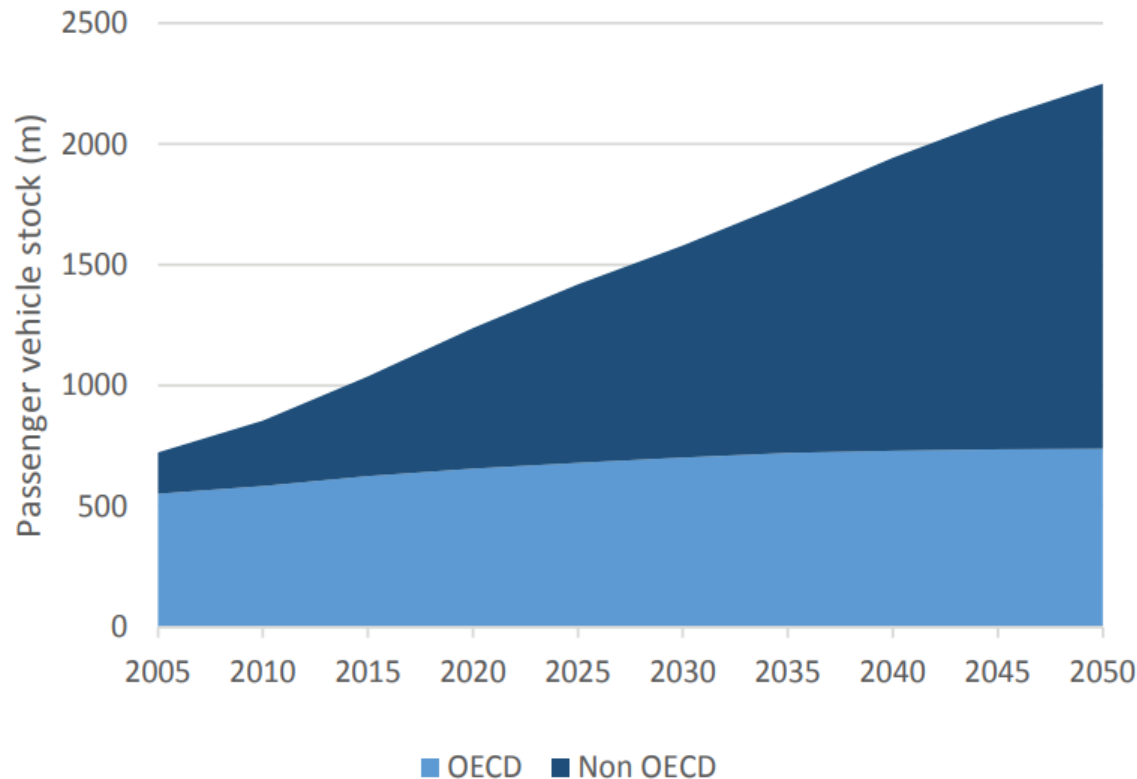
Introduction

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The global vehicle fleet is growing

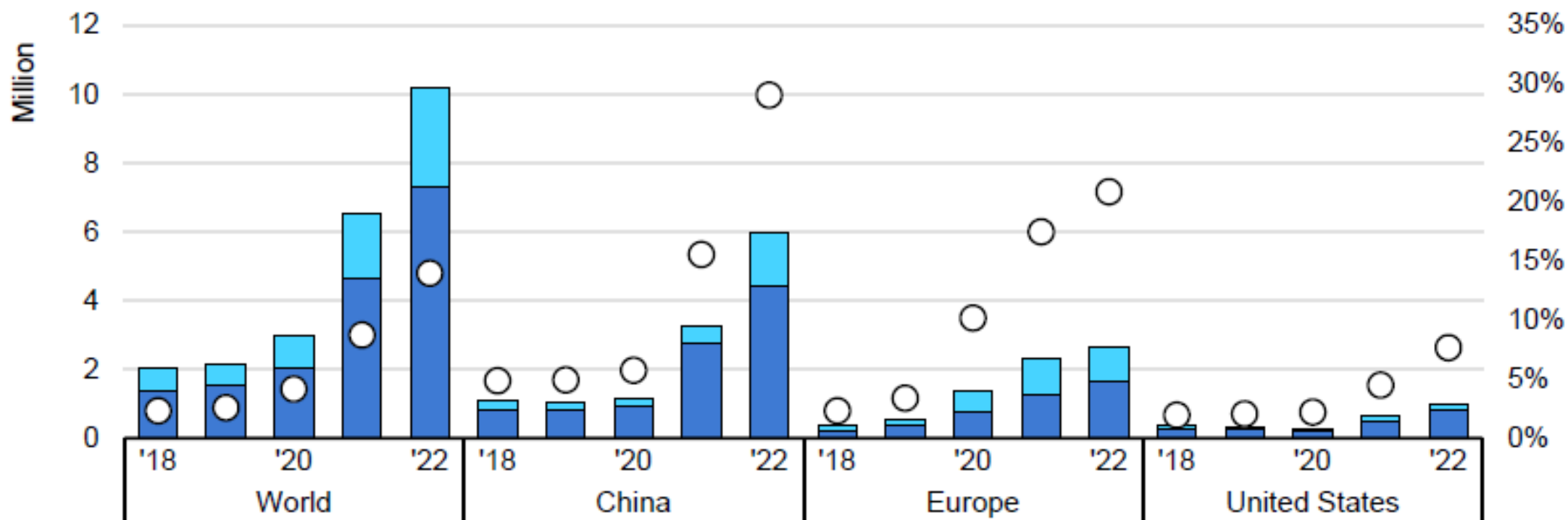


The global vehicle fleet is set to double by 2050

All of this growth, 1+ billion vehicles, will take place in non-OECD countries

The transport sector is set to go from one quarter to one-third of all energy related GHG emissions

Electric car registrations and sales share in selected countries & regions, 2018-2022



Electric matatus in Kenya



BASIGO - Kenya

Roam - Kenya



Electric Bus Rapid Transit (BRT) in Senegal



E-BRT in Dakar



Electric tuk tuks in Tanzania



Ziotio UN Limited - Tanzania



Electric motorcycles in Togo



Mauto / Spiro Togo

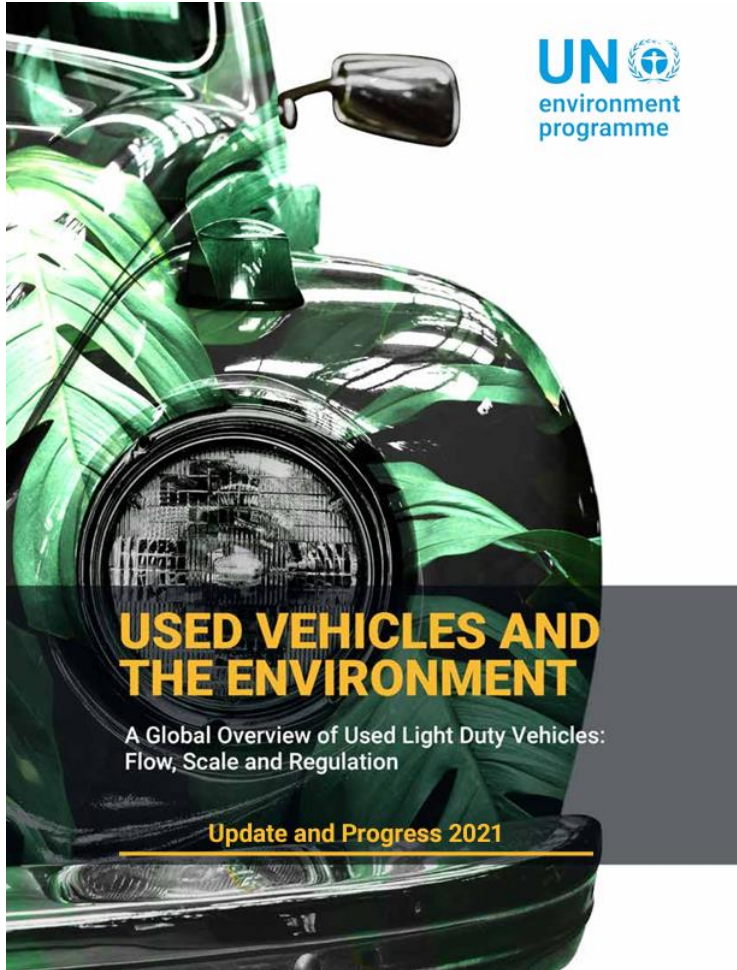


And...



...end-of-life EVs
in Kenya

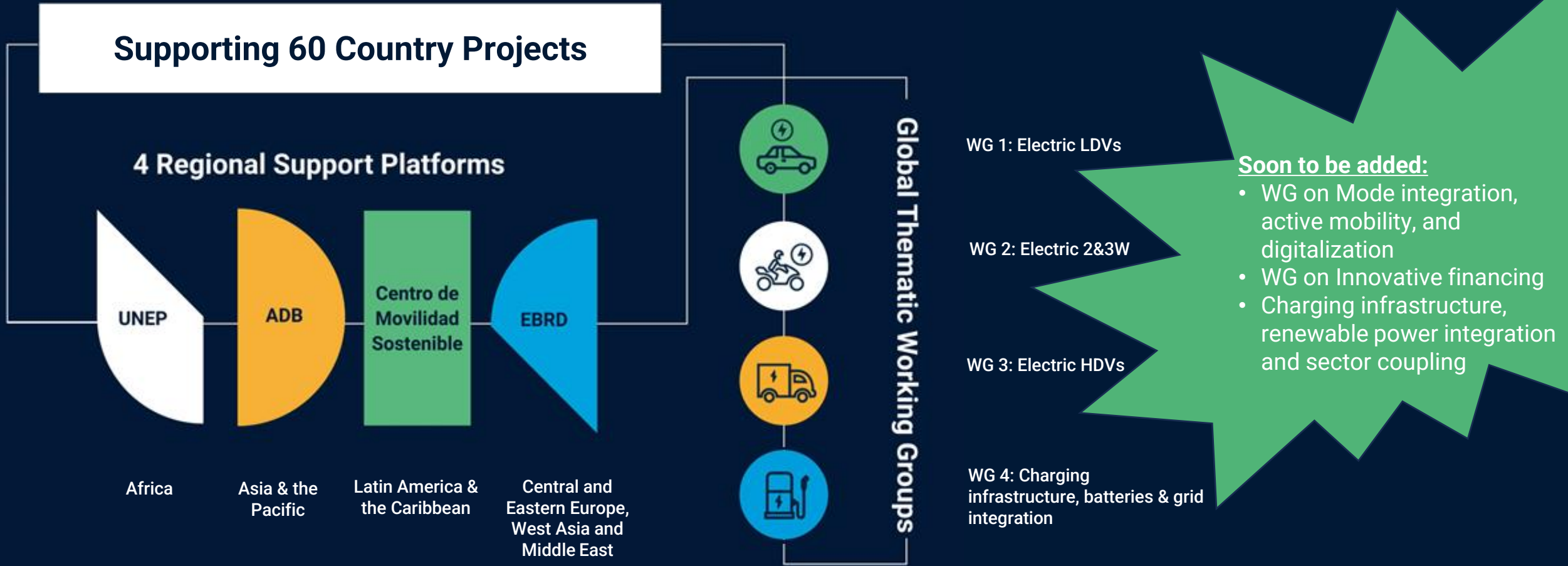
Used vehicle imports and electric mobility




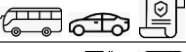
















More than 90% of all cars registered in Sub-Saharan Africa for the first time are used imported (with the exception of South Africa)






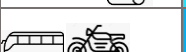
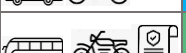







The African continent will see significant numbers of used imported EVs within the next five years








Structure of the Programme
























- Supports 60 low and middle-income countries with more than USD 130 million in grants at the national, regional and global level
- Funded by the GEF, the German Climate Initiative, the EU, the FIA Foundation, Climateworks and bilateral development aid
- Jointly implemented with partners such as ADB, EBRD, the World Bank, IEA, Centro de Movilidad Sostenible, UNDP, UNIDO and the SOLUTIONSplus project

Africa		
Burundi		UNEP
Cabo Verde	TBC	UNIDO
Cote d'Ivoire		UNEP / UNIDO
Ethiopia		UNEP
Ghana		UNEP
Kenya		UNEP
Madagascar		UNEP
Mauritius		UNDP
Rwanda		UNEP / SOL+
Senegal		UNEP
Seychelles		UNEP
Sierra Leone		UNEP
South Africa		DBSA
Tanzania		UNEP / SOL+
Togo		UNEP
Tunisia		UNIDO
Uganda		UNEP
Zambia		UNEP
Zimbabwe		UNEP

Asia & the Pacific		
Bangladesh		UNDP
Fiji		UNEP / ADB
India		UNEP / ADB
Indonesia		UNDP
Malaysia		UNIDO
Maldives		UNEP
Nepal		UNEP / SOL+
Palau		UNEP
Philippines		UNEP / SOL+ UNIDO
Solomon Islands		UNEP
Sri Lanka		UNEP
Thailand		UNEP / UNIDO
Vanuatu		UNEP
Viet Nam		UNEP / SOL+

Central & Eastern Europe, West Asia, Middle East		
Albania		UNIDO
Armenia		UNEP
Azerbaijan		UNEP
Jordan		UNIDO
Lebanon		UNDP
Ukraine		UNEP / EBRD
Uzbekistan		UNDP

Latin America & the Caribbean		
Antigua & Barbuda		UNEP
Argentina		UNEP
Belize		UNEP
Colombia		UNEP
Costa Rica		UNEP
Chile		UNEP
Cuba		UNEP
Dominican Republic		UNEP
Ecuador		UNEP / SOL+
El Salvador		UNEP
Grenada		UNEP
Guatemala		UNEP
Honduras		UNEP
Jamaica		UNDP
Mexico		UNEP
Nicaragua		UNEP
Panama		UNEP
Paraguay		UNEP
Peru		UNDP
St. Lucia		UNEP
Uruguay		UNEP / SOL+

About the country projects



**Building capacity
and creating
awareness**



**Establishing
roadmaps and
strategies**



**Developing
national policy
frameworks**



**Creating
business models and
finance schemes**



**Piloting
electric vehicles
on the ground**



Used EVs, battery end-of-life & circularity in LMICs

Challenges

- Many countries reluctant to promote electrification of mobility without battery EoL solution
- No proper e-waste collection programs in many LMICs
- Reuse of lithium-ion batteries (LIBs) still complicated (knowledge, software, battery design)
- Recycling not yet happening at scale (supply, price, technology, knowledge)

Opportunities

- Avoid environment/ waste issue → How to design EVs and EV batteries to facilitate longevity and recyclability in LMICs?
- Repair LIBs → How to ensure used EVs and their batteries can be repaired in the destination countries?
- Reuse LIBs for other purposes → How to create local value chains and employment for second life and up-cycling of used EV batteries?
- Recycle, incl processing → How to re-integrate EoL LIBs into global value chains and how to create local value?

Policy gaps

- Recycling of used batteries and circularity is addressed in all major EV producing regions (the EU, China, Japan, US, India)
- Policy work seems to concentrate on the EV / LIB manufacturing and issues related to mining, including environmental, social and health standards
- Very little is happening to address the topic of Global North to South used EV flows and battery second life / end-of-life / circularity in LMICs

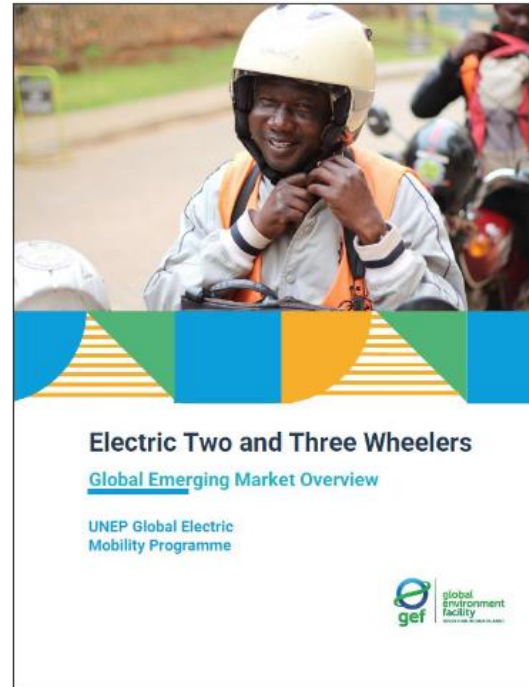
UNEP's new work stream will address the lack of regulation for used EVs, battery end-of-life and circularity in LMICs

E-Mobility toolbox

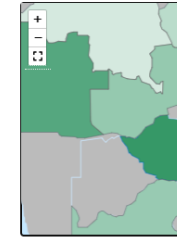
All e-mobility knowledge products including policy briefs, technical guidelines, business models, financing schemes are accessible through the online E-mobility toolbox: <https://emobility.tools/>



<https://emobility.tools>



Zimbabwe



Zimbabwe's EV market is small, while the country grapples with grid instability and a long economic downturn.

It has however developed a road map, offers fiscal incentives, and has industry strategies to boost adoption. While the focus has been more on 4W vehicles than other segments, companies like Mobility 4 Africa are demonstrating the value of e-mobility for rural logistics and other local use cases.

Electric Vehicles

vehicle segments	total stock	annual sales	savings /100km
2W/3W	-	-	\$6.11
4W/LDW	20	20	\$13.96
Buses	0	0	\$55.06

Population 15,993,520
Urbanization 32%
GDP per capita \$1,851

EV Readiness

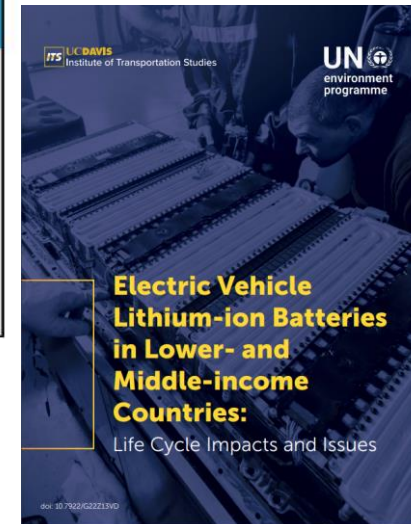
Overall	49%
- Energy	57%
- Technology	0%
- Policy	50%
- Finance	87%

Policies

E-Mobility:	
- strategy	yes
- regulations	no
Incentives:	
- fiscal	yes
- non-fiscal	no
EV policies:	
- industry	yes
- energy	no

Power

access	52%
stability	good
carbon intensity	392
	g CO ₂ e / kWh
electricity prices:	
- residential	\$0.01
- commercial	\$0.01
fuel price	\$1.65
price spread	\$12.69
EV ecosystem:	
- no. of companies	6
charging stations	0



Thank you!



global
environment
facility
INVESTING IN OUR PLANET

