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Swedish Forest Industries' position on Directive 96/53/EC

The Swedish Forest Industries Federation (Skogsindustrierna), thanks for the opportunity to participate in this call for evidence. We look forward to the Commission's public consultation on the coming revision on European Directive 96/53/EC later this year.

The Swedish Forest Industries Federation is one of the largest industry branches in Sweden. The industry is also one of the largest cargo owners, also called shippers, with 25 million tons of finished goods exported every year, mainly to European destinations but also worldwide. Besides exports, the forest industry also transports raw materials to the mills and factories and account for almost 25 percent of all lorry transport within Sweden. Therefore, the sector has for a long time worked at minimizing transport costs and emissions, and actively participates in research programs that focuses on efficiency. In 2009 the Swedish Forest Industries Federation launched a trail with a vehicle that was 30 meters long and with a Gross Vehicle Weight of 90 tons. Numerous studies have been conducted on this vehicle with regards to safety and reduced emissions. As a result of research and trails, vehicles of Gross Vehicle Weight of 74 tons and a length of 25.25 meters have been implemented in Sweden on specific roads from 2018.

With more than a decade of research by highly qualified research institutes in Sweden as well as government funded studies it can be concluded that longer and heavier vehicles are safer and reduces emissions substantially. Also, the vehicles are cost-effective and optimize supply chains.

The Green Deal

As the EU Green Deal also points out the urgency to reach climate ambitions and lower emissions from transport, it is essential that efficiency and innovation is implemented in all modes of transportation as part of the Sustainable and Smart Mobility Strategy and its action plan. Several member states have already implemented longer and heavier vehicles within national transportation as it is a way of reaching lower emissions and reach higher efficiency in transport. This is a very important work that has been carried out in member states and the EU COM should encourage more of these schemes.

Single Market that Leads to Innovation

Free movement of goods is one of the core ideas of the European Union and one of the objectives of the "Call for Evidence" is to reach the full potential of the single market. Indeed, the current EU rules hamper the full potential for user longer and heavier combinations of vehicles in cross-border traffic within the union. The most central point forward, for the EU COM, should be how to encourage more innovation in road transport, to achieve a competitive and innovative single market.

Hence, the focus of the revision of the directive should be not to hinder progress that has already been achieved in MS but how to build on that innovation for the benefit of all EU. Reference in the EU COM to this call states that harmonization is needed, but it is important that the harmonization aims towards encouraging MS in the direction of more efficient lorries. Directive 96/53/EC should not set the maximum weights and dimensions in the union but instead the minimum weights and dimensions, or in other words the lowest level of maximum dimensions and allow other higher/larger dimensions without restrictions. A well-functioning single market encourages innovation and does not hamper development already achieved in MS. If the EU COM would like to set maximum weight and dimensions, the directive should be set at no lower than 34.5 meters and 100 ton, as vehicles of this size already exists within the union.

EU COM states that 44 tons vehicles are one of the intended harmonization's looking into. One size does not fit all in different parts of Europe due to geographical conditions and business/industry needs. The good practices of those Member States that have managed their border-crossing with heavier and longer vehicles for decades must not become compromised due to the call from Western-Central-Europe to have more harmonized regulation on cross-border traffic. Challenges should be tackled but bearing in mind the background of the current patchwork of rules. If Directive 96/53/EC is seen as a minimum for weights and dimensions, there will no misunderstanding of the interpretation of the directive.

Also, a single market needs smooth border crossings. EU COM should have an overall approach to ensure easier access and smoother border crossings for transports of all modes. It is important to clarify the rules of the cross-border transport of vehicles with larger dimensions. There should be unlimited possibilities for neighboring countries to allow border crossings of standardized modules if the vehicles are allowed in the countries in question. The width of vehicles for border crossings is, for example, needs to be updated to 2.6 meter because of safety reasons (stability). Any administrative authorization procedure for border crossings with larger/heavier combinations that are allowed in both countries could be seen as an obstacle to the functioning of the common market and should therefore be prevented in the reform of the directive.

EMS is the way forward

One way to move forward, in order to both harmonize and innovate is to have the European Modular System (EMS) as a basis of 96/53/EC. The EMS system consist of different vehicle modules that can be combined into different combinations but form standardized modules. The EMS introduces a flexibility that allows all transportation companies to operate in any country or to rearrange a vehicle into another combination when entering a country. The EMS is the foundation for a patchwork of national rules that does not lead to discriminatory practices and any carriers/haulers of any nationality can operate in a MS and connect/disconnect modules at the border if needed. With the EMS there is a possibility to be both flexible and innovative, and at the same time have interoperability between countries that does not allow the same dimensions.

The European Modular System opens for a type of harmonization within the union with standardized modules. That means that other sectors, as rail and maritime, knows what type of modules they can transport, and terminals know what type of modules they can handle when loading or unloading. Including EMS in the directive means that EU COM can set standards to make sure that they are compatible with other modes of transport, and therefore also rail-road-maritime interoperability. With the EMS in the directive, it can also ensure that it possible to cross borders without administrative burdens or authorization procedures, regardless of the nationality of the vehicle.

There is of course a need to specify what modules are included in European Modular System as more modules are included today as knowledge and innovation has developed in the past years. This differs now between MS and what they regard as modules. EU COM should indeed communicate the notified new modules so that all MS knows what they are and can implement them. A module widely used within the forest sector is a wagon with 13.6 meter length should for example be clarified as EMS, as other MS has done so.

High-capacity vehicles promotes efficiency in all modes

Several modes of transport are almost always used in a supply chain on their way from producer to final customer. All modes of transport must be efficient and innovative and hampering innovation in one mode for the better of another mode is a destructive and non-innovative way forward. A fair level playing field is

when all modes are developing on their own terms. Innovation is spurred when there is competition between modes, which then leads to efficiency in the whole logistics chain. Rail benefits from high-capacity lorries as the radius of goods for transport to a rail hub is increased, which has been seen in examples from Sweden.

Zero-emission vehicles should be incentivized in other directives

The additional weight on the vehicle because of alternative powertrains or fuels can be considered, but the basis should be the European Modular System. Additional weight might also call for the need of more wheel axels, as the wear and tear of a road is determined by the load on each wheel. If the load per wheel in not higher than before the weight can be higher. But the directive should not aim to limit weights and dimension, but to set a minimum standard that can be higher in a member state or between member states if the EMS is used.

However, the use of larger high-capacity vehicles, should not be tied exclusively to alternative fuels or zero emissions. Nor should larger EMS combinations only be allowed as part of intermodal transport chains. If the right to high-capacity vehicles were limited to zero emissions vehicles, there would be several of the sectors that would be hindered in reducing emissions. In worst case it could lead to a shift to smaller combinations of vehicles, i.e., less efficiency and higher fuel consumption. Using biofuels, is of no problem for heavier vehicles and there are several of these high-capacity vehicles already existing. Although increased shares of biofuels or other alternatives fuels should be regulated in other directives (that are already proposed in the Fit-for-55 package) or through national incentives. One size does not fit all in different parts of Europe due to geographical conditions and business/industry needs.

The Swedish Forest Industry

The Swedish forest industry is an essential contributor in the green transition to a more circular and biobased economy. The industry refines wood resources to bio-based products, such as pulp, paper, board, packaging material, sawn timber, refined wood products, biobased electricity and heat and advanced biofuels. The core business is industrial activities based on wood sourced from sustainably managed forests, but among the industry are also some of the largest private forest holdings in Europe. Any forest, climate, environmental, energy and product related European Union policy is of high importance.

The Swedish Forest Industries proposes the following changes in the Directive 96/53/EC:

- The European Modular System should be the basis for combinations in the directive, which gives harmonization and flexibility with innovation at the same time.
- The current limitations for border crossing should be amended. There should be no limitations on weights and dimensions if the countries of both sides of the borders allow the weight and dimensions. Also width should be set to 2.6 for safety reasons.
- There should be no restrictions on number of border crossings if countries passed allow the weights and dimensions.
- EU COM should harmonize what the modules are part of European Modular System, with the aim of adding more modules already in use.
- Use of larger high-capacity vehicles, should not be tied to alternative fuels or zero emissions as it could lead to a negative effect. Incentive or other directives is more suitable to regulate that.

The Swedish Forest Industries proposes the following evidence for the above proposed changes to Directive 96/53/EC:

Recent articles on zero-emission high-capacity vehicles

Scania and forst company SCA develop first 80 tonne electric timber truck
https://www.scania.com/group/en/home/newsroom/press-releases/press-release-detail-page.html/4111621-scania-and-sca-develop-first-80-tonne-electric-timber-truck

Scania 64-tonne electric truck on the road with Wibax
https://www.scania.com/group/en/home/newsroom/press-releases/press-release-detail-page.html/4139928-scania-64-tonne-electric-truck-on-the-road-with-wibax#

Scania builds extremely heavy and extra-long electrified truck for Jula Logistics
https://www.scania.com/group/en/home/newsroom/press-releases/press-release-detail-page.html/4101348-scania-builds-extremely-heavy-and-extra-long-electrified-truck-for-jula-logistics

Reports and studies from government agencies in Sweden

Advice for municipalities on implementing roads for 74 ton, Swedish Transport Administration, 2021.https://www.trafikverket.se/contentassets/539948123ee34dc29f52ac1e468aadbc/information-och-rad-for-kommuner-gallande-den-nya-barighetsklassen-4-bk4.pdf

Summary: 74 tons gives efficient cargo transport and is important for competitiveness of businesses. Vehicles with 74 tons can load more cargo but the vehicles are not allowed to increase load on each wheel, why there is more axels and wheels on these vehicles. Roads are therefore not affected by the heavier weight. In many municipalities there are roads that needs to be classified as BK4 as the constitutes of the "last-mile-access". In some cases, bridges need to be overviewed as they must accommodate the whole weight. Guidelines for that is provided. Wear and tear of roads are minimally affected by higher weights if there are more wheels. Mainly roads that are already weak must be thoroughly reviewed before allowing BK4 on them. The vehicles have specific requirements to pass administration to prove stability and acceleration, therefore they have the same safety standards as conventional vehicles.

Implementation av weight class 4 (BK4) for Swedish roads for up to 74 tons. (Implementering av bärighetsklass 4), Natanaelsson and Eriksson, Swedish Transport Administration, 2020.
https://www.trafikverket.se/contentassets/00340eec2ef8460ba6b2423b7e5d4468/svar-och-aterrapportering-fran-trafikverket-2020/05-slutrapport-regeringsuppdrag--implementering-av-barighetsklass-4.pdf

Summary: From the 1 July 2018 the first roads opened for the new weight class, called BK4, in Sweden for vehicles with a maximum weight of 74 tons. The Swedish Transport Administration opened about 11

percent of the road infrastructure in the first year. More roads have been classified BK4 since then and in 2020 about 20 percent of the national road system is BK4. The Swedish Transport Administration has the ambition to continue the development and that the entire state-owned national road system will be classified BK4. According to the report about 40 percent is expected at the end of 2025. The goal is to have about 70-80 precent of the strategic roads for heavy vehicles to 2029. There are also private roads and roads owned by municipalities and the Swedish Transport Administration has a collaboration with organizations representing these roads in order to contribute with knowledge.

Longer lorries on Swedish road – for more sustainable transport (Längre lastbilar på det svenska vägnätet – för mer hållbara transporter), Natanaelsson, Brandt, Swedish Transport Administration, 2019.
https://www.trafikverket.se/contentassets/1160ae4fe6504bba8e3629eee4b60d7c/langre_lastbilar_pa_det_svenska_vagnatet_for_mer_hallbara_transporter.pdf

Summary: A effective transport system is possible with High-Capacity Transports (HCT), that is higher capacity by length/dimensions or weight than conventional vehicle. Heavier vehicles up to 74 ton is allowed in Sweden on specific roads (BK4) from July 2018. In this report the Swedish Transport Administration has investigated the possibility of implementing longer vehicles up to 34.5 meters, as has already been implemented in Finland from July 2019. Also, the legal aspects of longer vehicles have been regarded as well as consequences for the present road infrastructure.

A starting point has been to change as little as possible in the road infrastructure. The study shows that about 9000 kilometers or road could be opened for longer vehicles of 34.5 meters. If a continuous road system is opened about 4 500 kilometers could serve as an initial step, with a very small investment needed of only 0,015 million €, consisting mainly of highways. The net gain for society, with this small investment has been calculated to about 1-1,4 billion €.

The calculations also show that traffic safety increases because of fewer vehicles needed for transport of a specific amount of goods. With fewer vehicles there is also less emissions of carbon, nitrogen, particles, and other emissions.

Impact of higher road vehicle dimensions on modal split. An ex-post analysis for Sweden, Vierth, Lindgren, and Lindgren, VTI (National Road and Transport Research Institute), 2018. **http://www.diva-portal.org/smash/get/diva2:1178747/FULLTEXT01.pdf**

Summary: Road freight transport is responsible for a considerable amount of congestion, noise and various forms of air pollution and policy instruments that reduce these negative external effects are therefore on top of many policy-makers' lists. One of the discussed initiatives to reduce these externalities is to increase the maximum permissible weight and length of vehicle combinations.

There are however concerns that higher vehicle dimensions will reduce road transport cost per tonne-kilometre and therefore lead both to a modal shift and to induced demand for road transportation. The extent to which the introduction of longer and heavier road vehicles attracts freight from competing modes is therefore a crucial question. The purpose of this study is to provide empirical evidence on this matter, by analyzing how the modal split in Sweden has developed following the adoption of increases in the maximum permissible vehicle dimensions.

In this study, we utilize official statistics on freight transport by road, rail and water covering the period 1985 to 2013. We first investigate the extent to which LHVs were adopted following the increases in

vehicle dimensions in 1990 and 1993. We then construct time-series for the modal split both on the aggregate level and the commodity group-level and analyze the short- and long-run development.

We show that the share of tonne-kilometres and vehicle-kilometres performed by trucks with a load capacity above 40 tonnes increased substantially in the 1990s, which mainly came at the expense of the vehicles with the lowest capacity. This shows the high degree of incorporation of LHVs in the Swedish vehicle fleet.

Our analysis of the aggregate modal split shows that both the rail and water shares were decreasing from 1985 up until 1995, when the trend reversed for rail transportation. In 2000, rail had regained the market share it had in 1990 and continued to increase in the 2000. Water transportation kept on losing market shares throughout the period of study. The modal share for road transportation developed much in the opposite way. The road share increased steadily between 1985–1990 and continued this way during most of the 1990s, until it stabilized around 60–65 percent. We also show that road and rail have experienced increases in the level of tonne-kilometres since 1990, which implies that the falling rail share between 1990 and 1995 was driven by higher tonne-kilometer growth rates for road transportation than for rail transportation.

Our aggregated freight statistics do not allow us to attribute the development of the modal split during this period of study to a particular event such as the increase in maximum weights in 1990 and 1993. In particular, it is not possible to trace out substitution patterns between the transport modes. The weight reforms are likely to have mattered for the modal development, but so are the economic recession in the early 1990s, the railway sector reforms of 1996 and other structural changes in the transport market. What we do document is the lack of breaks in modal split trends at the weight reforms in 1990 and 1993. On the contrary, the share of each mode is continuing its long-term development.

A Lane-Change Scenario Developed for Assessment of Active Safety and ADAS in Heavy Vehicles, Sandin, J., Augusto, B., Nilsson, P. och Laine, L. 2017 VTI (National Road and Transport Research Institute), **http://www.diva-portal.org/smash/get/diva2:1249858/FULLTEXT01.pdf**

Summary: The aim of the project was to develop a lane-change scenario for driving simulators to analyze the characteristics of lane-change maneuvers performed with heavy vehicles. The definition of the lane change scenario was based on a literature review and an analysis of lane-change accidents carried out in the present work.

System analysis for implementing High Capacity Transport on roads – a study ordered by the ministry on more in depth analysis of heavier vehicles on the national road system in Sweden, Swedish Transport Administration, 2015 **https://trafikverket.ineko.se/Files/sv-SE/12128/RelatedFiles/2015_234_systemanalys_av_inforande_av_hct_pa_vag.pdf**

Traffic safety effects due to an introduction of longer and heavier vehicles – a literature overview. Hjort and Sandin, VTI (National Road and Transport Research Institute), 2012 **https://www.diva-portal.org/smash/get/diva2:669267/FULLTEXT01.pdf**

Summary: Longer and heavier vehicles on the roads could result in large transport and economic benefits. In an on-going VTI project, denoted Sammodalitetsprojektet, an economic estimate is made of the effects of allowing longer and heavier trucks in Sweden. A central part of that project is traffic safety analysis and risk assessment of longer and heavier vehicles. This review concerns potential traffic safety effects from the introduction of longer and heavier trucks than those currently allowed in Sweden. For this purpose, a

summary of results from accident studies, literature summaries and in-depth studies of fatal accidents involving heavy trucks done in the past few years was made. In addition, a focus group study with truck drivers was conducted to pick up the traffic safety problems with road transports involving the heavy trucks available today.

The effects of long and heavy trucks on the transport system. Report on a government assignment., Vierth et al., VTI (National Road and Transport Research Institute), 2008 **http://vti.diva-portal.org/smash/get/diva2:675340/FULLTEXT01.pdf**

Summary: Trucks up to 25.25 meters in length and weighing up to 60 tonnes are permitted in domestic traffic in Sweden. This deviates from the EU standard, according to which trucks are not to be longer than 18.75 meters or weigh more than 40 tonnes. The Ministry of Enterprise, Energy and Communications has commissioned VTI to study what economic consequences this deviation has had for Sweden and to describe the competition interface between road and rail transport. The effects on transport costs for business, exhaust and noise emissions, road wear, time delay for motorists and road safety have been estimated.

A very large proportion of freight transport by road takes place by vehicles that exceed the EU standard. Reducing vehicle size would lead to large economic losses. Transport costs would increase in particular, but significant cost increases would also occur in the areas of road safety, exhaust emissions and noise emissions. It is noted in the study that it is difficult, at least in the short term, to bring about transfers between road and rail. This is due, in part, to high rate of utilization of the railway capacity.

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