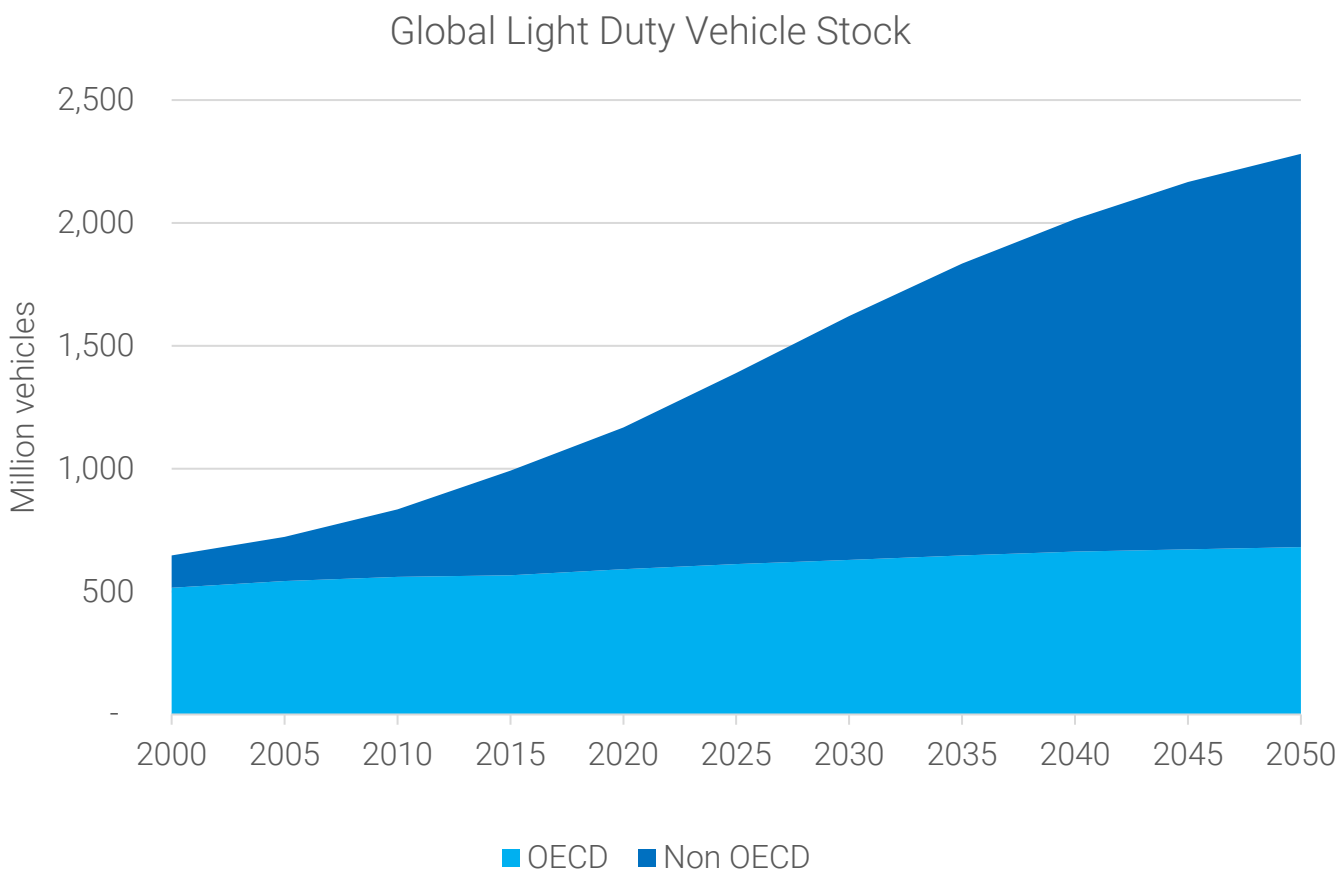
UN environment programme

The Environment Benefits of Cleaner Fuels for Africa

Rob de Jong

Head, Sustainable Mobility Unit UNEP

Estimated Growth of the Global Fleet



Data: IEA, 2019

UN Environment Assembly Resolution 11 (2022)

requests UNEP, with its partners, to support Member States

to collect information about and promote cleaner fuels and vehicles, including used vehicles,

for environment and health reasons

Two Track Approach

- Electrification
  - Busses, 2&3 wheelers, light duty vehicles
  - Pilots, policies, financing, national strategies, targets

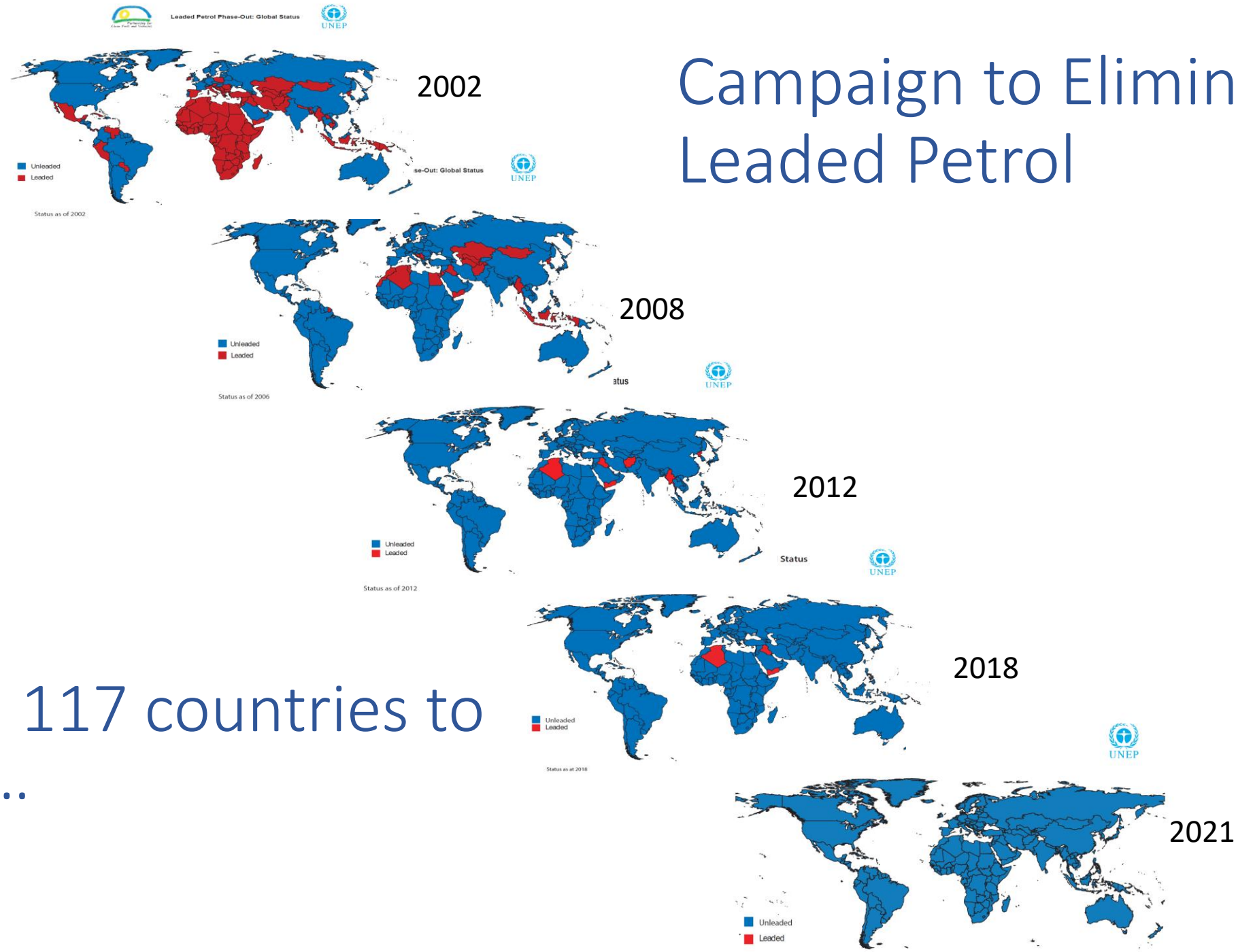
- Cleaner fuels and vehicles
  - Low sulfur fuels – fuels for Euro 4/IV vehicles
  - Euro 4/IV vehicles – diesel and petrol
  - Used vehicles

PCFV - leading global fuels & vehicles initiative

- The PCFV is the leading global programme to support the introduction of cleaner fuels and vehicles in low- and middle-income countries
  - Elimination of leaded petrol
  - Shift to low sulphur fuels
  - Cleaner and more efficient vehicles standards/ policies
- Public – Private Partnership
- 73 Partners
- Governance Rules
- UNEP Implementing Secretariat

Partnership for
Clean Fuels and Vehicles

Campaign to Eliminate Leaded Petrol



From 117 countries to Zero…

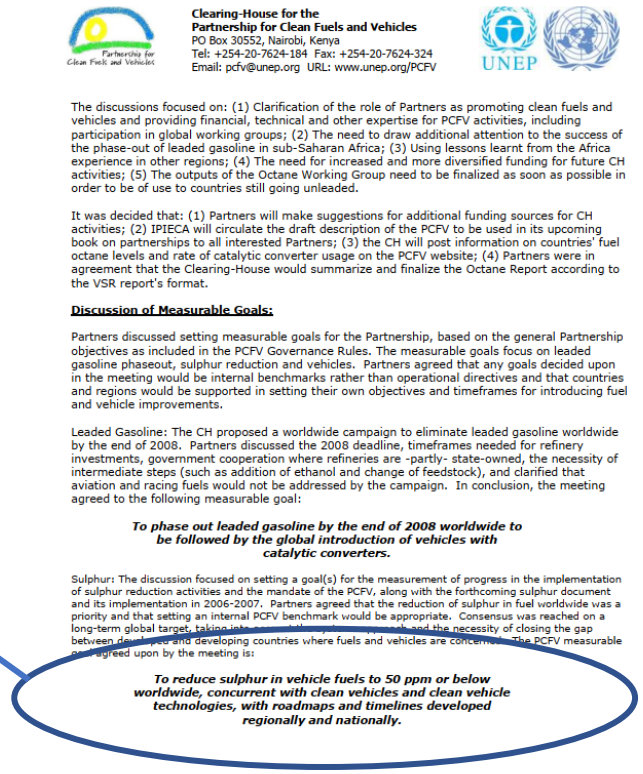
PCFV Sulphur Campaign

The PCFV measurable goal agreed upon by the PCFV Partners Meeting 2006 was:

To reduce sulphur in vehicle fuels to 50 ppm or below worldwide…

… concurrent with clean vehicles and clean vehicle technologies…

… with roadmaps and timelines developed regionally and nationally.



Clearing-House for the
Partnership for Clean Fuels and Vehicles
PO Box 30552, Nairobi, Kenya
Tel: +254-20-7624-184 Fax: +254-20-7624-324
Email: pcfv@unep.org URL: www.unep.org/PCFV

The discussions focused on: (1) Clarification of the role of Partners as promoting clean fuels and vehicles and providing financial, technical and other expertise for PCFV activities, including participation in global working groups; (2) The need to draw additional attention to the success of the phase-out of leaded gasoline in sub-Saharan Africa; (3) Using lessons learnt from the Africa experience in other regions; (4) The need for increased and more diversified funding for future CH activities; (5) The outputs of the Octane Working Group need to be finalized as soon as possible in order to be of use to countries still going unleaded.

It was decided that: (1) Partners will make suggestions for additional funding sources for CH activities; (2) IPIECA will circulate the draft description of the PCFV to be used in its upcoming book on partnerships to all interested Partners; (3) the CH will post information on countries' fuel octane levels and rate of catalytic converter usage on the PCFV website; (4) Partners were in agreement that the Clearing-House would summarize and finalize the Octane Report according to the VSR report's format.

Discussion of Measurable Goals:

Partners discussed setting measurable goals for the Partnership, based on the general Partnership objectives as included in the PCFV Governance Rules. The measurable goals focus on leaded gasoline phaseout, sulphur reduction and vehicles. Partners agreed that any goals decided upon in the meeting would be internal benchmarks rather than operational directives and that countries and regions would be supported in setting their own objectives and timeframes for introducing fuel and vehicle improvements.

Leaded Gasoline: The CH proposed a worldwide campaign to eliminate leaded gasoline worldwide by the end of 2008. Partners discussed the 2008 deadline, timeframes needed for refinery investments, government cooperation where refineries are -partly- state-owned, the necessity of intermediate steps (such as addition of ethanol and change of feedstock), and clarified that aviation and racing fuels would not be addressed by the campaign. In conclusion, the meeting agreed to the following measurable goal:

To phase out leaded gasoline by the end of 2008 worldwide to be followed by the global introduction of vehicles with catalytic converters.

Sulphur: The discussion focused on setting a goal(s) for the measurement of progress in the implementation of sulphur reduction activities and the mandate of the PCFV, along with the forthcoming sulphur document and its implementation in 2006-2007. Partners agreed that the reduction of sulphur in fuel worldwide was a priority and that setting an internal PCFV benchmark would be appropriate. Consensus was reached on a long-term global target, taking into [illegible] and the necessity of closing the gap between [illegible] and developing countries where fuels and vehicles are concerned. The PCFV measurable goal agreed upon by the meeting is:

To reduce sulphur in vehicle fuels to 50 ppm or below worldwide, concurrent with clean vehicles and clean vehicle technologies, with roadmaps and timelines developed regionally and nationally.

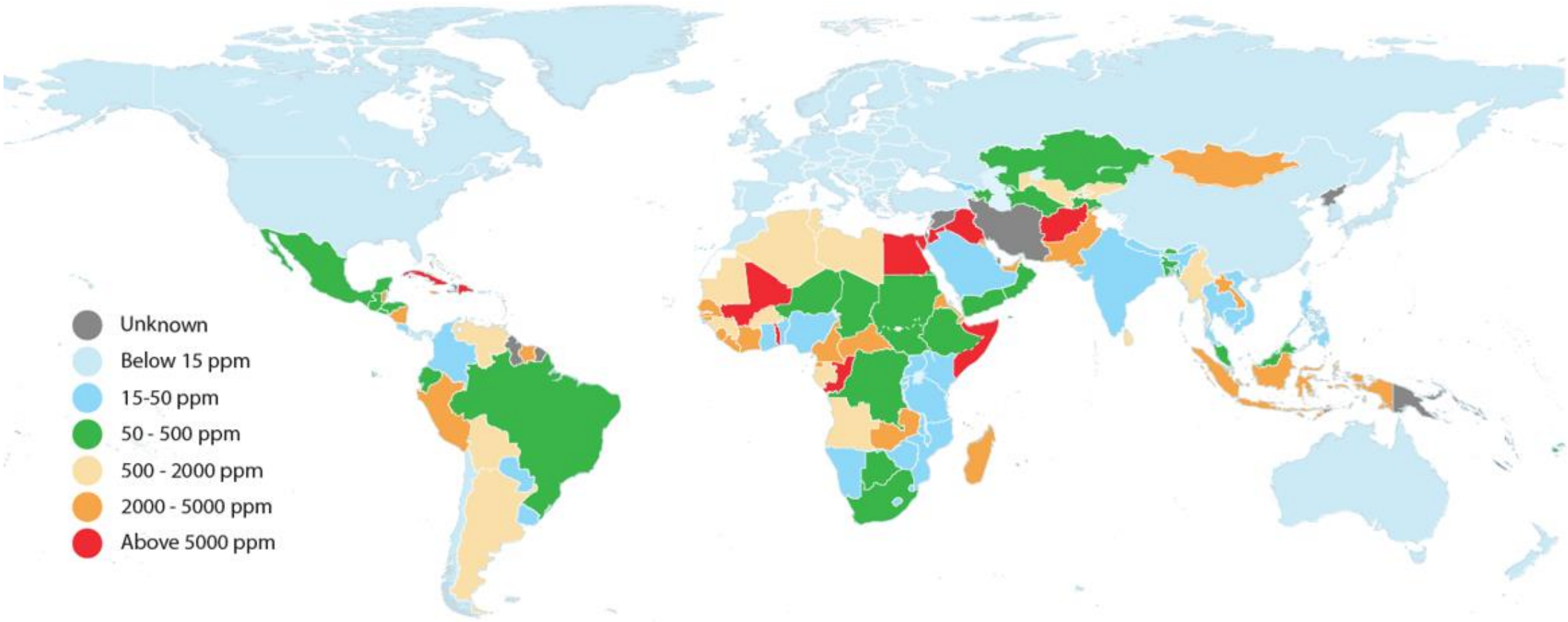
Countries with low sulphur fuels in 2006 (27)	27
Countries that switched to low sulphur fuels 2006-2021 with UNEP/ PCFV support (54)	54
Countries that switched without UNEP support (11)	11
ECOWAS Countries implementing new standards (11)	11

Countries with low sulphur fuels 92 (+11 ECOWAS) = 103

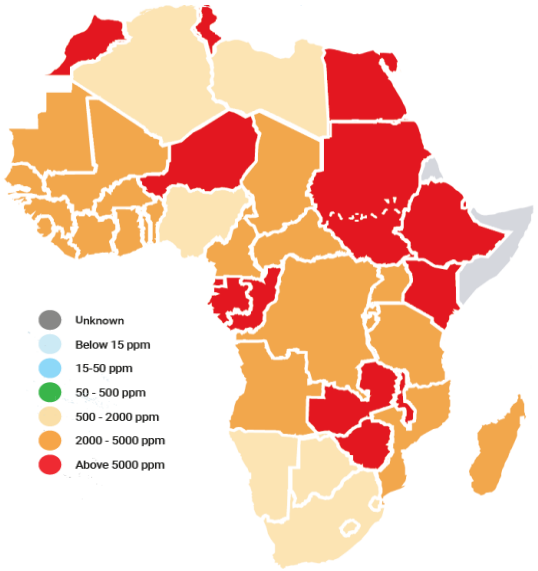
Countries still to switch to 50ppm	94

Countries remaining = 94

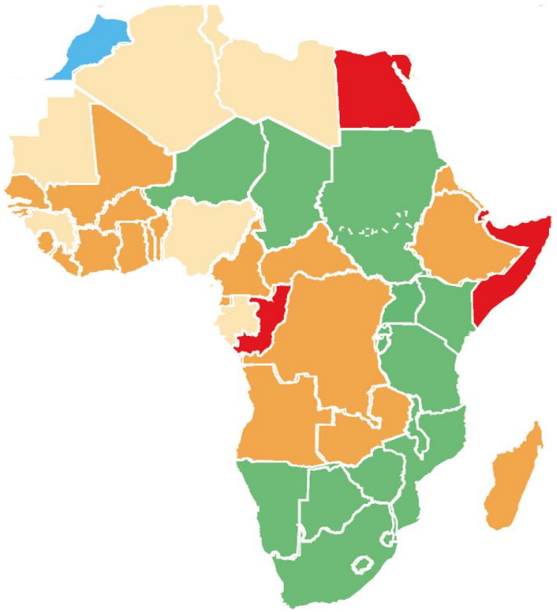
Sulphur campaign – global progress (diesel 2022)



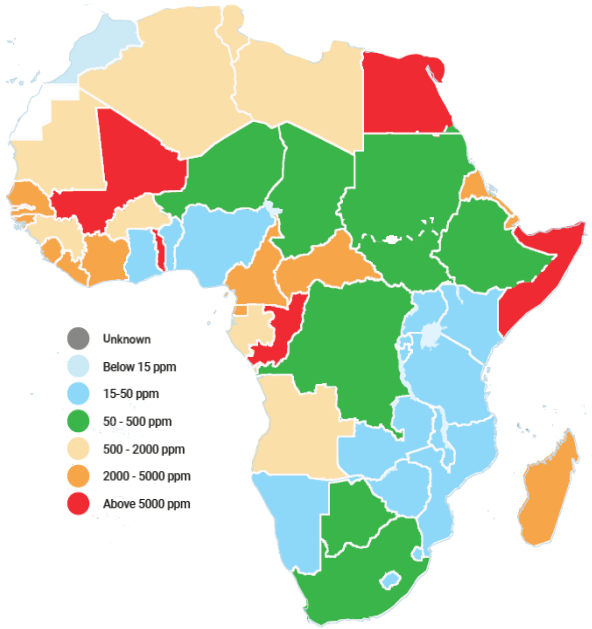
Africa Diesel Sulphur Levels 2006-2022



2006



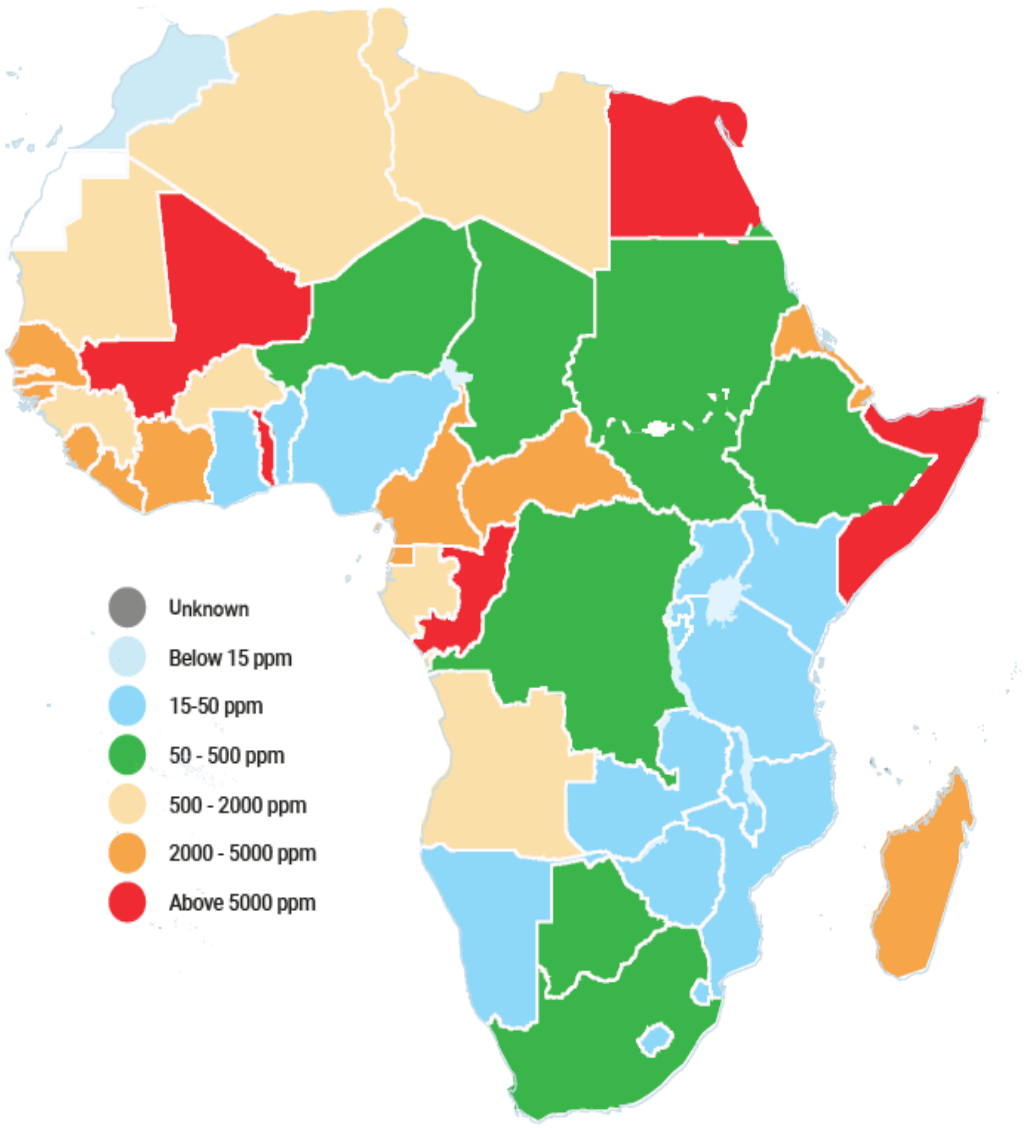
2014



2022

Africa Diesel Sulphur Levels

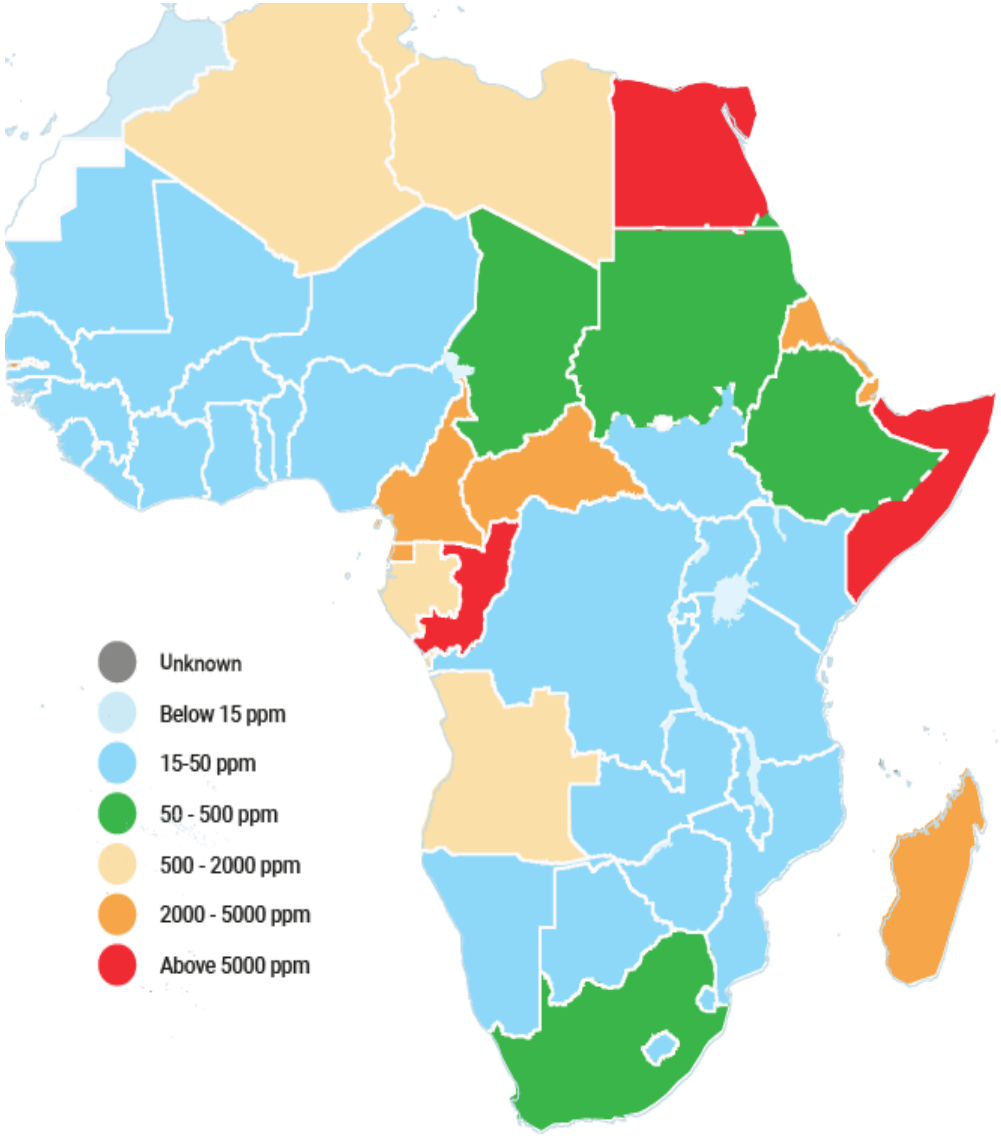
November 2022



Africa Diesel Sulphur Levels

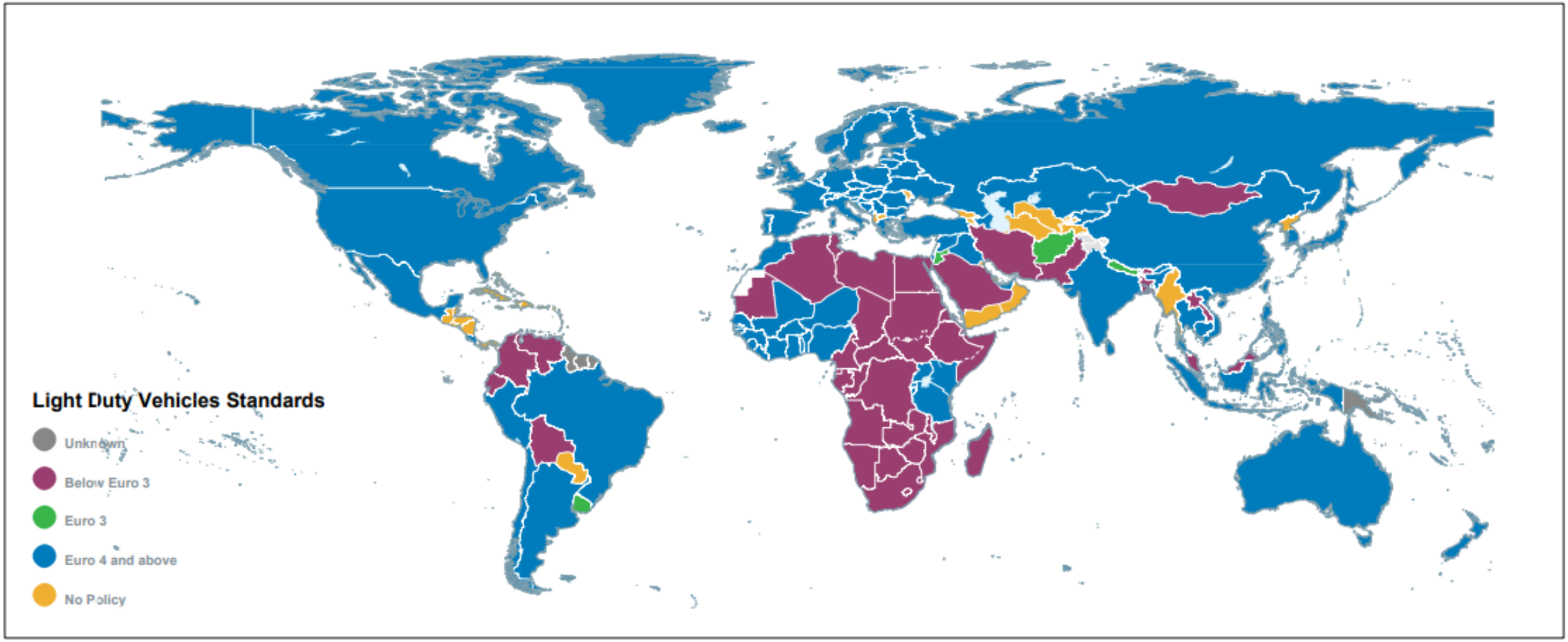
With regional commitments achieved

- ECOWAS
- Botswana (November 2022)
- DR Congo & South Sudan (joined EAC)

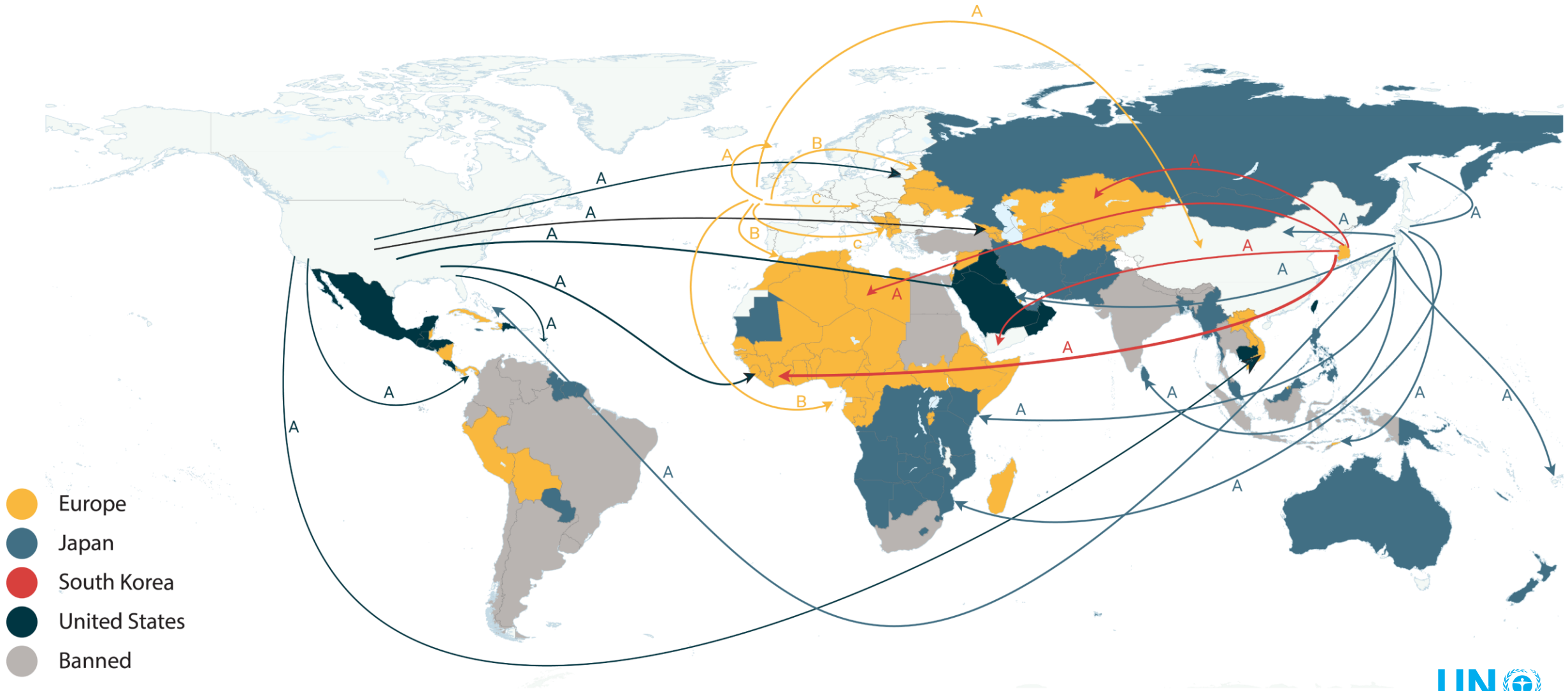


Global Vehicles Standards

Global Light Duty Vehicle Emissions Standards (June 2022)



The Global Trade in Used Vehicles -2021



A (20.000-145.000) B (145.000-270.000) C (Higher than 270.000)

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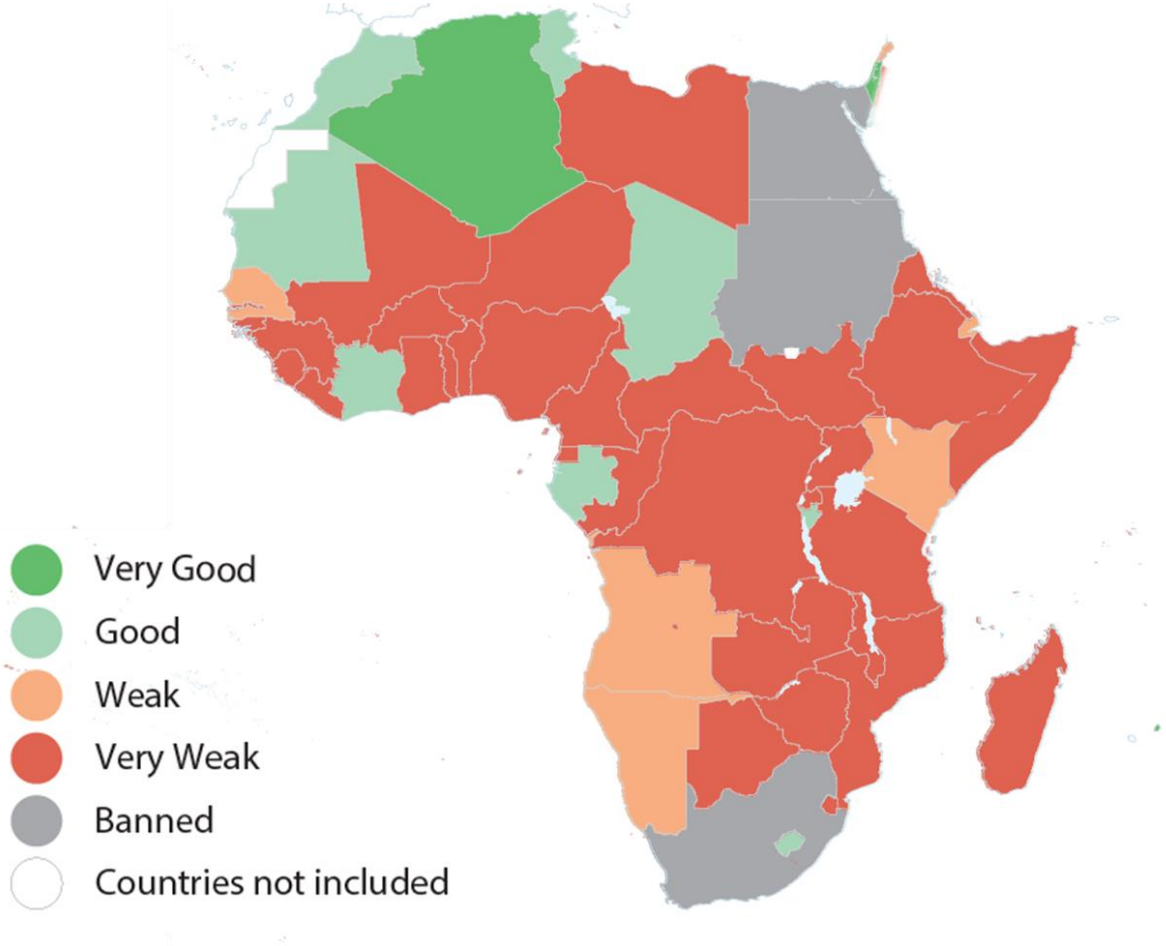
Used Vehicles - Most African Countries Have Weak LDV Regulatory Framework



Regulatory Environment Ranking (UNEP)	Countries	Region
Very Good	Algeria, Mauritius	2
Good	Chad, Côte d'Ivoire, Gabon, Lesotho, Mauritania, Morocco, Rwanda, Tunisia	8
Weak	Angola, Djibouti, Kenya, Namibia, Senegal	5
Very Weak	Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Comoros, Congo, Democratic Republic of Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Libya, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Sao Tome &Principe, Sierra Leone, South Sudan, Somalia, Tanzania, Togo, Uganda, Zambia, Zimbabwe	35
Banned	Egypt, South Africa, Seychelles, Sudan	4

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Progress - East Africa

- 2016 Low sulfur fuel standards (actual 10-15 ppm)
- Kenya and Rwanda already adopted Euro 4/IV vehicles standards - implementation ongoing
- May 2022 East Africa Community Council of Ministers adopted regionally harmonised Euro 4/IV vehicles standards
- After the EAC standard was gazetted early July, countries have 6 months to adopt standard as national law

KEBS Kenya Bureau of Standards
Standards for Quality life

Tel: 020 6948000 | Toll Free: 1545 | Email: pvoc@kebs.org | www.kebs.org

PUBLIC NOTICE ON IMPLEMENTATION OF KS 1515:2019

Kenya Bureau of Standards (KEBS) is a statutory body established under the Standards Act, CAP 496, of the Laws of Kenya. KEBS is mandated to offer quality inspection of imports based on Kenya Standards or approved specifications among other services.

Following the declaration of **KS 1515: 2019 - Road Vehicles — Inspection of Road Vehicles — Code of Practice** as a mandatory Kenya Standard by the Cabinet Secretary for Industrialization, Trade and Enterprise Development, KEBS wishes to inform all stakeholders and the general public that effective 1st July 2022:

- All USED passenger Minibuses, Midibuses, Large buses, Single articulated and Bi-articulated buses and Double-decker buses shall not be allowed for importation into the country. However, used passenger Microbus (up to 7 m overall length) shall continue to be imported into the country provided they are NOT older than Eight (8) years from the year of first registration.
- All USED rigid Trucks with Gross Vehicle mass (GVM) equal to or greater than 3.5 tons and up to and including 30 tons shall not be allowed for importation into the country.
- Only tractor heads and Prime movers not older than three (3) years from the year of first registration shall be allowed for importation. This shall apply up to 30th June 2023 after which NO used tractor heads and prime movers shall be allowed for importation into the country.
- All other USED Road vehicles not mentioned above shall continue to be imported into the country provided that they are NOT older than eight (8) years from the year of first registration.
- All imported new diesel-powered, and petrol (gasoline) powered vehicles shall be type-approved to meet the requirements of EURO IV/4 before importation into the country.

Importers and members of the public are encouraged to buy the standard from the KEBS library or KEBS webstore - https://webstore.kebs.org to familiarize with the requirements of the standard.

For further clarification, please contact KEBS on **Telephone +254 20 6948423 / 456 / 439 / 000 or E-mail:** pvoc@kebs.org or info@kebs.org

MANAGING DIRECTOR

KEBS implements an Anti-bribery Management Policy accessible through KEBS Website www.kebs.org

www.kebs.org

Progress - West Africa

- September 2020 ECOWAS Council of Minister adopted regionally harmonised fuel and vehicle standards
- New set of fuel quality standards
- EURO4 minimum vehicles emissions standards new & used vehicles. Used vehicles age restrictions – 5yrs for LDV, 10yrs for HDV – 10 yrs to implement
- Adopted fuel economy roadmap

COMUNIDADE ECONOMICA DOS ESTADOS DA AFRICA OCIDENTAL

ECONOMIC COMMUNITY OF WEST AFRICAN STATES

COMMUNAUTE ECONOMIQUE DES ETATS DE L'AFRIQUE DE L'OUEST

Original: French

FIFTY-SEVENTH ORDINARY SESSION OF THE ECOWAS AUTHORITY OF HEADS OF STATE AND GOVERNMENT

7 September 2020, Niamey, Republic of Niger

FINAL COMMUNIQUE

1. The Fifty-seventh Ordinary Session of the Authority of Heads of State and Government of the Economic Community of West African States (ECOWAS) was held on 7 September 2020 in Niamey, Republic of Niger, under the chairmanship of **H.E. Issoufou Mahamadou**, President of the Republic of Niger and Chair of the Authority.

2. Present at the Summit were the under-listed ECOWAS Heads of State or their duly mandated representatives:
H.E **Roch Marc Christian Kabore**, President of Burkina Faso
H.E **Alassane Ouattara**, President of the Republic of Cote d'Ivoire;
H.E. **Adama Barrow**, President of the Republic of The Gambia;
H.E **Nana Addo Dankwa Akufo-Addo**, President of the Republic of Ghana;
H.E. **Umaro Sissoco Embaló**, President of Guinea Bissau;
H.E **Issoufou Mahamadou**, President of the Republic of Niger;
H.E **Muhammadu Buhari**, President of the Federal Republic of Nigeria;
H.E **Macky Sall**, President of the Republic of Senegal;

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Proposed Targets for Africa

By end of 2023:

- All African countries import low sulphur (50ppm or less) diesel and petrol fuels
- And refining countries have a set a date for their refineries to switch

How?

1. Implement existing adopted standards:

- ECOWAS
- EAC (DR Congo, South Sudan)
- SADC Ministerial decision diesel fuels
- Export regulations (incl other countries)

2. Adopt standards

- Central Africa – sub regional standard
- SADC – sub regional standard (based on diesel decision)
- North Africa – country standards (regionally harmonized standards not envisaged)

Costs

- East Africa Community – small, not noticeable at pump
- Ghana – 2 cents per liter
- Mauritius – same price

- Difficult to predict
- Around one cent per liter?

Benefits

Example – from no regulation to Euro 4/IV

FROM: current situation mainly Euro 2&3 fuels and vehicles; average age 18 yrs
TO: minimum Euro 4 fuels and vehicles; vehicle age ~8 yrs & valid road worthiness certificate

	Key Issue	Benefits
Pollution	Exhaust filters faulty, missing or removed;	Common pollutants reduced – up to 90%
Fuel Savings / Climate	High fuel consumption	increased efficiency/ reduced CO2 emissions – ~5-10%
Road safety	Key safety equipment missing or removed – ABS, ESC, airbags; crumple zones	together major reduction of crash impacts - ~50% (inside cars)

Thank You

Rob de Jong
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www.unep.org/transport

UN environment programme