



Open letter to all European Market Surveillance Authorities:

Diesel Euro 5 and early Euro 6 cars still show high on-road NO_x emissions

Gothenburg, 21 June 2023

According to Commission Regulation (EU) 2018/858, designated national vehicle market surveillance authorities in EU member states and the UK must carry out tests to assess whether vehicles on the road in their respective markets comply with emission standards, including rules prohibiting the use of defeat devices prohibited under EU and UK law (see Articles 8 and 51). In recent cases, the Court of Justice of the European Union (CJEU) clarified that defeat devices can only be used to avoid immediate risks of damage or accident to the engine and cannot be legally justified in any event if they operate to reduce emission controls for most of the year in normal driving conditions (see cases C-693/18, C-128/20, C-134/20, C-145/20 and C-873/19). According to the law, if vehicles are found to contain illegal defeat device technology, breach emissions standards, or otherwise pose a serious threat to people's health, market surveillance authorities must require "without delay" that manufacturers take corrective action to bring the vehicles into compliance and/or address the relevant risk (see Article 52).

Remote sensing campaigns recently conducted in the H2020 project CARES (<https://cares-project.eu/>) indicate that diesel cars certified to Euro 5 and early Euro 6 (pre-RDE, i.e., Euro 6abc) are **still producing excess emissions of nitrogen oxides (NO_x)** — up to over 10 times the emission standard limit — **seven years after the "Dieselgate" scandal. High levels of NO_x emissions are seen in all vehicle families**, most of which were emitting consistent levels of NO_x across three European cities, signaling that the problem of excess NO_x emissions is widespread across Europe. These excess emissions pose a serious risk to people's health across the region, and **strongly suggest the widespread and continued use of illegal defeat devices in normal driving conditions.**

Moreover, **even vehicle families** from manufacturers that have announced recalls of cars with defeat devices or issued **software updates**, such as Volkswagen, Fiat-Chrysler, Daimler, and Renault-Nissan, were **still emitting NO_x emissions greatly exceeding the emissions limits, questioning the effectiveness of such fixes and the sufficiency of the enforcement following the updates.** The charts below summarize the results from the measurements conducted in Milan, Krakow, and Prague in 2021-22; <https://cares-project.eu/high-emitter-profiles/>.

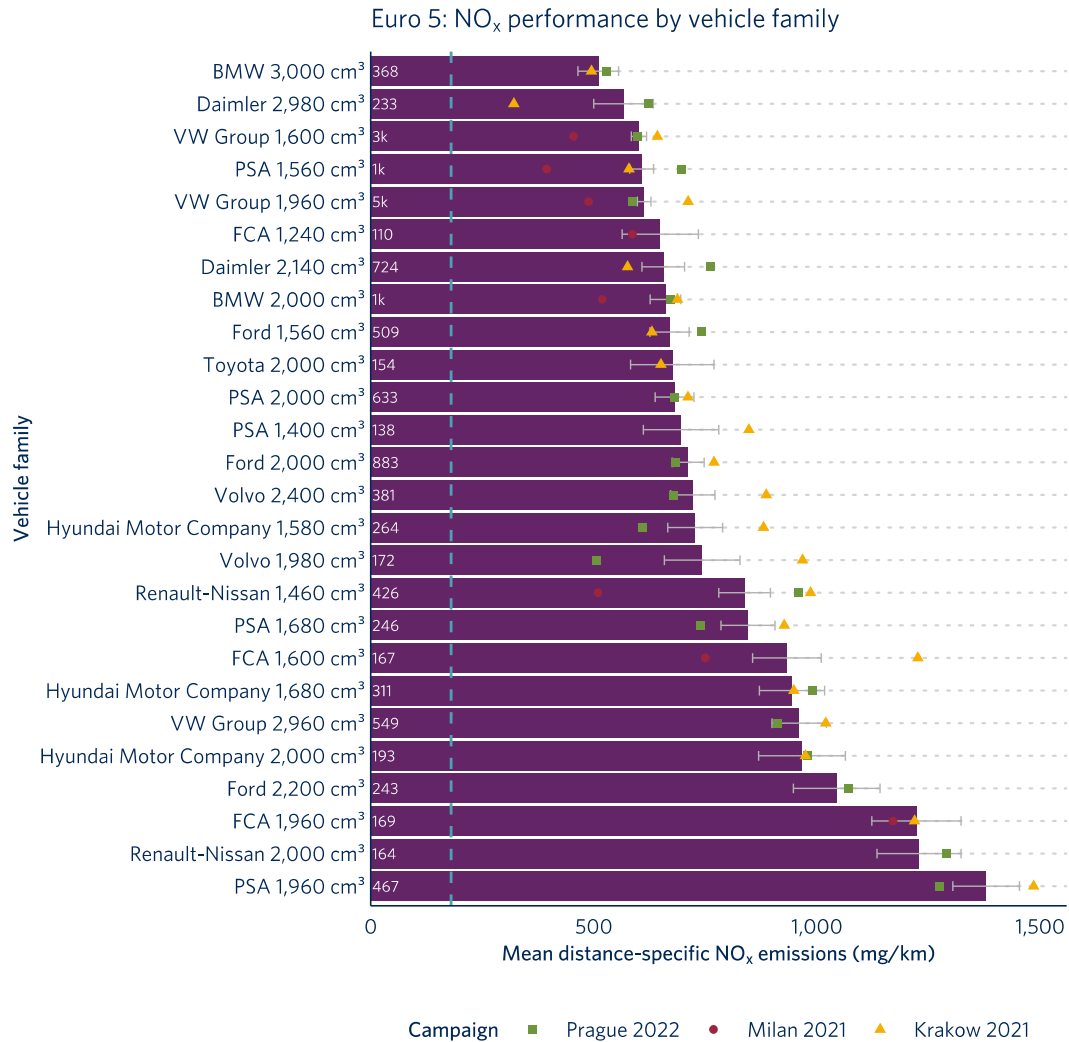
In response to these findings, we recommend that market surveillance authorities carry out targeted evaluations into the continued presence of illegal defeat device technology across these vehicle families and require without delay that manufacturers take corrective action to bring the vehicles into compliance. We also recommend that authorities closely monitor the real-world efficacy of any software updates made (including those already issued by manufacturers) and track their deployment across Europe.

In CARES it has been impossible to link the vehicle models to specific type-approval families. Therefore, we send the list of vehicle families — defined as unique combinations of fuel type, Euro standard, manufacturer group, and engine displacement — **asking market surveillance authorities to use this information to link it to the respective type-approval families and to take appropriate action with respect to the relevant vehicle types.**

On behalf of the CARES consortium - yours sincerely,

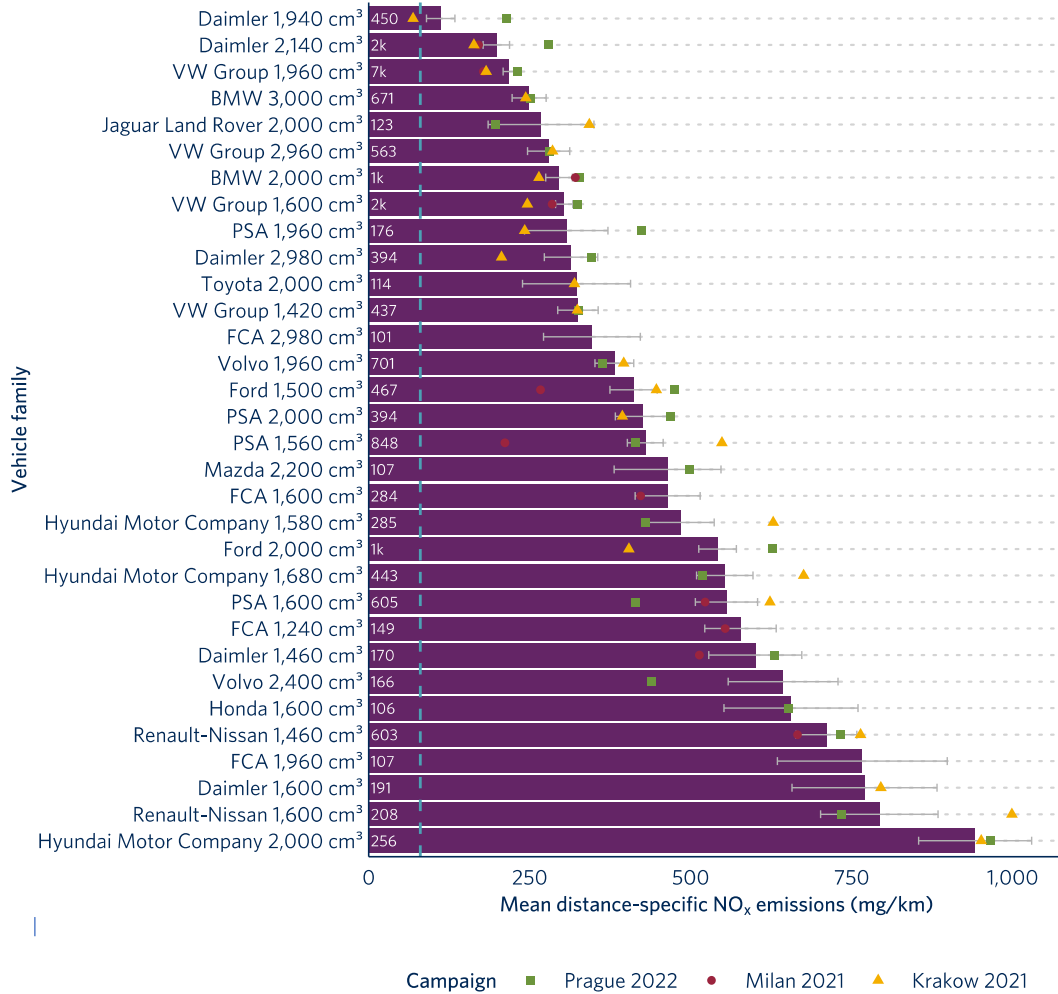
Åke Sjödin
CARES coordinator
IVL Swedish Environmental Research Institute

Charts: Average NO_x emissions per vehicle family



Calculated average NO_x emissions (mg/km) from **diesel Euro 5** vehicle families as measured by remote sensing during CARES campaigns in Milan, Krakow, and Prague. The blue dotted line refers to the type-approval limit of 180 mg/km. Whiskers indicate the 95% confidence interval of the mean. Only vehicle families with 100 or more measurements are presented.

Euro 6a-c: NO_x performance by vehicle family



Calculated average NO_x emissions (mg/km) from **diesel pre-RDE Euro 6** vehicle families as measured by remote sensing during CARES campaigns in Milan, Krakow, and Prague. The blue dotted line refers to the type-approval limit of 80 mg/km. Whiskers indicate the 95% confidence interval of the mean. Only vehicle families with 100 or more measurements are presented.



The following table shows the used **taxonomy of vehicle families**, including vehicle makes that belong to each manufacturer group.

Manufacturer group	Vehicle make
BMW	BMW
	Mini
Daimler	Mercedes
	Smart
FCA	Abarth
	Alfa Romeo
	Chrysler
	Dodge
	Ferrari
	Fiat
	Jeep
	Lancia
	Maserati
	Ford
General Motors	Cadillac
	Chevrolet
Hyundai Motor Company	Hyundai
	Kia
Honda	Honda
Mazda	Mazda
Mitsubishi	Mitsubishi
PSA	Citroën
	DS
	Opel
	Peugeot
	Vauxhall
Renault-Nissan	Dacia
	Infiniti
	Nissan
	Renault
Saab	Saab
Subaru	Subaru
Suzuki	Suzuki
Jaguar Land Rover	Jaguar
	Land Rover
Toyota	Daihatsu
	Lexus
	Toyota
Volvo	Volvo
VW Group	Audi
	Bentley
	Porsche
	SEAT
	Škoda
	Volkswagen



CARES partners:



CARES is a research project funded under the European Union Horizon 2020 Research and Innovation programme. The project brings together **European and Chinese experts in non-intrusive vehicle emission measurements, from 20 partner organizations,** to investigate the use of different remote sensing techniques for monitoring real-world vehicle emissions performance and enforcing compliance with exhaust pollutant standards. The goal of the CARES project is to lower barriers to the widespread use of these technologies through a combination of technology development, new analysis techniques, proof-of-concept demonstrations, and extensive dissemination of results, findings, and guidance. The project was coordinated by the IVL Swedish Environmental Research Institute and ran from May 2019 through April 2023.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 814966



List of **Market Surveillance Authorities** this letter is being sent to:

Austria

st5@bmk.gv.at
Federal Ministry for Climate Action, Environment,
Energy, Mobility, Innovation and Technology - Division
IV/ST5
www.bmk.gv.at
Radetzkystrasse 2, 1030 Vienna - Austria

Belgium

vehicle@mobiliteit.fgov.be
Federal Public Service Mobility and Transport -
Directorate-General Road Transport and Road Safety --
Directorate Certification and Surveillance
www.mobiliteit.belgium.be
Rue du Progrès 56, 1210 Brussels - Belgium

Bulgaria

gdzrp@mzh.government.bg
Ministry of Agriculture, Food and Forestry - Technical
and Control Inspection Department; Directorate
General "Agriculture and regional policy" (approval
authority)
www.mzh.government.bg
55, "Hristo Botev" Blvd, 1040 Sofia - Bulgaria

avto_a@rta.government.bg; islaveikov@rta.government.bg
Executive Agency "Road Transport Administration" -
Road Vehicles Directorate (approval authority)
www.rta.government.bg
5, Gourko street, 1000 Sofia - Bulgaria

info@kzp.bg; gl.direkcija@kzp.bg; t.patrikova@kzp.bg
Commission for Consumer Protection - Directorate
General Market Surveillance
www.kzp.bg
1, Vrabcha Str., 1000 Sofia - Bulgaria

Croatia

pisarnica@dzm.hr
State Office for Metrology, Independent Service for
Metrological Inspection -
www.dzm.hr/en
Capraška 6, 10000 Zagreb - Croatia

pisarnica.dirh@dirh.hr
State Inspectorate -
https://dirh.gov.hr/
Šubićeva 29, 10000 Zagreb - Croatia



Cyprus

roadtransport@rtd.mcw.gov.cy
Ministry of Transport, Communications and Works -
Department of Road Transport
www.mcw.gov.cy/rtd
27 Vasileos Pavlou, 2324 Nicosia - Cyprus

Czech Republic

posta@mdcr.cz
Ministry of Transport - Department of Road Vehicles
Operation
www.mdcz.cz/en/homepage.htm
Nábřeží Ludvíka Svobody 12, 110 15 Prague 1 - Czech Republic

Denmark

sik@sik.dk
Danish Safety Technology Authority -
www.sik.dk
Esbjerg Brygge 30, 6700 Esbjerg - Denmark

Estonia

info@transpordiamet.ee
Estonian Transport Administration - Construction and
Transport Supervision Department
www.transpordiamet.ee
Valge 4, 11413 Tallinn - Estonia

Finland

kirjaamo@traficom.fi
Finnish Transport and Communications Agency
(Traficom) -
www.traficom.fi
P.O. Box 320, 00059 TRAFICOM - Finland

France

ssmvm@developpement-durable.gouv.fr
Ministère de la transition écologique - Direction
générale de l'énergie et du climat - Service du climat et
de l'efficacité énergétique - Service de surveillance du
marché des véhicules et des moteurs (SSMVM)
www.ecologie.gouv.fr
Tour Sequoia, 1 place Carpeaux - 92055 Paris-La-Défense Cedex -
France

sm.bsst.safsl.sg@agriculture.gouv.fr
Ministère de l'agriculture et de l'alimentation - Sousdirection
du travail et de la protection sociale - Bureau
Santé et Sécurité au travail
https://agriculture.gouv.fr/
78, rue de Varenne - 75349 Paris - France



Germany

msa@kba.de
Kraftfahrt-Bundesamt - Marktüberwachung
www.kba.de
Fördestraße 16, 24944 Flensburg - Germany

Greece

yme@yme.gov.gr
Ministry of Infrastructure, Transport and Networks -
www.yme.gr www.yme.gov.gr
2, Anasstasseos & Tsigante Street, 10191 Athens – Greece

Hungary

fogyasztovedelem@bacs.gov.hu
Government Office of Bács-Kiskun County -
Department of transport and roadworthiness
www.kormanyhivatal.hu
Szent István Krt 19/A, 6000 Kecskemét - Hungary

jarmu-muszaki@bekes.gov.hu
Government Office of Békés County - Department of
transport and roadworthiness
www.kormanyhivatal.hu
Szabadság square 11-17, 5600 Békéscsaba - Hungary

kozlekedes@fejer.gov.hu
Government Office of Fejér County - Department of
transport and roadworthiness
www.kormanyhivatal.hu
Sárkeresztúri út 12. 8000 Székesfehérvár - Hungary
Government Office of Győr-Moson-Sopron County -
Department of transport and roadworthiness
Tatai út 3. 9028, Győr - Hungary

jmo@hajdu.gov.hu
Government Office of Hajdú-Bihar County -
Department of transport and roadworthiness
www.kormanyhivatal.hu
Bartók Béla u. 115, 4031 Debrecen - Hungary

meff.jarmu@heves.gov.hu
Government Office of Heves County - Department of
transport and roadworthiness
www.kormanyhivatal.hu
Faiskola u. 5., 3300 Eger - Hungary

tolna.mf.jarmu@tolna.gov.hu
Government Office of Tolna County - Department of
transport and roadworthiness
Kiskorzótér 3., 7100 Szekszárd - Hungary



jarmu-meff@somogy.gov.hu
Government Office of Somogy County - Department of
transport and roadworthiness
Vásártéri u. 2. 7400 Kaposvár - Hungary

kozlekedes@szabolcs.gov.hu
Government Office of Szabolcs-Szatmár-Bereg County -
Department of transport and roadworthiness
www.kormanyhivatal.hu
Hatzel tér 10., 4400 Nyíregyháza – Hungary

Government Office of Zala County - Department of
transport and roadworthiness
Zrínyi u 101. 8900 Zalaegerszeg - Hungary

vezeto-buda@bfkh.gov.hu
Government Office of the Capital City Budapest -
Department of transport and roadworthiness
www.kormanyhivatal.hu
Mozaik u. 5, 1033 Budapest - Hungary

kozlekedes@borsod.gov.hu
Government Office of Borsod-Abaúj-Zemplén County -
Department of Transport and Roadworthiness
www.kormanyhivatal.hu
Futó u. 1., 3508 Miskolc - Hungary

jasz.kozlekedes@jasz.gov.hu
Government Office of Jász-Nagykun-Szolnok County -
Department of Transport and Roadworthiness
www.kormanyhivatal.hu
Indóház u. 8., 5000 Szolnok - Hungary

veszprem.kozlekedes@veszprem.gov.hu
Government Office of Veszprém County - Department
of Transport and Roadworthiness
www.kormanyhivatal.hu
Kistó u. 1., 8200 Veszprém - Hungary

muszak@baranya.gov.hu
Government Office of Baranya County - Department of
Transport and Roadworthiness
www.kormanyhivatal.hu
Hengermalom u. 2., 7630 Pécs - Hungary

meff.jarmu@vas.gov.hu
Government Office of Vas County - Department of
Transport and Roadworthiness
Wesselényi Miklós u. 7, 9700 Szombathely - Hungary



kozlekedes@nograd.gov.hu
Government Office of Nógrád County - Department of
Transport and Roadworthiness
www.kormanyhivatal.hu
Csokonai u. 3., 3104 Salgótarján - Hungary

vezeto@csongrad.gov.hu
Government Office of Csongrád-Csanád County -
Department of Transport and Roadworthiness
www.kormanyhivatal.hu
Rákóczi tér 1., 6720 Szeged – Hungary

Government Office of Komárom-Esztergom County -
Department of Transport and Roadworthiness
Táncsics M. u. 1/D, 2800 Tatabánya - Hungary

jarmu@pest.gov.hu
Government Office of Pest County - Department of
Transport and Roadworthiness
www.kormanyhivatal.hu
Komócsy u. 17-19, 1141 Budapest - Hungary

Iceland

icetra@icetra.is
Transport Authority -
www.icetra.is
1040 PO Box 470, 202 Kopavogur - Iceland

Italy

dgmot.segr@mit.gov.it
Ministry of infrastructure and Transport - Department
for Transport, Directorate on Motor vehicles and
drivers
via Giuseppe Caraci 36, 00157 Roma - Italy

Customs Agency - Central Management and Fraud
Controls
www.agenziadoganemonopoli.gov.it/
Via Carucci 71, 00143 Roma - Italy

Latvia

pasts@ptac.gov.lv
Consumer Rights Protection Centre -
www.ptac.gov.lv
Brivibas street 55, 1010 Riga - Latvia



Liechtenstein

info.asv@llv.li
National Road Office (NRO) -
www.asv.llv.li
PO Box 684, 9490 Vaduz - Liechtenstein

Lithuania

ltsa@ltsa.lrv.lt
Lithuanian transport safety administration -
<https://ltsa.lrv.lt/en/>
Švitrigailos g. 42, 03209 Vilnius – Lithuania

Luxembourg

surveillance@ilnas.etat.lu
ILNAS - Surveillance du Marché
www.portail-qualite.public.lu
1, avenue du Swing, 4367 Belvaux - Luxembourg

Malta

info@mccaa.org.mt
Malta Competition and Consumer Affairs Authority -
Market Surveillance Directorate, Technical Regulations
Division
www.mccaa.org.mt
Mizzi House, National Road, Blata l-Bajda, Hamrun, HMR 9010 - Malta

Netherlands

<https://english.ilent.nl/contact>
Human Environment and Transport Inspectorate -
www.ilent.nl
Rijnstraat 8, 2515 XP Den Haag - Netherlands

RDW Vehicle Technology and Information Centre -
www.rdw.nl
Europaweg 205, 2711ER Zoetermeer - Netherlands

Norway

firmapost@vegvesen.no
Public Roads Administration -
www.vegvesen.no
PO Box 8142, 0033 Oslo - Norway

Poland

homologacja@tdt.gov.pl
Transportation Technical Supervision (approval
authority) -
www.tdt.gov.pl
ul. Pulawska 125, 02-707 Warsaw - Poland



dih@uokik.gov.pl
Office of Competition and Consumer Protection - Trade
Inspection Department
www.uokik.gov.pl
plac Powstańców Warszawy 1, 00-950 Warsaw - Poland

Portugal

imt@imt-ip.pt
Mobility and Transport Institute, I. P. (IMT) -
www.imtt.pt
Avenida das Forças Armadas, n.º 40; 1649-022 Lisboa – Portugal

Romania

dsp@rarom.ro
Romanian Automotive Register - Market Surveillance
Department
www.rarom.ro
Calea Griviței 391 A, 010719 Bucharest - Romania

Slovakia

info@soi.sk
Slovak Trade Inspection -
www.soi.sk
Bajkalská 21/a, 827 99 Bratislava - Slovakia

Slovenia

gp.irsi@gov.si
Inspectorate for Infrastructure -
www.ii.gov.si
Vožarski pot 12, 1000 Ljubljana - Slovenia

Spain

msanzc@mincotur.es; csegind@mincotur.es
Ministerio de Industria, Comercio y Turismo - Dirección
General de Industria y de la Pequeña y Mediana
Empresa - Subdirección General de Calidad y Seguridad
Industrial y Consejerías de las Comunidades Autónomas
P. de la Castellana 160, 28071 Madrid - Spain

bzn-sgh@miteco.es
913497441/42
Ministerio para la Transición Ecológica y el Reto
Demográfico - Secretaría de Estado de Energía -
Dirección General de Política Energética y Minas - S. G.
de Hidrocarburos y Nuevos Combustibles
P. de la Castellana 160, 28071 Madrid - Spain



Sweden

kontakt@transportstyrelsen.se
Tel:+46771503503
www.transportstyrelsen.se
601 73 Norrköping - Sweden

Switzerland

info@astra.admin.ch
Federal Roads Office (FEDRO) -
www.astra.admin.ch
Mühlestrasse 2, 3063 Ittigen

United Kingdom

enquiries@vca.gov.uk
Vehicle Certification Agency (VCA)
No 1 The Eastgate Office Centre, Eastgate Road, Bristol, BS5 6XX

enquiries@dvs.gov.uk
Department for Transport
Great Minster House, 33 Horseferry Road, London, SW1P 4DR

Türkiye

sugotomotiv@sanayi.gov.tr
Ministry of Industry and Technology - Directorate
General for Metrology and Safety of Industrial Products
www.sanayi.gov.tr
Mustafa Kemal Mahallesi, Eskişehir Yolu 10.km No:276, 06530
Çankaya/Ankara - Türkiye

In addition, this letter is being sent to the European Commission:

Peter Van Kemseke, European Green Deal Adviser to President von der Leyen
peter.van-kemseke@ec.europa.eu

Joan Canton, Cabinet of Commissioner Breton
joan.canton@ec.europa.eu

Daniel Mes, Cabinet of First Vice President Timmermans
daniel.mes@ec.europa.eu

Elena Montani, Cabinet of Commissioner Sinkevičius
elena.montani@ec.europa.eu

Filip-Alexandru Negreanu-Arboreanu, Cabinet of Commissioner Vălean
filip-alexandru.negreanu-arboreanu@ec.europa.eu

Roberto Reig Rodrigo, Cabinet of Commissioner Kyriakides
roberto.reig-rodrigo@ec.europa.eu