



# **Annex to ‘The Road to a Fair, Green, and Mobile Europe’**

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## Annex A: Financing

### **A.1: Is the EIB a leading and exemplary bank on climate change?**

It is true that the EIB is playing a real role in the development of climate finance. It would not be adequate to not mention the significant efforts that have been undertaken in recent years on the subject, as the EIB Group will continue this action in the climate field as it will unlock EUR 1 trillion of climate action and environmental sustainable investment in the decade to 2030.<sup>1</sup>

**But in the face of the climate crisis, it is not a question of whether significant efforts are being made. It is a question of whether they are critical enough to face the future crisis and its consequences and whether they will allow the bank to have a portfolio in line with the Paris climate agreements.**

The EIB is chastised by many NGOs for continuing to invest in dirty projects. For instance Counter Balance, a coalition of 9 NGOs, mentions its financing support for airports and motorways, which are “*absolutely incompatible with the objectives of the European Green Deal and the EIB commitments to align with the Paris Agreement*”<sup>2</sup> WWF also points out that “polluting transport infrastructure could get support until 2025 and beyond”.

It is in continuity with the bank's historical financing habits on “dirty projects”. According to Counter Balance : “*Between 2016 and 2019, the EIB financed high-carbon operations worth € 28.7 billion in the energy and transport sectors only. In the transport sector, this includes more than €4 billion in loans for the expansion of airports, €10.65 billion to construct or expand roads, highways and motorways, and €2.83 billion in polluting investments for the maritime sector.*” Moreover, according to Bankwatch : “*Between 2007 and 2011 the EIB loaned 30% of its energy budget (62 billion Euro) for different kinds of fossil fuel projects, sometimes causing a high carbon “lock-in” effect, for example when financing coal power plants with a sum of almost EUR 2 billion*”<sup>3</sup>

As such, its current commitments are not sufficient to provide sustainable guarantees: it still can finance polluting projects, and lack a clear definition of ‘low-carbon’ projects.

<sup>1</sup> EU Bank launches ambitious new climate strategy and Energy Lending Policy (EEAS 15/11/2019)

[https://eeas.europa.eu/delegations/china\\_en/70491/EU%20Bank%20launches%20ambitious%20new%20climate%20strategy%20and%20Energy%20Lending%20Policy](https://eeas.europa.eu/delegations/china_en/70491/EU%20Bank%20launches%20ambitious%20new%20climate%20strategy%20and%20Energy%20Lending%20Policy)

<sup>2</sup> <https://www.counter-balance.org/too-soon-to-call-eib-eu-climate-bank/>

<sup>3</sup> Data on the energy lending by the European Investment Bank and the European Bank for Reconstruction and Development (BankWatch Network, Unknown), Available at: <https://bankwatch.org/data-on-the-energy-lending-by-the-european-investment-bank-and-the-european-bank-for-reconstruction-and-development>



In an open letter to Mr. Werner Hoyer, the President of the EIB, a coalition of 34 NGOs severely criticizes the Climate Bank Roadmap 2021-2025.<sup>4</sup> They highlight the absence of any new restrictions on high-carbon activities, especially in the transport sector. As things stand, many uncertainties suggest that there is a significant risk that the Paris Agreements will not be respected. In the “EU Climate Bank Report” by Counter Balance<sup>5</sup>, the risk of greenwashing of its activities is highlighted. For instance, there is a risk of financing fossil fuels through “low-carbon” gas or “green aviation”, notions that are highly questionable and are more a matter of marketing than environmental awareness. Even if the Bank plans to invest 1 trillion in sustainable investment before 2030, this ambitious objective can be abused if the wrong projects are classified as sustainable.

Thus, far from being exemplary, the efforts made by the EIB Group still seem insufficient to comply with the Paris Agreements.

## **A.2: Stop all fossil fuel subsidies and apply the polluter-pays principle**

Transport is the largest beneficiary of fossil fuel subsidies. European countries spend more than €112 billion per year subsidising oil, gas and coal production or consumption. The transport sector was the main beneficiary, with more than €49bn (44%) used to support the use of fossil fuels including tax breaks on highly-polluting diesel.” (Euractiv, 2017)<sup>6</sup> *Aviation would receive €3bn a year in direct subsidy for operation and infrastructure developments.*’ (Transport & Environment, 2019)<sup>7</sup>

Transport receives an estimated implicit operations subsidy of €396bn per year for EU28.<sup>8</sup> Governments should phase out subsidies for high energy intensive modes of transport.

More than 60 % of transport infrastructure investments go to road transport. In Central and Eastern Europe, the share of investments in rail infrastructure is increasing.<sup>9</sup>

<sup>4</sup> [http://www.counter-balance.org/wp-content/uploads/2020/06/Joint\\_letter\\_climate\\_roadmap\\_Final.pdf](http://www.counter-balance.org/wp-content/uploads/2020/06/Joint_letter_climate_roadmap_Final.pdf)

<sup>5</sup> <http://www.counter-balance.org/wp-content/uploads/2020/07/EU-Climate-Bank-Report.pdf>

<sup>6</sup> Simon F., *Transport sucks up nearly half of Europe’s fossil fuel subsidies, report finds* (Euractiv 2017), Available at:

<https://www.euractiv.com/section/energy-environment/news/transport-sucks-up-nearly-half-of-europes-fossil-fuel-subsidies-report-finds/>

<sup>7</sup> Transport & Environment, *How to reduce airline emissions*

(T&E 29/09/2017), Available at: <https://www.transportenvironment.org/what-we-do/aviation-and-eu-ets>

<sup>8</sup> *Europe’s economic recovery after Covid-19: help finance it by applying user-pays and polluter-pays principles in transport* (CER 01/07/2020), Available at:

[https://www.cer.be/sites/default/files/publication/200701\\_CER\\_PositionPaper\\_User-and-polluters-pays%20to%20finance%20recovery%20after%20Covid-19.pdf](https://www.cer.be/sites/default/files/publication/200701_CER_PositionPaper_User-and-polluters-pays%20to%20finance%20recovery%20after%20Covid-19.pdf)

<sup>9</sup> *THE ECONOMIC FOOTPRINT OF RAILWAY TRANSPORT IN EUROPE* (CER 2014),

[https://www.cer.be/sites/default/files/publication/The\\_Economic\\_Footprint\\_-\\_web\\_-\\_final\\_final\\_30\\_Sept\\_0.pdf](https://www.cer.be/sites/default/files/publication/The_Economic_Footprint_-_web_-_final_final_30_Sept_0.pdf)



### A.3: EU Rail Funding

Cross-border passenger rail connections are being closed and services cancelled, despite passenger demand. The focus on expensive high-speed rail infrastructure and services, which receive beneficial treatment from EU funds, may be feeding this harmful trend.<sup>10</sup>

### A.4: FATCA law

*Using the internal market to stop fossil fuels financing : a climate FATCA law in Europe?*

The Climate & Jobs Pact defends the idea that we could implement an extraterritorial law to be sure that all banks that have a presence in Europe have investments consistent with the climate emergency.<sup>11</sup> If they invest in fossil fuels, part of their revenue from the European internal market could be retained.

We can find an ethical justification of this idea by Simon Caney, a Canadian professor of political theory. He established a distinction between first-order and second-order climate responsibilities.<sup>12</sup> Caney views first order climate responsibilities as consisting of an agent's obligation to do its 'fair share' to address climate change according to the tenets of 'burden-sharing justice'. Nonetheless, he does not consider that an agent's climate responsibilities stop there. As it is inevitable that some agents will fail to comply with the first-order climate responsibilities, he argues that other agents have second-order climate responsibilities to seek to induce these non-compliant agents to step into line. This might be summed up as 'Do your share and encourage/induce others to do theirs to protect the potential victims of climate change.'

According to Caney, second-order climate responsibilities arise for two reasons. On the one hand, they arise because some agents have failed to fulfill their first-order climate responsibilities. These 'non-compliant' first-order agents have, as such, acted inappropriately. On the other hand, they arise because it is incumbent upon second order agents to do what they can to minimize the threat of dangerous climate change. This (moral) obligation arises due to the severity of the negative consequences that would otherwise ensue for those who would suffer its destructive effects. It is because of the need to protect the entitlements of the potential victims of dangerous climate change that Caney characterizes second-order climate responsibilities as contributing to the realization of 'harm-avoidance justice'.

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<sup>10</sup> *Sustainable finance*

(Transport & Environment 2020) <https://www.transportenvironment.org/what-we-do/sustainable-finance>

<sup>11</sup> *European Call : 3 solutions for climate and jobs* (Climate and Jobs 2020), Available at:

<https://climateandjobs.eu/wp-content/uploads/2020/06/European-Call.pdf>

<sup>12</sup> Caney, S., 'Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens' (Journal of Political Philosophy 2014) 22: 125–149.



From this point of view, a climate Fatca law would be the exercise of its second-order climate responsibilities. This is in line with other climate reflections with extra-territorial consequences by using the power of the European market. As noted by Joanne Scott : “ *It is increasingly common for states to adopt climate change legislation that includes within its scope greenhouse gas emissions that occur outside of their territory.*”<sup>13</sup>

### *Would this FATCA climate law be compatible with European law?*

The European Union Emissions Trading System (EU ETS), is the first large greenhouse gas emissions trading scheme in the world. This scheme has an extraterritorial dimension as it includes extraterritorial aviation emissions within the ETS.<sup>14</sup> The Court of Justice of the European Union (CJEU) ruled that the EU’s decision to include aviation in its ETS was compatible with customary international law, because it considered that the EU and its Member States enjoy ‘unlimited jurisdiction’ over aircraft which are present within the territory of a Member State.

The Court insisted that it is legitimate for the EU to make the carrying out of a commercial activity within the EU conditional upon compliance with EU environmental law, ‘in particular’ where the environmental objectives pursued by the EU ‘follow on from’ an international agreement to which the EU is a party. According to the Court, customary international law does not call into question the full applicability of EU law within the territory of the EU, even when the ‘event’ causing pollution within the EU occurs partly outside.

This is an encouraging element of the compatibility of a climate FATCA law with European and international law. Similar elements could be explored in the EU issued Regulation 2015/757 on the monitoring, reporting, and verification of carbon dioxide emissions from maritime transport.<sup>15</sup>

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<sup>13</sup> Scott, Joanne, Unilateralism, Extraterritoriality and Climate Change (July 22, 2015). D. Farber & M. Peeters, Climate Law Encyclopedia (Edward Elgar, 2015 Forthcoming), Available at SSRN: <https://ssrn.com/abstract=2634575>

<sup>14</sup> Hartmann J., *The European Emissions Trading System and Extraterritorial Jurisdiction* (Ejil:Talk 23/04/2012)

<https://www.ejiltalk.org/the-european-emissions-trading-system-and-extraterritorial-jurisdiction/>

<sup>15</sup> Dobson NL and Ryngaert C, “PROVOCATIVE CLIMATE PROTECTION: EU ‘EXTRATERRITORIAL’ REGULATION OF MARITIME EMISSIONS” (2017) 66 International and Comparative Law Quarterly 295 <https://www.cambridge.org/core/journals/international-and-comparative-law-quarterly/article/provocative-climate-protection-eu-extraterritorial-regulation-of-maritime-emissions/347B22E0D1C79E34EFDC86483462B18A/core-reader#>



## Annex B: Rail

### **B.1: Reforming the EU-Wide integrated ticketing and payment systems**

- There are a couple of challenges and opportunities worth mentioning for an EU-Wide integrated ticketing and payment system. Perhaps the most obvious is the fact that Finland is the only Member State that requires transport services to provide an API (Application Programming Interface) which creates a holistic system integrating all services (Wavestone & VVA 2019).
- A bill was recently passed in France which opens up mobility data, on a real time basis, and requires that the data be used for a national access point (Legifrance 2019). There is also a bill being debated in the Danish Parliament which would ensure the creation of a single digital mobility service under one company managed by a joint board (Folketinget 2019)
- The commercial barriers for integrated ticketing is one the biggest challenges (Wavestone & VVA 2019). Integration of services requires that investment is done for interoperability which may not be feasible for smaller operators or those with short public service contracts due to uncertainty in regards to return on investment. There is also the issue of companies not wanting to share their data with competitors due to fears that it could lower their financial gain
- The online booking experience within the EU is inherently flawed and acts as a significant hurdle to increase the number of passengers travelling by train. Clear examples of this may be found with train enthusiast and visiting professor college of Europe who has detailed overviews on his twitter account and blog. In a nutshell, it may be very difficult to find the cheapest and most relevant train on certain distances due to the absence of an all encompassing platform which shows all journey possibilities. Surprisingly, you may even get astronomically different prices for the exact same train on the same day/time on different booking platforms.
- The solution is to have operators make timetables and ticketing of their trains available to third parties in an open data format.



## **B.2: Rail passenger rights (Position of the European Parliament presented by rapporteur Boguslaw Liberadzki)**

- The inclusion of regional and national railways in the legislation (Currently Member States may grant a permanent exemption for urban, suburban and regional services)
- Ensure that all trains have compartments for bikes
- 100% compensation after 2 hours for national and international long-distance journeys (Currently 25% of ticket price is given for a delay of 60 to 119 minutes and 50% of ticket price is given for a delay of 12 minutes or above)
- Force majeure (unforeseeable circumstances) should be determined by independent and competent authorities
- Lower the pre-notification time for people with disabilities from 48 to 24 hours to make it more accessible
- A report published by the College of Europe has already shown that EC261 (air passenger rights regulation) has decreased delays for airlines - why should it be different for trains (Gnutzman & Spiewanowski 2018)?

## **B.3: Bolstering competition and liberalisation in the rail sector**

- With the exception of Austria and Italy, national incumbents still dominate by 100% the rail market for domestic commercial long-distance journeys in, e.g. France and Spain, and by 99% in Germany.
- Liberalization does not necessarily produce a competitive market, which calls for the dire need of competent public authorities intervention in this market.
- PSCs represent approximately 90% of travels by train and 42% of passenger per kilometer within the EU.
- Regarding urban planning, the Sustainable Mobility Plans (SUMP) could constitute a help to local transport infrastructures (Bongardt et al. 2013).
- PRIME Platform
- Fragmentation between technical standards remains too important: in 2014, it is estimated 11 000 technical national rules still coexisted.



## **B.4: Ultra-Rapid Trains**

The development of an Ultra Rapid Train (URT) network could constitute a genuine alternative to planes. It would also constitute a pan-European flagship project to support the Green Deal. It would also fill a technological gap vis-à-vis China, and offer both a response and potential linkages to the Chinese Belt and Road Initiative.

- Today in Europe, only a few lines allow a speed of 300 km/h, namely: Paris-Strasbourg and Madrid-Barcelona.
- It would be distinct from TEN-T projects, which are an ineffective patchwork of national high-speed lines according to the European Court of Auditors (ECA, 2018). The objective in terms of average speed would be to reach 250-350km/h, which would allow halving current rail travel times, for example, contributing to a Paris-Berlin journey of only 4 hours.
- One of the foreseeable drawbacks the URT could be an increase in noise pollution. Indeed, some of the fastest existing train lines like the HS2 in the UK, or the Paris-Bordeaux line in France, are estimated to produce a nuisance of on average 95 decibels at 50 meters from the railway by the Guardian and Le Figaro newspapers, though no official word is actually available. Considering the WHO recommends a threshold of 54 dB by day, and 44 dB by night, it seems necessary to take the noise pollution issue into account when considering the URT, as the lines could cut across some of Europe's most densely populated areas (see figure X).

## **B.5: Conduct an economic assessment on whether hydrogen can be a sustainable strategy for unelectrified rail connections**

EASAC (2019) finds that in assessing Hydrogen's feasibility in the transport sector, urgency is a crucial factor when discussing rail's contribution to decarbonisation and hydrogen still needs to address issues concerning its storage, the cost of fuel cells, its green production which requires large amounts of energy, and the overall supply of renewable electricity which is required for the process of producing green hydrogen.

## **B.6: Electrified railway lines**

According to the data from the European Commission, in 2016, there is a huge difference in the percentage of electrified railway lines between member states.





- Only in Luxemburg (95%), Belgium (86%), The Netherlands (76%) and Sweden (75%) more than  $\frac{3}{4}$  are electrified.
- In Denmark (24%), Greece (23%), Estonia (14%), Latvia (13%), Lithuania (6%) and Ireland (3%) less than  $\frac{1}{4}$  are electrified.
- Taking into account that the latest available data dates from 2016, we assume that currently more railway lines are electrified, but in order to bridge the gap for the majority of the EU Member States who do not meet 75%, investments need to be increased heavily in the electrification of railway infrastructure.

Our recommendations on electrification are in line with [CER's position paper "Rail's contribution to the European Climate Pact" \(29 May 2020\)](#), where they aim for carbon free railway operations by 2050, in line with the European Green Deal's objectives. They point out that rail is already committing to improve their energy efficiency by:

- Modernising its infrastructure;
- Modernising its fleet;
- Procuring green electricity;
- Investing in technology.

We support CER's pledge that significant financial investments in the rail sector are required to reach the objectives of the European Green Deal while ensuring the cost-friendliness of solutions for consumers.

## **B.7: The Revitalisation of Night Trains:**

The European Environmental Agency (2018) specifically indicated in their annual study on the environmental impact of transport that nightrains are a viable alternative to aviation's flights that are less than 1,000km in length, however, night train services have seen a decline over the past couple of decades. To make night trains more competitive against short distance flights, passengers should be faced with more affordable rail tickets as there is demand to be satisfied.

The fact that low-cost airlines are able to provide far-lower prices than intercity and nightrains for the same short-distance routes generally puts a pressure on rail ticket prices to decline. The crucial issue to overcome is that in the EU operation and network services are separated which incurs a higher cost on long-distance train operators. Train operators are burdened with higher variable costs as a result of this separation which has as a result the loss of night trains economic advantages ([Back on Track, 2020](#)). Concurrently with the railway packages that have been in place since 1991, "MS also have to fill these requirements:

- Open network access:** *access to rail network must be open to all rail operators on equal terms, for both freight and passenger transport.*
- Separation of network and operations:** *the network must be managed separately from railway operations, however, bundling in holding companies remains possible*



- (c) **Public Service Obligations (PSO) and tender obligation:** *if railway connections are subsidised by a MS, this must be done within the framework of an open tender.* “ Back on Track, 2020 ).



## Annex C: Urban & Rural Mobility

### C.1 Sustainable Urban Transportation

- ***Introduce a grant scheme to support cities purchasing zero-emission vehicles (ZEVs) and install the required infrastructure in order to reach net-zero by 2040.*** Cities need to lead by example and commit to 100% zero emission passenger and other municipal vehicles such as buses, refuse collection trucks and municipal vans. The funding for ZEVs should ensure a clean source of energy, sustainable extraction of materials and human wellbeing both in the EU and abroad. In order to achieve this, state and regional governments are invited to establish a roadmap to reach net-zero public vehicles emissions. A mandate for increased sales of clean vehicles will also require a similarly broad deployment of infrastructure such as charging stations.
- ***Push to 100% electrification of car-sharing companies' fleets.*** The car-sharing fleet in Europe is currently around 400,000 vehicles and it is estimated that it will reach 7.5 million vehicles by 2035.<sup>16</sup> Furthermore, about 45% of car-sharing providers in Europe already operate a 100% electric fleet, 20% operate a mixed fleet of electric vehicles and internal combustion engines, whereas 35% do not use any ZEVs at all.<sup>17</sup> Since it is difficult for municipalities to regulate private car ownership, targeting car-sharing companies will definitely help in the electrification of urban mobility. At the same time, cities' regulations benefitting the electrical vehicles owners, such as free parking and the inner city free access, makes the car-sharing companies' electrical vehicles business plan more viable.
- ***Support the development of active mobility.*** Improving the accessibility and infrastructure for pedestrians and cyclists will support the shift from car usage to cycling and walking mobility patterns over shorter distances. For example,

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<sup>16</sup> ING, Car Sharing Unlocked, October 2018

<[https://think.ing.com/uploads/reports/ING - Car sharing unlocked.pdf](https://think.ing.com/uploads/reports/ING_-_Car_sharing_unlocked.pdf)> accessed 12 Aug 2020

<sup>17</sup> Nora Manthey, Trend-Europe: Electrification in Car-Sharing Fleets, March 2020

<<https://www.electrive.com/2020/03/08/trend-europe-electrification-in-car-sharing-fleets/>> accessed 12 Aug 2020



one study showed that 60% of trips in France are under five kilometres.<sup>18</sup> For that reason, the EU could announce grant schemes for the governments to:

- develop new and expand existing bicycle lanes.
  - increase cycle parking spaces.
  - give subsidies for newly purchased bicycles and especially for e-bikes.
  - upgrade their public e-bikes fleet and promote bike sharing programs.
- ***Establish a single European transportation card.***<sup>19</sup> A single ticket that would allow the passengers to travel using different modes of transport, provided by many transport operators across the EU. To achieve a single network of transport operators, many stakeholders need to be involved. Through policies, the EU could facilitate their cooperation by:
    - Giving stakeholders financial benefits to encourage the collaboration.
    - Providing application programming interfaces (APIs) for planning and ticketing.
    - By identifying and bridging the gaps in the transportation regulations among different countries.
    - Facilitating the integration between different ticket schemes (interoperability).
    - Introducing a price integration system to include all the transport operators and distribute the revenue between the different actors accordingly.

## C.2 Sustainable Rural Transportation

- ***Putting the issue on the European agenda.*** So far, it appears rural mobility has widely not been considered as an issue in its own right, both in European and Member State's mobility policies. Indeed, it is usually in rural development, tourism, agricultural, or broader mobility policies, which often reduces the rural mobility issue as very peripheral, if tackled at all. However, rural mobility has to

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<sup>18</sup> Igor Todorović, Cyclists ask European Parliament to Add Bicycle Infrastructure, Incentives, July 2020

<<https://balkangreenenergynews.com/cyclists-ask-european-parliament-to-add-bicycle-infrastructure-incentives/>> accessed 15 Aug 2020

<sup>19</sup> Remaining Challenges for EU-Wide Integrated Ticketing and Payment Systems

<[https://ec.europa.eu/transport/sites/transport/files/vva-grimaldi\\_exec\\_summary\\_ticketing\\_study.pdf](https://ec.europa.eu/transport/sites/transport/files/vva-grimaldi_exec_summary_ticketing_study.pdf)> accessed 29 Jul 2020



be taken into account for designing both a comprehensive sustainable mobility policy, and for addressing its specificities. The actual legislative vacuum reflects the urbanization trend that has been ongoing those last centuries in Europe and the world, and has been steadily supported and reinforced by policy choices in mobility and spatial planning. Rural mobility is thus also linked to the broader topic of urban/spatial planning. We thus propose first to build a European-wide policy specifically tackling the issue of rural mobility that would be a reference in said matter.

We would particularly include in this policy recommendation:

- ***Reforms regarding carpooling legislation.*** Due to the major deficit of transportation alternatives in rural areas, the motorization rate per individual is very high. The costs to develop an alternative collective transport infrastructure(?) in rural areas are very high and prohibitive. This is true for people already possessing a car who want to make their purchase profitable and because individuals need to be provided with a secure alternative. Carpooling should specifically be authorized to be a commercial activity in order to be incentivized and developed. This should also entail, for instance, favouring the institutionnalisation of carpooling lines and designated signalling.
- ***Demand-Responsive Transports management.*** The advantages of an on-demand transport service are diverse, allowing both spatial and temporal flexibility, ideal for rural areas where a daily network does not exist. In addition, the solution has a limited environmental impact as well as a financial impact since fewer vehicles are on the road.

### C.3 Access to Electrical Vehicles

#### *Public Transportation*

- ***Revise the targets for the public buses under the Clean Vehicles Directive to be only met solely by electrification instead of fuels falling under the Alternative Fuels Infrastructure Directive.*** Depending on the EU country's population and GDP, between 24% and 45% of new public buses must be clean, according to the revised Clean Vehicles Directive. In 2030 between 33% and 66% of publicly procured buses must meet the standard. According to the Alternative Fuels



Infrastructure Directive, vehicles powered by fossil fuels such as liquified and compressed natural gas are considered “clean”. However, studies discredited claims that compressed natural gas (CNG) do not pollute the air with toxic particles, and for that reason the EU should aim for clean vehicles powered solely by electricity.

### *Charging Points*

- ***Having a homogenous development of charging points across the EU.*** There is an increase of EV use at the European Union Level. ACEA acknowledges that by the European Commission’s conservative estimates, at least 2.8 million electric charging points will be needed across the EU by 2030. According to Directive 2014/94/EU,<sup>20</sup> Member States should ensure that charging points open to the public are set up to provide adequate coverage, so that electric vehicles can circulate at least in urban/suburban agglomerations and other densely populated areas and, where appropriate, within networks determined by the Member States. The number of such charging points should be set taking into account the estimated number of electric vehicles to be registered before the end of 2020 in each Member State. However, this Directive does not take into account non-urban locations. Thus, the development of charging points across Europe is heterogeneous. A number of charging points should be imposed per Km<sup>2</sup> which would allow people in the city as well as in the countryside to access the charging points.

## **C.4 Reducing Pollution**

Most particles in the air form in the atmosphere as a result of complex chemical reactions derived from power plants, industries and automobiles.

There are more than 70.000 studies that demonstrate the negative effect of air pollution on health. This includes 8.8m premature deaths a year worldwide, 400.000 of which are in the EU with 1 in every 8 deaths caused by the environment (EEA, 2019), but it also leads to heart attacks, strokes, dementia, miscarriages, infant health

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<sup>20</sup> Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure [2004] OJ L 307.



problems among many others. Air pollution is estimated to cost the European economy between €427bn and €790bn per year.

After air pollution, noise pollution is the second most important cause of ill health in Western Europe. Exposure to it may be involved in the development of some breast cancers, psychological stress exacerbating respiratory diseases and rising levels of depression and anxiety. The EEA (2018) estimates that 100 million people in the EU are exposed to higher than recommended noise levels and are thus likely to develop ill health.

Multiple options exist to decrease these deadly levels of pollution, speed limits and Zero Emission Zones are only two examples:

- a) **Promote clean and healthy alternatives such as walking, cycling over the purchase of vehicles:** New forms of micro mobility and public transport help reduce pollution, congestion, noise and accidents. Given that 75% of trips in the EU are below 10 km there is considerable potential in this.
- b) **Help small businesses, sole traders, charities and low-income families go zero emission:** Provide targeted support to families and SMEs that could not afford a transition to zero-emission vehicles.
- c) **Consider special rules for residents inside the LEZ:** These include more time to acquire a compliant vehicle, discount and exemptions for certain categories of drivers such as residents or disabled people.
- d) **Establish a package of countermeasures for speeding:** These include speed limits, road engineering measures (e.g. speed bumps), enforcement on *intentional speeders* with safe and credible limits and informative programs, all under the umbrella of full governmental transparency. These controls must be tailored based on best practices and never undermine individual freedoms through indiscriminate practices such as mass surveillance.
- e) **Clarity and predictability of policies:** For these policies to be successful they need to change behaviour through a clear and predictable calendar communicated to the public, transparent and understandable account of costs and generated money, high standards regarding the allowance of clean vehicles into ZEVs, proper enforcement and penalties and above all transparency in objectives and enforcement.



- f) Establish stronger constraints on Euro regulations** : 90% of the vehicles circulating in the EU don't respect the Euro 6 regulations on Nitrogen oxides, Carbon monoxides, Hydrocarbons and Particulate matter emissions.
- The necessity of tackling this issue in a more convincing manner is undeniable, and more EU action (i.e. with subsidies for the consumers to change for a less polluting vehicle) on this level is needed.
- g) Stronger reglementations on constructors** : An impactful ecological transition cannot be done without big changes in the systems of production ; therefore, it's necessary that the EU pressures vehicles constructors towards more eco-friendly production processes. Existing techniques, such as scrubber systems (which removes harmful materials, such as acid gases, from exhaust gases) that are already used for trucks and ships motors, can be extended to cars and improve drastically air quality.





## Annex D: Space

### *The negative externalities resulting from spacecraft launching*

The current way of sending spacecraft in space is highly polluting: The launching drains our resources (energy, funds and materials) as it can consume up to 400 tons of kerosene<sup>21</sup>, producing a high amount of carbon emissions. Not only does it consume fuel, but it also produces debris.

### *Space debris*

Space is full of space debris, coming from rocket launches, obsolete satellites, scraps from ISS construction, accidental discards (spacesuit gloves, cameras, fragments from spacecraft, etc.). Half of trackable objects are due to in-orbit explosion events or collision events. It has an impact on space exploration, as it threatens space equipment and observation centers<sup>22</sup>. The other impact is on space observation. The multiplication of bodies can hinder space observation, as well as produce more debris when said satellites become obsolete.

### *Global Integration of Space policy*

Up until the last century, Europe has had a continuous stream of violent conflicts, be it internally or towards the rest of the world. There is little doubt that it was the economic and political interests of individual nation-states that radicalised their narrative, resulting in well over 400 conflicts in Europe between the 13th century until 1951.

In the world stage, conflicts between the “Great Powers” since the 1500, albeit decreasing in percentage of years in their duration, have not shone through their absence.

This dire reality led to the creation of the European Coal and Steel Community (ECSC) in 1951, opening the door to a relative period of peace known as the Pax Europaea.

*“There will be no peace in Europe if the States are reconstituted on a basis of national sovereignty with the consequent prestige politics and economic protection... the constitution of vast armies will again become necessary .... Europe will once again recreate itself in fear ...unless the States of Europe form a Federation or a “European entity” which will make it a common economic unit.” (Jean Monnet, 5th August 1943)*

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<sup>21</sup> To provide a comparison, a Paris-New York flight consumes 40 000 litres, so to be equivalent, we would need to take around 10 consecutive flights to match the consumption of a single rocket launching JmCourtty, *L'énergie d'un Paris-New York en avion* (Questions de physique 07/10/2017) <https://www.questionsdephysique.fr/energie-paris-new-york-avion/>.

<sup>22</sup> ESA



The idea that commercial ties will reduce the risk of wars (in Europe) dates back at least to the 1795 publication of Kant's *Perpetual Peace* (1992). Europe's success in avoiding subsequent bloody conflicts due to this cooperation was rewarded with a Nobel Peace Prize in 2012.

Today's growing tensions between world superpowers and radicalisation of our societies are a reminder of our bleak past. This is even more worrisome with space militarisation, as it **can only give birth** to bloodier and increasingly destructive conflicts. It is for this reason that commercial interdependence through integration seems to be the only way to avoid further destruction.

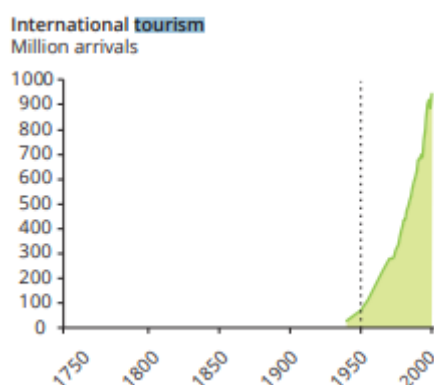


## Annex E: Ecotourism

### *Short state of affairs*

Tourism is an EU competence since 2007 as established in the Lisbon Treaty. The EU aims at increasing EU tourism demand, from within the EU and beyond. As an ever increasing industry branch and a main economic pillar of several European countries, such as Spain, Italy and France, the importance of a sustainability transformation is becoming more urgent. About 600 million tourists are coming to Europe per year,<sup>23</sup> and Spain, France and Italy are 3 of the most popular destinations globally. The UNTWO confidently declared the tourism sector as “a leading and resilient economic sector” in January 2020, disregarding the fragility of economies and populations regarding health and environmental crises, which can severely impact the way societies can move and engage in touristic locations.

Global tourism causes about 5% of all energy-related CO<sub>2</sub> emissions. Emissions from transporting tourists have grown steadily over the past decades, reaching almost 1,600 million tonnes of CO<sub>2</sub> in 2016, whilst three quarters of CO<sub>2</sub> emissions from tourism are transport-related.<sup>24</sup> It is one of the five target sectors contributing the most to environmental deterioration under the Treaty of Amsterdam (EU, 1997).



### *Negative externalities caused by tourism*

*Tourism contains the seed of its own destruction; tourism can kill tourism, destroying the very environmental attractions which visitors come to a location to experience”*  
(Glasson et al. [4], p. 27)

Europe is welcoming one third of the global tourism business,<sup>25</sup> and has a global growth rate of 4%. The global tourism sector is expected to reach 1.8 billion in 2030, as

<sup>23</sup> Mr. Panos Coroyannakis, CPRM, CIVITAS DESTINATIONS project, Director of Communications

<sup>24</sup> UNTWO (2019). Transport-related CO<sub>2</sub> Emissions of the Tourism Sector-Modeling Results

<sup>25</sup> Mr. Panos Coroyannakis, CPRM, CIVITAS DESTINATIONS project, Director of Communications



1.5 billion was reached in 2019.<sup>26</sup> The tourism sector is closely tied to mobility and particularly the aviation sector, as about 55% of tourists in the EU reach their destination by plane and 39% by road.<sup>27</sup> This leads to the European tourism sector contributing to an estimated 3% of the total carbon dioxide emissions.<sup>28</sup> More so, it also impacts air, water and soil qualities, partly because of the strain tourists put on local biospheres, but also because of the infrastructures needed to provide services (hostellery services, attractions, roads, etc.).

## E.1 Cruise Ships

### *State of affairs*

The cruise tourism sector, with an 8% annual growth since 1980, has developed to be an important employment and income factor for many countries. In 1997, cruise tourism catered for 8.5 million customers, in 2015 it was roughly 21 million respectively (CUA, 2015). The EU Commission's "Blue Growth Strategy" (The European Strategy for more Growth and Jobs in Coastal and Maritime Tourism) from 2013 is the main maritime policy document, focusing on creating more jobs in maritime and coastal tourism.

The sheer growth in numbers also leads to increasing CO<sub>2</sub> emissions as well as air pollution, with current estimates predicting 10% of global emissions by 2050 from cruise tourism alone. Lastly, it is a luxury tourism facility, focused on hosting mainly middle class and high class passengers (CBI, 2020). After container ships, cruises produce the most black carbon per tonne of fuel and the most black carbon per ship/year (ICCT, 2015),<sup>29</sup> as well as 70.000t of waste waters/year. Lastly, operators increasingly take tourists to destinations threatened by climate change, with Antarctica and other polar regions as favourites and cruise ships and aircraft as main transport modes (Eijgelaar et al., 2010).

As most large cruise ships are neither environmentally-friendly nor sustainable, and as the demand and urgency for sustainable tourism increases, small sea and river cruises which contribute to local communities become more appealing for small and medium-sized tourism operators. In addition, the European Tourism Indicator System (ETIS) for sustainable management at destination level has been implemented to develop coastal and maritime tourism dedicated indicators and aims to guide tourists' decision-making in terms of sustainability assessments. Lastly, as cruise tourism more often than not exceeds carrying capacities of the local environment, with short-term gains prioritized over a long-term perspective, a larger emphasis must be put on

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<sup>26</sup> <https://www.unwto.org/international-tourism-growth-continues-to-outpace-the-economy>  
<https://www.theworldcounts.com/challenges/consumption/transport-and-tourism/negative-environmental-impacts-of-tourism>

<sup>27</sup> Mr. Panos Coroyannakis, CPRM, CIVITAS DESTINATIONS project, Director of Communications

<sup>28</sup> <https://www.conserve-energy-future.com/how-tourism-affects-environment.php>

<sup>29</sup> Black carbon emission and fuel use in global shipping (2015), ICCT [https://theicct.org/sites/default/files/publications/Global-Marine-BC-Inventory-2015\\_ICCT-Report\\_15122017\\_vF.pdf](https://theicct.org/sites/default/files/publications/Global-Marine-BC-Inventory-2015_ICCT-Report_15122017_vF.pdf)



integrating policies into the local context and strategically reducing or mitigating the impact.

## E.2 Cycling tourism

### *State of affairs*

“There are an estimated 2.295 billion cycle tourism trips in Europe with a value in excess of €44 billion per annum. This is the estimated sum total of domestic and international cycle tourism trips. The number of cycle overnight tourists is 20.4 million spending around €9 billion annually.” (European Parliament, 2012)<sup>30</sup>

Cycling tourism creates over 500 000 jobs in the EU.<sup>31</sup> Approximately 20 millions bikes are sold every year in Europe.<sup>32</sup> Cycle tourists bring many positive benefits to local economies by visiting areas less frequented by mainstream tourists and spending their money in local businesses. Local residents also benefit from the cycling route infrastructure, regional connectivity and services to accommodate cycle tourists. This sector has multiple connections to businesses, and is bound to expand but requires massive public investment.

The EU has two main interests in supporting cycling tourism projects:

1. It is part of its commitments to make tourism more sustainable across the Union. It is indeed one of the main destinations worldwide. Investing in more sustainable tourism can reduce millions of people’s impact.
2. Cycling tourism’s focus is on travel. As such, it has beneficial effects on several other industries (hostellery services, general tourism, cycle path and bike industries).

Several projects are already supported by the EU (cf. The Pilgrims Route – EuroVelo 3, Curtain Trail – EuroVelo 13, 2011). However, various needs remain to be addressed. In particular, maintenance places for bikes, as well as good-quality cycle paths, clear road signs and mapped tours and sightseeing advice.<sup>33</sup> All of these are quite easy to fulfill, as they are already requirements for tourism in itself.

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<sup>30</sup> The European Cycle Route Network Eurovelo  
<https://ecf.com/sites/ecf.com/files/EP%20study%20on%20EuroVelo%20network.pdf>

<sup>31</sup> [https://pro.eurovelo.com/download/document/EV-PressKit2020-final\\_pdf.pdf](https://pro.eurovelo.com/download/document/EV-PressKit2020-final_pdf.pdf)

<sup>32</sup> <https://www.cbi.eu/market-information/tourism/cycling-tourism/europe>

<sup>33</sup> <https://www.cbi.eu/market-information/tourism/cycling-tourism/europe>



## E.3 Ecolabels

### *State of affairs on Ecolabels*

Established in 1992 and recognised across Europe and worldwide, the EU Ecolabel is a label of environmental excellence that is awarded to products and services meeting high environmental standards throughout their life-cycle: from raw material extraction, to production, distribution and disposal. The EU Ecolabel is a voluntary tool that is available to tourism accommodation services willing to prove and promote their environmental excellence.<sup>34</sup>

A specific EU Ecolabel for sustainable tourism was established on the 25th of January 2017 (Commission Decision (EU) 2017/175), and includes establishments with significant actions in energy (lights, air conditioning, heaters) and water (backwashing pools procedure, towel changings) savings, and other environment-friendly actions.<sup>35</sup> 385 EU ecolabels in “tourism accommodations” were given at the point of March 2020.<sup>36</sup>

Several studies were led in order to measure the effectiveness of this type of device. For instance, a Polish study recreated a certification at the national level called “Clean Tourism”, supervised by the Polish Ministry of Environment and the Ministry of Sports and Tourism. This study showed that among the 85 certified facilities, a monthly reduction in CO<sub>2</sub> emissions, on average of 22% was noticed. This result consists of a reduction in CO<sub>2</sub> emissions of electricity by 17%, thermal energy by 12%, water consumption by 13% and waste generation by 80%.<sup>37</sup>

Although this Ecolabel device has shown proof of its efficiency, it does not yet guarantee a sustainable tourism model in Europe; indeed, transport is not included in the current tourism accommodation EU ecolabel, while CO<sub>2</sub> emissions related to it are rising, and that tourism is one the main sources of transport.<sup>38</sup>

## E.4 Accommodation & activities

The increasingly large numbers of tourists traveling within and outside of the EU creates negative impacts due to their mobility as well as their stay and activities. The tourism industry has expanded to develop several activities designed to entertain tourists, more often than not at the detriment of the local population and ecosystem.

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<sup>34</sup> [https://ec.europa.eu/growth/sectors/tourism/offer/sustainable\\_en](https://ec.europa.eu/growth/sectors/tourism/offer/sustainable_en)

<sup>35</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2017.028.01.0009.01.ENG&toc=OJ:L:2017:028:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.028.01.0009.01.ENG&toc=OJ:L:2017:028:TOC)

<sup>36</sup> <https://ec.europa.eu/environment/ecolabel/facts-and-figures.html>

<sup>37</sup>

[https://www.researchgate.net/publication/304375519\\_Sustainable\\_Development\\_of\\_Tourism\\_-\\_EU\\_Ecolabel\\_Standards\\_Illustrated\\_Using\\_the\\_Example\\_of\\_Poland](https://www.researchgate.net/publication/304375519_Sustainable_Development_of_Tourism_-_EU_Ecolabel_Standards_Illustrated_Using_the_Example_of_Poland)

<sup>38</sup>



### *State of affairs*

The infrastructure for outdoor and indoor attractions such as roads and facilities have increased all across the EU due to activities including dynamiting, coral mining to build resorts, transport, use of water, land and energy, the development of infrastructure, buildings and facilities, pollution and wastes, land fragmentation and the increasing number of second homes. The increased resource use of tourism can lead to many negative environmental effects such as water stress, stress on the local biosphere and the pollution and littering.

In some Greek islands (Cyclades), water demand in summer can be from 5 to 10 times higher than in winter (Plan Bleu, 2004). Higher consumption of water for associated facilities and leisure. Tourists require constant access to water. A tourist staying in a hotel uses on average one third more water per day than a local inhabitant.<sup>39</sup>

Tourism is also a known cause of deforestation, as more resources such as timber are necessary to cater to the tourists needs.

The increase of infrastructure is not the only strain on the environment. For example, illegal dumping is a serious issue, reported especially in trekking activities. It leads to further issues within the ecological cycle in the region, which can be tackled by a more effective control of the tourists and management of the trekking paths.

## **E.5 Biodiversity & tourism / conservation**

### *State of affairs*

When following ecotourism approaches, roughly 95% of the revenue goes back to local communities compared to 20% for conventional all-inclusive tourism approaches.<sup>40</sup> As the state of biodiversity in Europe is looking increasingly desperate with 80% of key habitats rated as being in 'bad condition',<sup>41</sup> increased efforts are needed as nature-based tourism can only thrive in healthy and resilient ecosystems.

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<sup>39</sup> European Environment Agency, *Europe's environment: the third assessment* (EEA 2000)  
[https://www.eea.europa.eu/publications/environmental\\_assessment\\_report\\_2003\\_10](https://www.eea.europa.eu/publications/environmental_assessment_report_2003_10)

<sup>40</sup> *Reducing Tourism Impact* (WWF 2020), Available at:  
[https://wwf.panda.org/our\\_work/our\\_focus/oceans\\_practice/solutions/reducing\\_tourism\\_impact/](https://wwf.panda.org/our_work/our_focus/oceans_practice/solutions/reducing_tourism_impact/)

<sup>41</sup> State of Nature in the EU 2013-2018. European Environment Agency.  
<https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020/>