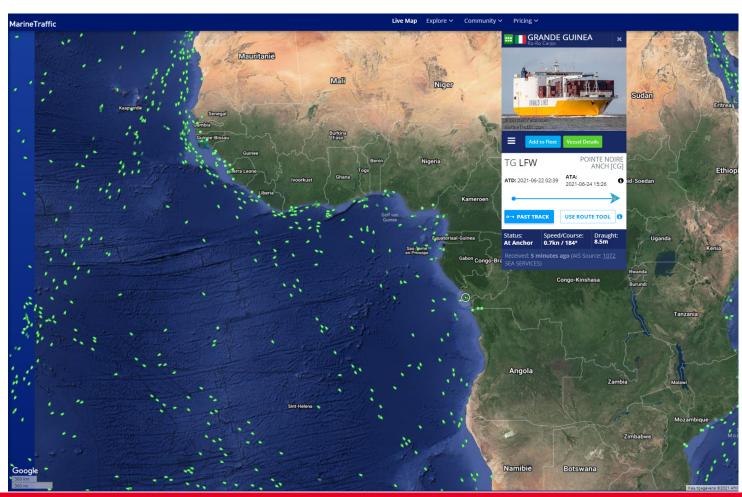


Netherlands Ministry of Infrastructure and Water Management

Case study export of used vehicles from Dutch ports to African countries



Grande Guinea: Dakar (16/6), Lomé (21/6), **Pointe Noire (25/6),** Douala (29/6) San Pedro (1/7), Antwerp (14/7), Hamburg (17/7), Le Havre (20/7), Tilbury (23/7)

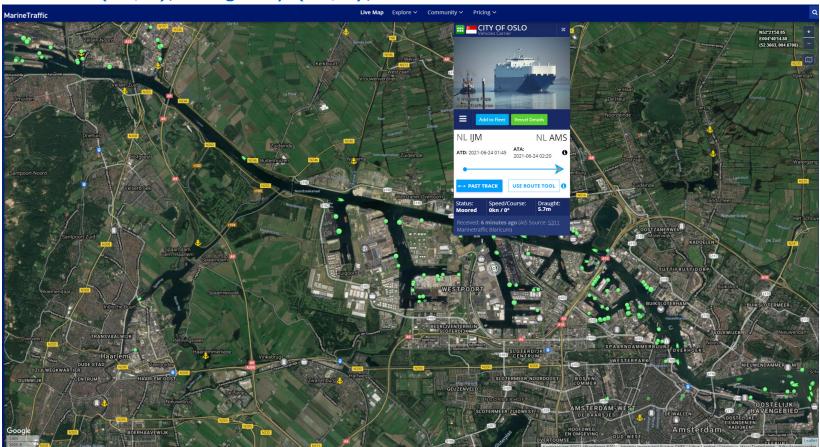


© Marine Traffic



<u>City of Oslo</u>: Antwerp (22/6), <u>Amsterdam (25/6)</u>, <u>Misurata (1/7) Benghazy (4/7)</u>; Antwerp (2/8), Amsterdam (6/8),

Misurata (12/8), Benghazy (15/8); Antwerp (12/7), Amsterdam (14/7), Misurata (21/7), Benghazy (24/7),



© Marine Traffic





Series of 3 connected reports



Heavy fuel oil for seagoing vessels

On-road fuels for West Africa

Blended in the Netherlands



Used vehicles exported to Africa

A study on the quality of used export vehicles



TNO report

TNO 2020 R11950

Petrol fuel quality and its effects on the vehicle technology and the environment

Norbert E. Ligterink, Ruud P. Verbeek, and Rob F.A. Cuelenaere

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July 2018

October 2020

24 June 2021



Why a 2nd and 3rd study?

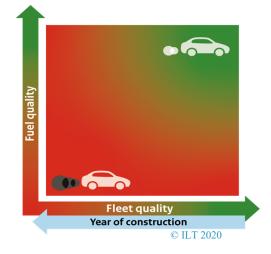
Follow-up on fuel report from 2018



Pro-active & to anticipate













New report on quality of petrol in relation to vehicles

- Stresses the need for standards on fuels and vehicles
- More information & to download the report:

https://english.ilent.nl/documents/reports/2021/04/24/petrol-fuel-quality-and-its-effects-on-the-vehicle-technology-and-the-environment

Petrol fuel quality and its effects on the vehicle technology and the environment

TNO has written the report. 'Petrol fuel quality and its effects on the vehicle technology and the environment' for the Human Environment and Transport Inspectorate (inspectie Leeformgeving en Transport, ILT). The report shows the effects of using fuels exported to Africa. These fuels are unsuitable by European standards. TNO investigated the effects on humans and the environment of using high-sulphur, high-benzene petrol containing manganese. This summary contains the most important parts of the report.

Download "Petrol fuel quality and its effects on the vehicle technology and the environment"

PDF document | 25 pages | 413 kB Report | 24-06-2021

Main conclusions

- Fuels blended in the Netherlands harm people's health and pollute the environment when
 used in African countries.
- The composition of the fuels causes, among other things, catalysts to stop working.
 Sometimes, this even leads to unfiltered emissions. This also occurs when the fuel is used in relatively young and 'clean' vehicles.
- Countries that aim to use fewer 'old' and more 'younger' cars and vans to tackle air pollution and smog will not achieve their goal if these fuels are used.
- The public is thus exposed to extra and unnecessary levels of carcinogenic benzene, sulphur dioxide, and particulate matter. This quality of fuel is not permitted in Europe, but it is transported to countries where legislation is less strict than in Europe.







oliebedrijven: stop met export

Verkeer in Lagos in Nigeria, een van de grootste steden ter wereld /

giftige benzine



Nieuw onderzoek door TNO bevestigt dat Nederlandse oliebedrijven milieuvervuilende en kankerverwekkende benzine exporteren naar arme landen

De inspectie Leefomgeving en Transport (ILT) waarschuwt de bedrijven al jaren dat ze hiermee moeten stoppen en zegit nu ook juridische handvatten te hebben om de bedrijven aan te pakken. Het gaat om brandstoffen die in Europa al lang verboden zijn.





Used vehicles exported to Africa

A study on the quality of used export vehicles



FINDINGS OF STUDY ON USED VEHICLES

THE WAY FORWARD: WHAT COULD BE DONE

Link to report:

https://english.ilent.nl/latest/news/2020/10/26/ilt-older-vehicles-nolonger-welcome-in-west-africa



DESK STUDY matching data from customs and vehicle register

GdnCod Brutogewici Nettogewich RefZe LevVoc LevV Lor DouaneW Statwrd 2 18NLII5T5 1 08Jun2018 12:08:03.809 043 ADAN 1 NG NL used truck 87042299(10550.000 10550.000 18201AntweiFAS 42 17900.00 17900.00 3 18NLJITYN 1 25Jun2018 9:48:47.853 043 ADAN 1 GH NL Bedrijfswagen, diesel, 5-20 ton, gebruikt 87042299(10025.000 10025.000 Koopm FCA 65 6450.00 6450.00 4 18NLJCHLF 1 16Jan2018 13:14:50.829 043 ADAN 1 LY GEBRUIKTE PERSONENWAGEN: CHEVROLET M/87032390(1980,000 1980,000 AMSTE FOB 10. 750,00 750,00 NL 5 18NLJCK9E 1 18Jan2018 9:53:32,482 043 ADAN 1 LY GEBRUIKTE PERSONENWAGEN: MERCEDES A14870323901 1380,000 1380,000 AMSTE FOB 10-750,00 750.00 6 18NLJJTV6 2 20Jul2018 12:51:08,759 043 ADAN 1 LY GEBRUIKTE PERSONENWAGEN: 87032390(1700,000 AMSTE FOB 10-750.00 1700,000 750.00 18NLJMAF 1 ############### 043 ADAN 1 SL DAF TRUCK 4X4 CARGO CHASSISNR, 292036 870422990 7000,000 7000.000 NIEUW FCA 95 9250.00 9250.00 8 18NUE79(12 ############### 043 ADAN 9 ZA DEEL VAN COLLO SHS049 T/MSHS049 ANDERE 870829900 19,010 11.100 2018(AMSTE FCA 10 280.00 280.00 9 18NLJKNXI 31 ############################### 043 ADAN 20 ZA SHT340 T/M SHT340 VERSNELLINGSBAKKEN VO 870840500 47,400 2018(AMSTE FCA 10-10 18NLJF892 1 ############### 039 MAA: 1 ML NIEUWE PICK-UP CHNRS.: JN1TESY61Z0573645 87042191(4726,000 4726,000 1800(NIEUW EXW 29 52266,00 52266,00 11 18NLJG50(1 ################### 043 ADAN 1 SL Personenauto, benzine, 1500-3000 cc, gebruikt 87032390 1370,000 1370.000 Douan FCA 39 1050,00 1050,00 ONDERDELEN EN TOEBEHOREN VOOR TRUCKS 87082990(325,400 12 18NUHLO: 1 25May2018 9:55:51.846 039 MAA: 1 ZA EINDH(EXW 56 21167.00 21167.00 287,800 13 18NLJCBSZ 1 12Jan2018 11:52:25,576 043 ADAN 1 DZ DFSK V21 CHASSIS 1.3 2WD CHASSISNR LVZBN2870431910 923,000 923,000 27355 HAAFT EXW 41 3250,00 3250,00 14 18NUGGS 2 26Apr2018 9:46:07 495 043 ADAN 1 LV NI GERRIJIKTE PERSONENWAGEN: MERCEDES 870323900 1350 000 1350 000 AMSTEROR 10. 750 00 750 00 15 18NI II RTT 12 27Aug2018 7:12:58 554 043 ADAN 5 LY AUTOMOBIEL VOOR PERSONEN VERVOER OPEI870323901 1000 000 1000 000 W567 AMSTE FOR 10 500 00 500 00 NI Personenauto, benzine, 1500-3000 cc, gebruikt 87032390(1537,000 1537,000 16 18NUB76F 1 03Jan2018 15:45:59 134 043 ADAN 1 GA Apeldo FCA 73 2800.00 2800.00 17 18NLJLG5F 1 30Aug2018 7:56:17,425 043 ADAN 1 LY GEBRUIKTE PERSONENWAGENS: 87032390(3441,000 3441,000 AMSTE FOR 10 2250.00 2250.00 AMSTE DAT 76 23300,00 23300,00 18 18NLIIOAV 1 04Jun2018 15:38:34,349 043 ADAN 1 NG Tank oplegger / aanhanger Merk: OMSP MACC 87163100(13000,000 13000,000 19 18NLJD1T 1 30Jan2018 16:38:12,242 043 ADAN 1 SN Gebruikte personen auto TOYOTA AVENS 87032390(1200,000 1200,000 amster FOB 10 2500,00 2500,00 20 18NUETM 1 16Mar2018 8:30:14,928 043 ADAN 1 LY GEBRUIKTE PERSONENWAGEN: OPEL ASTRA 87032390 1150,000 1150,000 AMSTE FOR 10 21 18NLIGOT 2 ############## 043 ADAN 1 MA andere | Delen en toebehoren van motorvoert 870829900 29.850 59798 Schiph (CPT 11 22 18NLJCW3 4 26Jan2018 16:44:07,360 043 ADAN 1 LY AUTOMOBIEL VOOR PERSONEN VERVOER HYU 87032390 1000,000 1000.000 W567 AMSTE FOB 10 500.00 500.00 23 18NLJFLOP 1 ############# 043 ADAN 1 NG Soort: Bedrijfswagen 5/20T Merk: MERCEDES E87042299(10600,000 10600,000 LELYST. EXW 82 43500,00 43500,00 24 18NLJCIX2 2 17Jan2018 11:20:47,817 043 ADAN 2 MA POMPEN LUCHT, REST ONDERDELEN 87089997(18000,000 18000,000 WOUTIEXW91 9750,00 9750,00 25 18NUEGZE 3 ################# 043 ADAN 2 MA andere I van motorriiwielen I Delen en toebeh 87141090(17.406 12.540 5938 SAINT (CPT 38 290.00 290.00 26 18NI IEXV1 1 19Mar2018 9:03:42 418 043 4D4N GEBRUIKTE PERSONENWAGEN: OPEL ZAFIRA 87032390(1300.000 1300.000 AMSTE FOR 10. 750 00

HABRABRANEMISEN EMIVERY_DAT_KESTAT_VR STATUS HERK_L TYPE_EXPO WOIREG_D, TELLER_ST EE TELLERSTAND #KENTEK VRTG ID NR EERSTE INEERSTE TO VREEG MERK BESCHR 00HVS1 WVWZZZ6XZXW004266 2E+07 19990715 1 M1 VOLKSWAGEN 20170325 2E+07 Nee 2E+07 198605 K Geen Oordeel L 00JBF1 VF1DZ0G0T41125980 2E+07 20090409 1 M1 RENAULT 20190226 2E+07 52 POL OREH 20190226 2E+07 4 00JBF1 VF1DZ0G0T41125980 2E+07 20090409 1 M1 RENAULT 52 POL OREH Nee 2E+07 229383 K Logisch 5 001FT2 W/DR20102414112182 2F±07 19840816 1 M1 MERCEDES-RENZ 1 G 2F+07 51 Nee 2F+07 238840 K Geen Oordeel 00JGH1 WDB2011221A289411 2E+07 19860319 1 M1 MERCEDES-BENZ 1 D 2F+07 52 ROU OREH Nee 2E+07 342000 K Onlogisch 20180830 2E+07 7 00JJD5 W0L000033D5179441 2E+07 19830624 1 M1 OPEL 1 B 52 NLD RDW Nee 2E+07 7592 K Onlogisch 00JKP1 WVWZZZ3CZAE005450 2E+07 20090624 1 M1 VOLKSWAGEN 20190119 2E+07 52 POL Export Dier Nee 2E+07 414065 K Logisch PA 1 D 0.00015 9 00JKX2 SAJAA0620AKR48187 2E+07 20090626 1 M1 JAGUAR 20190703 2E+07 20180705 2E+07 10 00JNK4 WVWZZZ1KZAW001867 2E+07 20090707 1 M1 VOLKSWAGEN 0.00006 52 BEL Export Dier Nee 2E+07 263435 K Geen Oordeel 11 00ISE6 WWW7773C77E223195 2F+07 20070430 1 M1 VOLKSWAGEN PA 1 D 0.00100 20190202 2F+07 52 ROU Export Dier Nee 2E+07 275932 K Geen Oordeel P 12 00JXD8 JN1TDSY61U0318765 2F+07 19991229 1 M1 NISSAN 1 D 20181009 2F+07 52 NLD RDW Nee 2E+07 241397 K Logisch AU 1 D 0.00200 52 LTU OREH 13 00JXN3 WAUZZZ4L27D022586 2E+07 20060907 1 M1 AUDI 20171012 2E+07 Nee 2E+07 379787 K Geen Oordeel 4 00JZH9 WBACM11030LF04417 2E+07 19990512 1 M1 BMW 20191025 2E+07 52 BEL Export Dier Nee 2E+07 147890 K Geen Oordeel Z 2E+07 19990107 1 M1 VOLKSWAGEN Nee 2E+07 163377 K Geen Oordeel N 15 00KDN7 WVWZZZ9CZXM902889 20181027 2E+07 16 OOKKB6 7LA84300002069007 2F+07 20040630 1 M1 LANCIA TAL 1 D 0.02400 20180120 2E+07 52 RUS Export Dier Nee 2E+07 225117 K Geen Oordeel I 17 00KLB4 WDB1680322I562344 2E+07 20020228 1 M1 MERCEDES-BENZ 1 B 2E+07 Nee 2E+07 68496 K Geen Oordeel 52 MDA OREH 18 00KLD1 UU1KSDAM541562528 2E+07 20100115 1 M1 DACIA LO 2 G 20190607 2E+07 Nee 2E+07 269557 K Logisch 19 00KLD1 UU1KSDAM541562528 2E+07 20100115 1 M1 DACIA 20190607 2E+07 52 MDA OREH Nee 2E+07 269557 K Logisch LO 1B 20 00KNG7 SB1ED76LX0E001443 2E+07 20100114 1 M1 TOYOTA TO 1 D 0.00121 5 20181105 2E+07 52 LTU Export Dier Nee 2E+07 292908 K Logisch LO 2 G 21 00KTP1 UU1KSD0M541997064 2E+07 20100212 1 M1 DACIA 20181114 2E+07 52 RUS Export Dier Nee 2E+07 744571 K Logisch 22 00KTP1 UU1KSD0M541997064 2F+07 20100212 1 M1 DACIA 10 1 B 20181114 2F+07 52 RUS Export Dier Nee 2E+07 744571 K Logisch 23 00KVF8 YV1SW814272669039 2E+07 20070420 1 M1 VOLVO V7(1 D 0.00200 20190117 2E+07 52 UKR Export Dier Nee 2E+07 269000 K Onlogisch 24 00LGB6 KMJWAH7JP8U018188 2E+07 20071213 1 M1 HYUNDAI 20170704 2E+07 52 DEU OREH Nee 2E+07 244216 K Geen Oordeel 1 D 25 00VLV9 WDB9026621R899371 2E+07 20060530 3 N1 MERCEDES-BENZ 1 D 20180309 2E+07 52 HUN OREH Nee 2E+07 196501 K Geen Oordeel 26 00VNJ2 WV1ZZZ2KZ7X107505 2E+07 20070402 3 N1 VOLKSWAGEN 20180510 2E+07 52 SRB Export Dier Nee 2E+07 375345 K Geen Oordeel

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3-DAY FIELD INSPECTION with vehicle authority



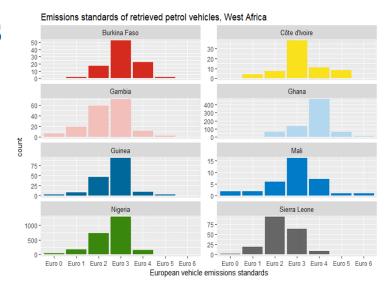
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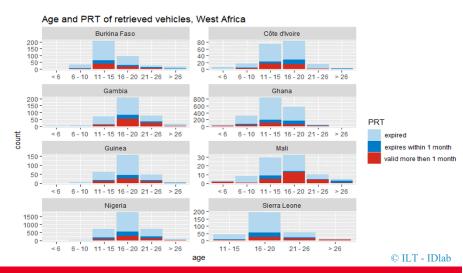


Age, emission standards and roadworthiness

Age distribution retrieved LDV

Country	count	mean	Q1	Median	Q3
Burkina Faso	122	15.3	12.8	15.4	17.2
Côte d'Ivoire	77	14.2	12.5	14.9	17.0
Egypt	230	13.8	12.6	14.3	15.5
Ethiopia	113	12.6	9.8	13.2	15.1
Gambia	359	18.8	15.9	18.4	20.8
Ghana	987	12.4	10.2	11.7	14.2
Guinea	219	17.2	15.3	17.2	19.0
Libya	638	17.8	15.8	17.6	19.6
Mali	49	14.9	12.5	14.8	17.8
Morocco	257	4.7	3.5	4.3	4.9
Nigeria	2526	17.7	15.4	17.4	19.6
Sierra Leone	246	18.1	16.5	18.2	19.5







Mileage

LDV mileage (km x 1000) retrieved vehicles

Country	count	Mean	Q1	Median	Q3
Nigeria	2508	250	199	241	286
Ghana	984	207	148	193	240
Libya	633	220	163	205	245
Gambia	358	270	208	262	317
Sierra Leone	244	245	185	229	283
Egypt	229	209	168	204	238
Guinea	217	247	193	234	294
Morocco	210	208	166	194	232
Burkina Faso	121	247	191	236	303
Ethiopia	113	202	133	188	261
Côte d'Ivoire	76	230	182	218	264
Mali	49	228	189	220	275

HDV mileage (x 1000) retrieved vehicles

Country	count	Mean	Q1	Median	Q3
Ghana	802	257	172	231	303
Nigeria	600	274	196	253	321
Ethiopia	169	219	147	201	283
Sierra Leone	78	234	163	230	293
Gambia	67	286	186	233	308
Burkina Faso	60	303	219	274	357
Morocco	52	317	223	295	388
Guinea	41	306	204	273	334
Côte d'Ivoire	31	277	208	279	333
Mali	17	306	242	301	366
Libya	7	252	208	245	278
				© ILT -	· IDlab



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Used vehicles to WAF comparabe to End of Life Vehicles

European vehicle emissions standards

200000

150000

1000000 ·

50000 -

RDW_Dismantling LDVs

Euro 0 Euro 1 Euro 2 Euro 3 Euro 4 Euro 5 Euro 6 NA

Retrieved used export LDVs to West Africa

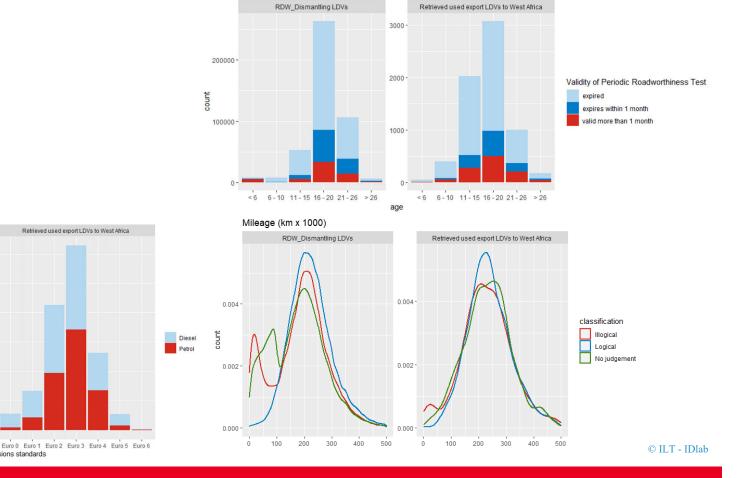
3000

2000 -

1000 -

European vehicle emissions standards

Age vehicles





3-DAY FIELD INSPECTION: 160 vehicles













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Overall technical state of vehicles

- A group of vehicles in reasonable state
- At least 56% of petrol vehicles and 48% of the diesel vehicles would fail a periodic roadworthiness test (have one or more deficiency)
- These also included vehicles that still had a valid roadworthiness certificate
- One out of 8 airbags had a malfunction



HDV high mileages, examples



from 1994, to Lagos, 896.650 km



German truck from 2002, to Benghazi, 820.789 km

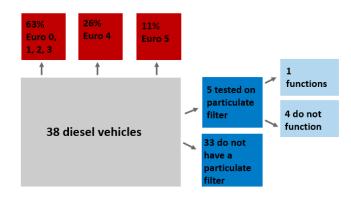
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Testing emissions (diesel)



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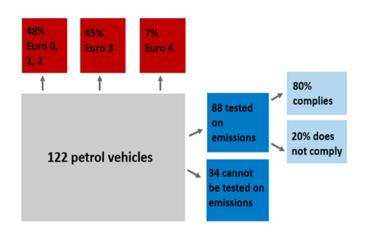








Testing emissions (petrol cars)











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A GROUP OF VEHICLES UNABLE TO CONTROL

- empty battery
- completely worn out, too dirty to enter
- doors that don't open, stack on each other or "sandwiched"
- we stopped some vehicles (as waste) in a very bad state ->see next slides







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A Nissan Micra from 2003 for Benghazi, Libya



© ILT Dec 2019





A Volkswagen from 1988 for Nigeria



A VOLVO TRUCK from POLAND from 2000

for NIGERIA





© ILT Dec 2019

VIN unreadable, lights and battery removed, exhaust system incomplete, fuel tank missing, air tanks hanging loose, smooth tyres

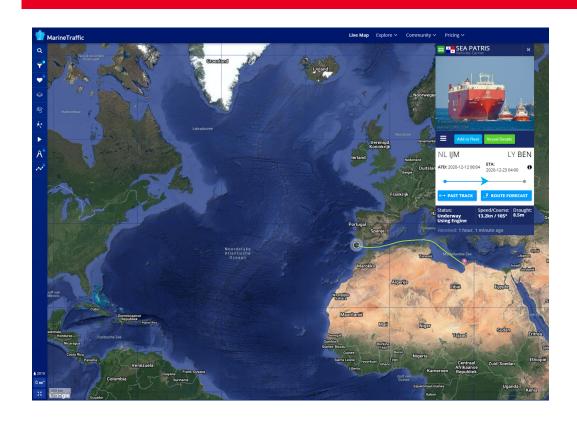


Our study showed: regulation works!

ECOWAS countries	Mean age LDV exported in 2017/2018	Mean age HDV exported in 2017/2018	Current national regulations and policies Note: ECOWAS countries have decided on new regulation for vehicles by 2021: import vehicles max 10 years, recommendation max 5 years for LDVs, minimum euro 4/IV emission standards		
BURKINA FASO	15.3	14.8	No import restrictions, no tax incentives, no euro emissions standards		
CôTE D'IVOIRE	14.2	15.7	Passenger vehicles and taxis imported < 5 years. Minicars (9-34 seats) and vans (< 5 tons) imported < 7 years. Cars (>34 seats), vans (>5 tons) imported < 10 years. Note the decree (no 2017-792) on age restriction of used import vehicles) was adopted on 6 De 2017 and was applied since 1 th of July 2018. (This means that the new age standard was not into force during a long period of our desk studies covering export data of 2017 and 2018.)		
GAMBIA	18.8	17.1	No import restrictions. No emissions standards.		
GHANA	12.4	14.5	Customs Act, 2015 (Act 891) established a penalty system with graduated fees to serve as disincentive for importing LDVs and HDVs over 10 years. Taxes are based on the Customs Freight and Insurance (CFI) value. New regulations came into effect in April, 2020 (Customs Amendment Bill, 2020) as a revision to Customs Act of 2015. This law seeks to ban the import of LDV's older than 10 years. Implementation is set to commence in October, 2020.		
GUINEA	17.2	17.5	No import restrictions.		
MALI	14.9	16.4	Encouragement of import of new vehicles: incremental tax on age.		
NIGERIA	17.7	18.9	LDVs and HDVs < 15 years, Euro 2/II emission standards.		
SIERRA LEONE	18.1	20	No import restrictions. No incentive for cleaner vehicles: use vehicles pay less tax than new vehicles.		
Other countries	Mean age LDV exported in 2017/2018	Mean age HDV exported in 2017/2018	Current national regulations and policies		
EGYPT	13.8	8.4	Ban om import of used vehicles except electric vehicles up to an age of 3. Regulations allow for entering used cars into the country for exceptional cases (most likely returning residents), provided the Egyptian national bought it new abroad (first owner) and documentation is verified by Egypt embassy at the concerned country.		
ETHIOPIA	12.6	12.0	No import restrictions. New regulation prepared to limit the age of import vehicle to 5 years		
LIBYA	17.8	14.3	LDVs and HDVs < 10 years. Tax of 800-1000 LD for each car imported. Decree No 148 was implemented in May 2019. Government enforcement is difficult due to the political situation in the country. The Government of National Accord has only control in ports on the west side of the country. (This means that the new age standard was not into force in the period of our desk study covering export data of 2017/2018. However the LT field inspections in December 2019 showed that none of the 110 passenger cars that were inspected and destined for Libya was younger than 10 years. Their average age was 18.8.)		
MOROCCO	4.7	7.7	LDVs and HDVs < 5 years since 2010. Minimum Euro 4 emission standards for import vehicles since 2015.		

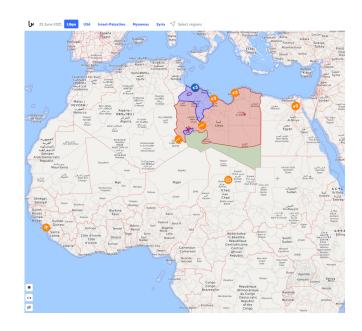
however not complete, and





Example of a vehicle carrier loading used vehicles in Antwerp (1/12/20) and Amsterdam (7/12/20) for unloading in Misurata (19/12/20) and Benghazi (21/12/20)

- Libya gateway for used vehicles to African countries?
- Threat to effective implementation of ECOWAS new regulation?





Human Environment and Transport Inspectorate Ministry of Infrastructure and Water Management



joint action between exporting and importing countries needed



Benefits of clean fuels and a fleet consisting of vehicles in good technical state

- clean fuels => immediate reduction of emissions and no damaging of emission control systems
- vehicles with working emission control system
 less polluting emissions: cleaner air
- more road safety => less accidents
- well maintained (and younger) vehicles consume less fuel
 - => cheaper to drive
 - => less climate emissions



NEEDS FOR THE WAY FORWARD

EXPORT COUNTRIES: TO AGREE TO ONLY EXPORT VEHICLES THAT ARE ROAD WORTHY &

IMPORT COUNTRIES: FUEL AND VEHICLE STANDARDS

HARMONISED



this will greatly enhance implementation at export and import



OTHER NEEDS FOR THE WAY FORWARD? your views

- Promoting implementation of used vehicles import regulation, more inspectors?
 so that used vehicles arrive as required
- Promoting vehicle roadworthy Inspection and Maintenance programs?
 so that vehicles <u>remain</u> in the condition as arrived
- Setting up safe **recycling** networks? so that end of life vehicles are <u>safely disposed</u> off with a high recycling rate
- **Desulpherization** capacity?
- Focus on promoting sustainable (urban) transport systems and mobility?

for health, road safety and climate benefits



What investments alongside setting fuel and vehicle standards most helpful to achieve benefits for health and road safety?

please send ideas, questions and comments to: marietta.harjono@ilent.nl

