Toll Plus – A proposal from the iMONITRAF! regions

Core elements of the proposal and necessary adjustments of the Eurovignette Directive

1. The role of a Toll Plus System for the Alpine regions

The Alpine regions are particularly sensitive to the negative impacts of freight and passenger transport. To tackle the common challenges, the regions along the four main transit corridors have joined forces in the iMONITRAF! network to develop common solutions. The common strategy of the Alpine regions (May 2012) is a major milestone of iMONITRAF! and proposes – as a midterm instrument – the implementation of a Toll Plus system to support a common modal shift policy. During the Transport Forum in Innsbruck (June 2014), political representatives gave a mandate to further explore a Toll Plus System. An in-depth analysis was commissioned by the iMONITRAF! partners[1] and welcomed during a recent workshop in Bolzano. It was agreed to share the proposal with stakeholders on European and national level. This factsheet summarizes the core elements and illustrates necessary changes of the Eurovignette Directive.

2. Core elements of the iMONITRAF! proposal for Toll Plus

In the recent in-depth analysis, iMONITRAF! partners have analysed several scenarios for a Toll Plus System. The bottom-line scenario indicates that the current legal framework leaves only little room for flexibility. Thus, other scenarios explore possibilities of extending the external cost pricing element or the mark-up factor of the current Eurovignette Directive. As a result, an optimized scenario is derived and analysed with the help of the DPSIR-framework[2]. This includes the following core elements:

Core element 1: Defining toll levels and implementation

- Definition of toll levels: the 'Plus' of the toll level shall be defined on the basis of additional costs in mountain areas (infrastructure cost, external cost). The impact assessment indicates that additional toll rates of about 20-25 €ct/km would be appropriate to internalize external costs (including appropriate mountain factors) and to significantly reduce environmental impacts and the emission of the greenhouse gas CO_2.
- Implementation: Considering the different approaches of current pricing systems, the implementation of these additional costs can be achieved either through the application of specific external cost factors (Art. 7c of the Eurovignette Directive) or a standardised mark-up (Art. 7f). For both elements, an extension of the Eurovignette Directive would be necessary.

Explanation: Most pricing systems only internalize a share of external costs along the Alpine corridors and toll levels as well as toll differentiation are not sufficient for incentivizing the use of Best-available-technologies and for modal shift. On the Brenner corridor, the share of rail transport has decreased since the abolition of the sectoral driving ban in 2011 and air quality targets are still exceeded. Only on the Gotthard corridor, external costs are fully internalized with the ambitious Swiss HGV-fee.

[1] "Specifying the regional proposal on Toll Plus - An in-depth analysis of the iMONITRAF! network on design elements, impacts and legal issues of a Toll Plus System". H. Lueckge, M. Maibach, J. Heldstab (2015).
[2] DPSIR: Driver, Pressure, State, Impact, Response. The system was developed by EEA and has been used by iMONITRAF! to analyse impacts of future policy scenarios.

Core element 2: Flexibility of toll rates to support convergence of pricing systems

- Toll Plus should serve as a mechanism to harmonise toll levels across the iMONITRAF! corridors and thus to a fairer distribution of traffic. To ensure a convergence of toll levels, additional toll rates should be higher at the corridors with currently low toll levels. Thus, the optimized Toll Plus scenario proposed an additional toll rate of 20 €ct/km for Gotthard, Mont Cenis and Fréjus and a higher increase at the Brenner with 25 €ct/km.

Explanation: The costs for an Alpine crossing differ considerably between the iMONITRAF! corridors. The lowest costs can be seen at the Brenner corridor, so that the Brenner currently faces the highest burden related to transalpine freight transport. Especially a convergence of toll levels between the Brenner and the Gotthard corridors would ensure a level-playing field between the two corridors, leading to a more efficient transport routing.

Core element 3: Toll differentiation beyond current EURO-norms

- The regional analysis illustrates the impacts of additional incentives for maximum load factors and the use of best available HGV technology (also on regional level). Both elements are necessary if air quality targets along the transit corridors shall be met.
- In order to allow a dynamic adjust of toll rates, differentiation must consider future developments beyond existing EURO-norms such as differentiation according to specific CO_2-emissions.

Explanation: Future engine technologies will generate only marginal improvements related to "local" air pollutants. However, there is a considerable potential to improve overall efficiency of HGV and thus fuel use (e.g. through aerodynamic concepts, tyres, etc.) thereby also reducing CO_2 emissions.

Core element 4: Provisions for regional transport

- To avoid negative economic impacts in the Alpine regions, special provisions for regional transport will be necessary. Potential options need to be analysed in-depth to make sure that they are compatible with the principle of non-discrimination.
- As regional transport has other characteristics than long-distance transport, exemptions for regional transport should consider the size of trucks and the distance. They should not create any negative incentives regarding environmental performance.

Explanation: Previous analysis of steering instruments for transalpine freight traffic have illustrated over-proportional economic impacts in the Alpine region. To ensure acceptance for modal-shift policies along the corridor, it will be necessary to consider the different characteristics of short- and long-distance transport.

Core element 5: Flexible revenue use with a share for the Alpine regions

- The provisions for revenue use should leave a high flexibility so that specific environmental and cross-modal projects can be financed (see proposed projects in chapter 4.2 of the report).
- As the regional level has the best knowledge of financing needs, an appropriate share of revenues of about 30-50% shall be allocated to the regions along the transit corridors.

Explanation: Currently, revenues generated by existing pricing systems are used for infrastructure development only (road and partly rail). However, there is a high need for financing accompanying measures, environmental protection measures that support acceptance as well as additional passenger transport measures. iMONITRAF! partners have proposed specific projects that could benefit from Toll Plus revenues.

3. iMONITRAF! claims for the revision of the Eurovignette Directive

The Eurovignette Directive already includes several specific provisions for road pricing systems in mountain areas. However, they are not sufficient to allow the implementation of an ambitious Toll Plus System. Thus, the iMONITRAF! network proposes the following adjustments:

Claim 1: Extension of the external cost pricing approach to include further cost elements

Current provision: Article 7c of the Eurovignette Directive sets the frame for applying external cost charges. However, the external cost pricing is limited to traffic-based air and noise pollution. Other external cost elements are not considered.

Need for action: To implement the polluter-pays principle and to ensure that tolls set an incentive for using Best-available-technologies and for modal shift, the external cost pricing approach needs to be extended to include costs related to climate change, up-and downstream processes, nature & landscape as well as accidents. Especially for nature & landscape and accidents, impacts of HGV-transport are over-proportional in the sensitive Alpine regions. Also, mountain regions are highly vulnerable to climate change.

→ Art. 7c as well as the corresponding Annexes IIIa and IIIb should be extended. Details on maximum chargeable cost rates (Annex IIIb) should be based on state-of-the-art cost estimates. Latest external cost assessments clearly go beyond the cost rates proposed in Annex IIIb of the Directive.[3]

Claim 2: Definition of appropriate mountain factors in Annex IIIb of the Directive

Current provision: When applying external cost charges related to air and noise pollution, Member States may currently apply a factor of up to 2 in mountain regions to consider higher external costs.

Need for action: the "mountain factor" of up to 2 is not sufficient to consider over-proportional impacts in the sensitive Alpine environment. External cost assessments rather calculate a "mountain factor" of about 5 for air and noise pollution. For nature & landscape impacts, the "mountain factor" is estimated with a factor 10, accidents with a factor 1,2.[4]

→ the "mountain factors" in Annex IIIb should be adjusted: "up to 5" for air quality and noise and appropriate "mountain factors" for additional external cost elements.

Claim 3: Extension of the mark-up concept as alternative to external cost pricing

Current provision: Art. 7f allows for the application of a mark-up factor in mountain areas (up to 25%). The justification includes a link to "acute congestion" as well as "significant environmental damage". Thus, the mark-up may be seen as pragmatic approach to external cost pricing with a link to infrastructure development.

Need for action: even when the full potential of the mark-up concept is exploited, toll rates do not fulfil the polluter-pays principle and do not set an incentive for modal shift.

→ The Directive should leave more room for flexibility for the mark-up concept if a justification can be provided by Member States (e.g. extending the mark-up to 50%).

[3] E.g. UIC (2011): External costs of transport in Europe; EEA (2013): Road user charges for heavy goods vehicles (HGV).

[4] See Lieb, Ch., S. Suter and P. Bickel (2006): Input into Deliverable 3 – Environmental costs in sensitive areas, EU FP6 project GRACE (Generalisation of Research on Accounts and Cost Estimations.

In addition, the overlap between the mark-up concept and the external cost pricing concept should be removed (see claim no. 5).

Claim 4: Differentiation of toll rates beyond air quality criteria

Current provision: Art 7g of the Eurovignette Directive defines the differentiation of road-user charges according to environmental performance of HGV. However, these are limited to the criteria defined by EURO emission standards.

Need for action: As EURO class VI already has a strong market penetration and as developments beyond EURO VI are not clear, it would be advisable to allow for a broader differentiation concept. Especially, specific CO_2-emissions of HGV could be considered for setting differentiated road charges.

Claim 5: Streamlining the legal framework: separation of mark-up and external cost pricing

Current provisions: Currently, there is a clear overlap between the mark-up concept and the external cost pricing. This fact is acknowledged in the Directive in Art. 7f (5) which states that the amount of the mark-up shall be deducted from the external cost charge to avoid an "undue charging of users".

Need for action: The overlap between the two elements reduces transparency of overall road charges and hinders the Member States in fully applying the polluter-pays-principle". .
→ The mark-up concept and the external-cost pricing approach should be clearly separated: the mark-up should be linked to infrastructure financing needs and should thus act as tool for cross-financing. The external cost charging should ensure a full internalization of external costs, with revenues being used for environmental and/or accompanying measures.
Member States should be able to combine both elements.

Claim 6: Including minimum requirements for road-user charges in mountain areas

Current provisions: The Eurovignette Directive currently includes no minimum requirements for infrastructure charges, the mark-up concept nor for external cost pricing.[5] This leads to the fact that pricing systems along and between the Alpine corridors differ considerably – leading to unwanted traffic shifts.

Need for action: The Directive should set clearer incentives for a harmonization of pricing systems. This could be achieved through a provision on necessary cooperation between Member States, if the mark-up factor or a "mountain factor" on top of external costs shall be applied. Another solution would be to change the mark-up factor into a mandatory element for mountain areas.

[5] However, the inclusion of minimum requirements is not unknown in the Eurovignette Directive. The initial version of the Directive from 1999 includes a chapter on vehicle taxation which includes minimum tax rates.