



# Annual Report 2017

In-depth analyses and lobbying strategy for Toll Plus



# iMONITRAF! Annual Report 2017

## In-depth analysis and lobbying strategy for Toll Plus

INFRAS / Climonomics / Eurac Research with inputs of iMONITRAF! partners

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## The iMONITRAF! year 2017 at a glance

### ***iMONITRAF! 2017 – the revision of the Eurovignette as window-of-opportunity***

Pressures related to transalpine road freight transport remain high on the four major transit corridors Brenner, Gotthard, Mont Blanc and Fréjus. Although all regions have implemented modal shift policies, the further growth in road traffic volumes could not be stopped and modal shift from road to rail is stagnating (except on the Gotthard corridor). Also, air quality limits are still exceeded in many areas, and the noise exposition remains high. The regions along the major transit corridors thus decided to continue their cooperation in the frame of iMONITRAF! in the period 2017-2018, with a strong focus on further developing their common modal shift policy, especially through a further development and harmonisation of their pricing systems for road freight – Toll Plus.

Based on the political resolution on Toll Plus as signed in November 2016, the recent phase of the iMONITRAF! cooperation aims at networking for the implementation of the regional Toll Plus proposal. The recent revision of the Eurovignette Directive as relevant legal framework provides a great window-of-opportunity for iMONITRAF! to actively lobby for a special consideration of its proposals in the revised Directive. In 2017, iMONITRAF! partners developed a detailed lobbying strategy to reach out to relevant stakeholders and first activities of this strategy were successfully implemented. A broad communication activity has led to new contacts with relevant stakeholders as well as relevant MEPs of the Transport Committee (TRAN). Direct meetings to present iMONITRAF! proposals took place in Brussels in December 2017. The proposals of iMONITRAF! found great support during these meetings and relevant MEPs agreed to support the organisation of a specific lunch event in the EP in January 2018. Also, new alliances could be established – including new cooperations as well as a strengthened contact with NGOs in the Alps.

### ***Toll Plus: in-depth study on regional transport***

The avoidance of over-proportional impacts for regional transport is one of the core elements of the iMONITRAF! resolution on Toll Plus. Thus, iMONITRAF! has commissioned a report to explore the technical, legal and administrative aspects of different measures for regional transport - carried out and presented by Rapp Trans in 2017. An analysis of existing elements for regional transport in pricing systems, regulatory measures for freight transport as well as passenger transport leads to the result that no existing approach can be directly transferred to Toll Plus due to technical or legal obstacles. The study thus concludes that **flanking measures for regional transport will be difficult** to design and that it would thus be favourable to focus on “build-in” approaches. A data analysis provides insights into the share of regional transport which could be targeted through a **weight limit** for Toll Plus. It is illustrated that only a small share of regional transport can be reached by this approach: 12-17 % of regional transport uses vehicles below 12 t (or a 2-axle limit as approximation), a higher weight limit of 18 t (or 3 axles as approximation) would relief about 16-23 % of regional transport operations. For special regulations based on geographical characteristics, the authors come to the conclusion that all proposed measures will not be compatible with EU law. **Goods-based exemptions** focusing on transport of certain goods, such as milk and raw wood, or for vehicles in combined transport seem however feasible. Another complementing measure might be to exempt **transport for local supply**, acknowledging the fact that no viable transport alternatives exist.

### **Monitoring update for the year 2016**

The monitoring perimeter has newly been extended: In addition to the transalpine corridors Fréjus, Mont Blanc, Gotthard, Brenner and Tarvisio, which had been subject to the iMONITRAF! monitoring system until the monitoring year 2015, the additional corridors Ventimiglia (Italy), Simplon and San Bernardino (Switzerland) have been integrated including indicator time series from 2005 onwards. Summed over all – including the new – corridors monitored by iMONITRAF!, an increase of traffic volume was registered from 2015 to 2016. Heavy vehicles increased by 4.6 % whereas light vehicles numbers grew by 2.4 %. On Brenner and Ventimiglia, the increase of heavy vehicles reached almost 6 %, on the French-Italian corridors Fréjus and Mt. Blanc 3 % and on the Swiss corridors Gotthard and San Bernardino 2 %. Simultaneously, the Swiss corridors show the largest growth for light vehicles numbers with more than 8 %. Brenner is further on the corridor with the highest numbers of transalpine passages (about 23,600 light veh. and 6,400 heavy veh. per day) followed by Ventimiglia (ca. 18,900 light veh. and 5,300 heavy veh. per day). For the overall freight volumes including road and rail freight, a similar increase of 4.9 % can be observed from 2015 to 2016. The Swiss rail corridors Gotthard and Simplon show the highest modal shift (share of rail) with even increasing value for 2015 to 2016, whereas the modal shift on Brenner and Fréjus/Mt. Cenis was decreasing. The annual air pollutant concentrations of PM<sub>10</sub> and NO<sub>2</sub> remain on a declining trend. Toll prices show a constant pattern with highest rates at Fréjus and Mont Blanc, lowest rates at Brenner, Tarvisio, Ventimiglia and mean rates at the Swiss corridors. Prices of diesel and petrol increased from 2015 to 2016 for the first time since 2012.

### **Best Practices –dynamic adjustments of measures to limit environmental pressures**

In 2017, the development related to regional and national measures indicate a need for action that remains on a very high level. Especially along the Brenner corridor, air quality targets are still exceeded and all regions are struggling to implement effective measures. Again, it became obvious that a set of ambitious regulatory and incentive measures (“push” and “pull”) is required for reaching a reduction of environmental burdens. Thus, **driving bans were adjusted dynamically** in Tyrol and the autonomous Provinces of Bolzano and Trento have further tested the **effectiveness of dynamic speed limits**. In addition, congestion became a more pressing issue on the Brenner, leading to the introduction of the **block admission system** at the end of 2016. The **subsidy systems for combined transport** on the Italian side of the Brenner have been taken into operation in 2017 (Trento) or will soon be operationalized (Bolzano). With respect to passenger transport, the collection of Best Practices more and more shows the **need for a diverse set of measures**: modal shift of passenger transport will only be possible with a further ambitious improvement of infrastructures and services (Best Practice example Switzerland). In cross-border regions, this also requires the further integration of services and tickets to provide seamless mobility options (Best Practice example Ticino-Lombardia). However, a large share of motorized passenger transport will remain, requiring the need for low-emissions solutions to reduce impacts on air quality, climate change and noise.

### **The transport policy framework – developments on EU level**

In 2017, the revision of some major EU policies was launched and additional legislation to achieve a decarbonisation of the transport sector have been taken forward by the European Commission. At the end of May 2017, the European Commission published a first set of legislative initiatives to support the transition to clean, competitive and connected mobility. “**Europe on the Move**” is a wide-ranging set of initiatives that will make traffic safer, encourage smart road charging, reduce CO<sub>2</sub> emissions, air pollution and congestion as well as improve social provisions in the transport

sector. As most important issue for iMONITRAF!, the initiative includes the **revision of the Eurovignette Directive**. With the “**Clean Mobility Package**” launched in November 2017, the Commission took further decisive steps in implementing EU's commitments under the Paris Agreement. For the transport sector, the package includes a set of six documents to support the transition towards low-emission vehicles, including new CO<sub>2</sub> standards for cars and a **revision of the Combined Transport Directive**. In addition, the Commission has taken first steps to design the TEN-T financing framework for the period 2021-2030.

### ***Outlook 2018 and beyond***

For 2018, the work plan of the iMONITRAF! includes further activities regarding the implementation of Toll Plus but also aims at a broader agenda-setting. For this, a strategy meeting is foreseen in February 2018 to discuss recent developments (including technological innovations) and their relevance for future activities of iMONITRAF!. For autumn 2018, the organisation of a Transport Forum and/or political roundtable is foreseen with the objective to again provide a platform for exchange between technical and political levels. Links with the macro-regional strategy EUSALP will continue to be strengthened; in 2018, Tyrol will hold the EUSALP presidency, and a particular focus will be given to Action Group 4 Mobility this year. For the period beyond 2018, no specific follow-up has been agreed yet. In general, the need for further cooperation is evident: Toll Plus is only one element of a common modal shift policy for the Alpine region. Several other elements could be further developed in the frame of iMONITRAF! and the challenge to strengthen the regional voice remains high in the further developing landscape of other networks and projects.

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## **iMONITRAF! Aktivitäten im Jahr 2017 – Das Wichtigste in Kürze**

### ***iMONITRAF! 2017 – Die Revision der Wegekosten-Richtlinie als politisches Momentum***

Der Handlungsdruck entlang der wichtigsten Transitkorridore Brenner, Gotthard, Mont Blanc und Fréjus blieb auch im Jahr 2017 massiv. Obwohl alle Regionen bereits verschiedene Verlagerungsmaßnahmen umsetzen, steigt das Verkehrsvolumen weiter an und die Verlagerung von der Straße auf die Schiene stagniert weiterhin (außer am Gotthard Korridor). Grenzwerte für Luftschadstoffe wurden auch im Jahr 2017 an vielen Messstellen weiter überschritten und auch die Lärmbelastung entlang der Transitkorridore blieb bestehen. Die Regionen entlang der vier wichtigsten Transitkorridore haben sich daher entschieden ihre Kooperation im Zeitraum 2017-2018 fortzuführen und dabei insbesondere die gemeinsamen Verlagerungsmaßnahmen weiter voranzubringen – mit einem besonderen Fokus auf die Harmonisierung und Weiterentwicklung der Mautsysteme wie im Rahmen des Toll Plus Vorschlags skizziert.

Basierend auf der politischen Resolution zu Toll Plus vom November 2016, konzentriert sich das iMONITRAF! Netzwerk in der neuen Phase auf Networking auf nationaler und europäischer Ebene um die Implementierung von Toll Plus voranzutreiben. Die aktuell laufende Revision der Wegekosten-Richtlinie (Eurovignette), welche auf europäischer Ebene den relevanten rechtlichen Rahmen darstellt, bietet ein gutes politisches Momentum. Im Jahr 2017 erstellen die iMONITRAF! Partner daher eine umfassende Lobbying-Strategie, in der konkret definiert wurde wie die zentralen Akteure auf nationaler und europäischer Ebene am effektivsten erreicht werden können. Erste Elemente dieser Strategie wurden bereits erfolgreich umgesetzt. Eine breit angelegte Kom-

munikationsrunde hat zu neuen Kontakten mit relevanten Stakeholdern sowie relevanten Mitgliedern des Europäischen Parlaments (MEP) im Verkehrsausschuss geführt. Im Dezember 2017 fanden mehrere bilaterale Treffen in Brüssel statt um die konkreten Vorschläge von iMONITRAF! vorzustellen. Grundsätzlich stoßen die Ideen von iMONITRAF! dabei auf offene Ohren und wichtige MEPs erklärten sich bereit, die Organisation eines Lunch-Events im Europäischen Parlament im Januar 2018 zu unterstützen. Zudem konnten neue Allianzen geschmiedet werden, teilweise mit neuen Partnern und teilweise mit einer Stärkung bestehender Kontakte zu Nichtregierungsorganisationen im Alpenraum.

### ***Toll Plus: Vertiefungsstudie zur Einbeziehung des Regionalverkehrs***

Die Vermeidung negativer Effekte auf den Regionalverkehr ist eine der Kernforderungen der iMONITRAF! Resolution zu Toll Plus. Daher hat iMONITRAF! eine Vertiefungsstudie beauftragt, um die technischen, rechtlichen sowie administrativen Rahmenbedingungen möglicher spezifischer Maßnahmen für den Regionalverkehr zu analysieren. Diese Studie wurde im Verlaufe des Jahres 2017 von Rapp Trans durchgeführt und präsentiert. Die Analyse bestehender Sonderregelungen für den Regionalverkehr im Rahmen von regulatorischen und fiskalischen Instrumenten im Güter- sowie auch im Personenverkehr führt zu dem Schluss, dass aufgrund technischer oder rechtlicher Hürden keine der bestehenden Regelungen direkt auf Toll Plus übertragen werden kann. Die Studie kommt daher zu dem Schluss, dass spezifische flankierende Maßnahmen für den Regionalverkehr schwer zu begründen sind und dass daher eher „build-in“ Ansätze verfolgt werden sollten, welche die Auswirkungen auf den Regionalverkehr bereits über die Ausgestaltung der verschiedenen Designkomponenten minimieren. Eine Datenanalyse zeigt auf, welcher Anteil des Regionalverkehrs durch eine **Differenzierung der Toll Plus Kostensätze nach Fahrzeuggewicht** entlastet werden könnte: 12-17 % des Regionalverkehrs umfassen Transporte mit einem Gesamtgewicht unter 12 Tonnen (oder Fahrzeugen mit nur 2 Achsen als Näherung), eine höhere Gewichtslimite von 18 t (oder Fahrzeugen mit maximal 3 Achsen als Näherung) würde 16-23% des Regionalverkehrs erfassen. Differenzierungsansätze, die sich auf geographische Charakteristika der Transporte beziehen, erscheinen aufgrund der Studienergebnisse nur schwer mit dem geltenden EU-Recht vereinbar und sollten nicht weiter verfolgt werden. Ansätze, die auf die **Ausnahme besonderer Güterarten** fokussieren erscheinen hingegen technisch und rechtlich machbar. So könnten z.B. Transporte von Milch, Rohholz oder auch Fahrten, die Bestandteil des kombinierten Verkehrs sind, von Toll Plus ausgenommen werden. Ebenso erscheint eine **Ausnahme des lokalen Zubringerverkehrs** möglich, da für diesen meist keine Alternativen auf der Schiene verfügbar sind.

### ***Monitoringergebnisse 2016***

Das Monitoring wurde für 2016 räumlich ausgeweitet: Zusätzlich zu den Korridoren Fréjus, Mont Blanc, Gotthard, Brenner, Tarvisio, die bisher zum iMONITRAF! -Monitoring gehörten, wurden die neu auch die transalpinen Übergänge Ventimiglia (Italien), Simplon und San Bernardino (beide in der Schweiz) integriert, und zwar mit den Indikatoren ab 2005. Summiert über alle – inklusive neue – Korridore hat die Zahl der Motorfahrzeuge zwischen 2015 und 2016 wieder zugenommen, und zwar um 4,6 % bei den schweren und 2,4 % bei den leichten Motorwagen. Auf den beiden Achsen Brenner und Ventimiglia betrug das Wachstum der schweren Motorwagen fast 6 %, auf den französisch-italienischen Korridoren Fréjus und Mont Blanc 3 % und auf den Schweizer Korridoren Gotthard und San Bernardino 2 %. Umgekehrt war auf den Schweizer Korridoren mit 8 % das höchste Wachstum bei den leichten Motorwagen zu verzeichnen. Der Brenner ist nach wie vor die Achse mit dem grössten Verkehrsaufkommen. (ca. 23,600 leichte und 6,400 schwere Motorwagen pro Tag) gefolgt von Ventimiglia (ca. 18,900 leichte und 5,300

schwere Motorwagen pro Tag). Zwischen 2015 und 2016 wuchsen auch die auf den iMONITRAF!-Korridoren über die Alpen transportierten Gütermengen (Strasse und Schiene) um 4,9 %. Die Schweizer Korridore weisen den höchsten Modalsplit auf, der 2016 sogar nochmals zulegte. Hingegen sanken die Modalsplits am Brenner und Fréjus/Mt. Cenis. Die Luftqualitätsindikatoren, die jahresmittleren Immissionskonzentrationen von Feinstaub PM<sub>10</sub> und Stickstoffdioxid NO<sub>2</sub> setzten ihren Trend zu tieferen Werten fort. Bei den Strassengebühren blieb auch im Jahr 2016 das bisherige Muster unverändert: Die höchsten Gebühren werden am Fréjus und Mont Blanc verlangt, die niedrigsten am Brenner, Tarvisio und Ventimiglia; die Gebühren auf den Schweizer Korridoren liegen dazwischen. Die Treibstoffpreise waren seit 2012 stetig gesunken, nahmen nun im Jahr 2016 erstmals wieder zu, sowohl beim Benzin wie auch beim Diesel.

### ***Best Practices – dynamische Weiterentwicklung bestehender Maßnahmen***

Die im Jahr 2017 ergriffenen Maßnahmen auf regionaler und nationaler Ebene bestätigen den hohen Handlungsdruck. Insbesondere am Brenner Korridor werden die relevanten Grenzwerte für Luftschadstoffe weiter überschritten und alle Regionen ringen um die Umsetzung effektiver Maßnahmen zu deren Begrenzung. Hierbei wurde erneut deutlich, dass nur ein Instrumentenmix aus ambitionierten regulatorischen Maßnahmen und preislichen Anreizen („push“ und „pull“) zu einer Reduktion der Umweltbelastung beitragen kann. Daher wurden die bestehenden Fahrverbote im Land Tirol dynamisch weiterentwickelt und die autonomen Provinzen Bozen und Trentino führten weitere Pilotversuche zu optimalen Geschwindigkeitsbegrenzungen durch. Zusätzlich wurde das Problem der Kapazitätsgrenzen am Brenner immer deutlicher, was zu einer Einführung der Blockabfertigung in Tirol auf Ende 2016 geführt hat. Auf italienischer Seite des Brenner Korridors wurden zudem die Subventionssysteme für den kombinierten Verkehr im Jahr 2017 in Betrieb genommen bzw. stehen kurz davor. In Bezug auf den Personenverkehr zeigt die Best Practice Sammlung ebenfalls die Notwendigkeit eines breiten Maßnahmensets auf: die Verlagerung des Personenverkehrs von der Straße auf die Schiene wird nur unter einer ambitionierten Weiterentwicklung der Infrastruktur und des Betriebs möglich sein (Best Practice Beispiel Schweiz) In grenzüberschreitenden Regionen ist zudem eine Integration des Betriebs und Ticketings notwendig um friktionslose Mobilitätsangebote zu schaffen (Best Practice Beispiel Tessin-Lombardei). Da aber der motorisierte Individualverkehr weiterhin den größten Anteil beim Personenverkehr ausmachen wird, ist zudem der Umstieg auf emissionsarme Technologien notwendig um dessen Umweltauswirkungen zu reduzieren.

### ***Der verkehrspolitische Rahmen – Entwicklungen auf der europäischen Ebene***

Im Jahr 2017 wurde die Weiterentwicklung und Revision einiger zentraler europäischer Rahmenbedingungen angestoßen, insbesondere auch um einen stärkeren Beitrag zur Dekarbonisierung des Verkehrssektors zu erreichen. Ende Mai wurde von der Europäischen Kommission das erste Maßnahmenpaket vorgestellt, um die Transformation hin zu einer emissionsarmen, wettbewerbsfähigen und vernetzten Mobilität zu unterstützen. „**Europe on the Move**“ ist ein breit angelegtes Maßnahmenpaket, das zur Verbesserung der Verkehrssicherheit, zur Implementierung effektiver Straßenbenutzungsgebühren, zur Reduktion von CO<sub>2</sub>-Emissionen, Luftschadstoffen und Lärm aber auch zur Verbesserung der sozialen Vorgaben im Verkehrssektor beitragen soll. Als wichtigstes Element für iMONITRAF! enthält dieses Maßnahmenpaket auch die **Revision der Wegekostenrichtlinie**. Im November 2017 wurde weiterhin das „**Clean Mobility Package**“ veröffentlicht, mit dem die EU Kommission weitere Beiträge zur Erreichung des Pariser Abkommens erreichen möchte. Für den Verkehrssektor enthält das Paket sechs relevante Dokumente, die den Umstieg auf emissionsarme Fahrzeuge unterstützen sollen- darunter neue CO<sub>2</sub>-Grenzwerte für

Pkw und die **Revision der Richtlinie für den kombinierten Verkehr**. Weiterhin hat die Kommission erste Schritte zur Weiterentwicklung der TEN-T Politik in der Periode 2021-2030 eingeleitet.

### **Outlook 2018 und darüber hinaus**

Für das Jahr 2018 umfasst der Arbeitsplan von iMONITRAF! weitere Aktivitäten zur Implementierung von Toll Plus, aber auch das Ziel wieder weitere Agendapunkte anzustoßen. Ein Strategiemeeting im Februar 2018 soll eine Plattform darstellen, um aktuelle Entwicklung (inkl. technologischer Innovationen) und deren Relevanz für iMONITRAF! zu diskutieren. Im Herbst 2018 ist erneut die Organisation eines Transport Forums/politischen Roundtables geplant, um den erfolgreichen Austausch zwischen technischer und politischer Ebene fortzuführen. Zudem werden die Synergien mit der makroregionalen Strategie EUSALP weiter gestärkt. In 2018 übernimmt das Land Tirol die Präsidentschaft der EUSALP und ein besondere Fokus soll dabei auf die Arbeitsgruppe 4 Mobilität gelegt werden. Für die Zeit nach 2018 wurden bisher noch keine konkreten Regelungen getroffen, der große gemeinsame Handlungsbedarf ist aber eindeutig: Toll Plus ist nur ein Element der gemeinsamen Verlagerungspolitik der Alpenregionen. Weitere Maßnahmen könnten in einem ähnlichen Prozess weiterentwickelt und vertieft werden. Auch die Notwendigkeit der Stärkung der gemeinsamen Stimme der Alpenregionen bleibt im sich dynamisch entwickelnden Umfeld anderer Netzwerke und Projekte weiter bestehen.

## iMONITRAF! en 2017 – Résumé

### ***iMONITRAF! en 2017 – La révision de la Directive Eurovignette, une fenêtre de tir pour agir***

Les régions situées le long des corridors du Brenner, du Gothard, du Mont Blanc et du Fréjus sont confrontées au défi posé par les impacts négatifs du trafic transalpin sur les populations et l'environnement. Bien que toutes ces régions aient mis en place des politiques de report modal, la croissance continue du trafic routier n'a pas été stoppée. Les seuils relatifs à la qualité de l'air sont dépassés sur de nombreux sites et, globalement, le transfert modal de la route vers le rail est en stagnation, à l'exception du Gothard. Les régions situées le long des quatre principaux corridors de transit ont donc décidé de poursuivre leur coopération dans le cadre du réseau iMONITRAF!, pour la période 2017-2018 avec l'objectif de développer une politique commune de report modal, via le développement et l'harmonisation d'un système de sur-péage pour le transport routier, nommée « Toll Plus ».

En novembre 2016, les Régions partenaires ont signé un accord politique de poursuite de cette stratégie commune de sur-péage : ainsi la coopération récente au sein d'iMONITRAF ! a pour objectif de faire du travail de réseau pour le déploiement de la proposition de sur-péage régional. La révision en cours de la Directive Eurovignette est un cadre de travail institutionnel important et donne une opportunité pour qu'iMONITRAF ! fasse du lobbying actif pour faire valoir ses propositions. En 2017, les partenaires d'iMONITRAF! ont mis en place une stratégie détaillée de lobbying afin de parvenir à ce que les parties prenantes et les premières actions soient un succès. Une stratégie de communication pertinente a permis de nouer de nouveaux contacts notamment avec les parlementaires européens de la Commission transports (TRAN). Des rdv personnalisés pour présenter les propositions d'iMONITRAF ont été organisés à Bruxelles en décembre 2017. Des eurodéputés ont donné leur accord pour soutenir l'organisation d'un déjeuner de travail au Parlement européen en janvier 2018. De nouvelles collaborations pourraient être mises en place ainsi que des coopérations avec des organisations œuvrant en faveur des Alpes.

### **Sur-péage « Toll Plus » : Etude approfondie du transport régional**

La prise en compte insuffisante des effets négatifs du transport régional est un élément clé de l'amendement sur le sur-péage d'iMONITRAF!. En effet, iMONITRAF! a commandé à Rapp Trans en 2017 un rapport sur les aspects techniques, juridiques et administratifs de différentes mesures mises en place pour le transport régional. Une analyse sur les éléments existants en termes de système de tarification, de mesures de régulation du transport de marchandises et de passagers a conclu qu'il n'existait pas de démarche duplicable au sur-péage en raison d'obstacles techniques et juridiques. Le rapport conclu également que la **mise en place de mesures encadrées pour le transport régional sera compliquée** et qu'il semble plus adapté de se focaliser sur des approches intégrées.

Une analyse des données donne un aperçu du partage du transport régional qui pourrait être atteint via **une limite sur le poids** pour le sur-péage. Il est indiqué que seule une petite partie du transport régional peut être impacté par cette approche. Les véhicules dont le poids est inférieur à 12 tonnes représente 12 à 17% du transport régional tandis que les plus de 18 tonnes sont présents en plus grande proportion (16 à 23%). Les auteurs arrivent à la conclusion que pour des régulations spécifiquement basées sur des critères géographiques, toutes les mesures proposées ne seront pas compatibles avec la réglementation européenne. **Des exceptions pour certains transports de marchandises** tels que le lait et le bois brut ou pour les véhicules en transport combiné semblent toutefois possible. Une autre mesure complémentaire pourrait exempter **l'approvisionnement local** dans la mesure où il n'existe pas de mode de transport alternative viable pour l'instant.

### **Mise à jour de l'observatoire pour l'année 2016**

Le périmètre de surveillance a été récemment étendu : en plus des corridors transalpins Fréjus, Mont Blanc, Gotthard, Brenner et Tarvisio qui ont fait l'objet d'une surveillance d'iMONITRAF! jusqu'en 2015, les corridors Vintimille en Italie, Simplon et San Bernardino en Suisse ont été ajoutés inclus les valeurs de leurs indicateurs dès 2005. La somme de tous les corridors surveillés par iMONITRAF! fait ressortir une augmentation du volume du trafic entre 2015 et 2016. Les véhicules lourds ont augmenté de 4,6% et les véhicules légers de 2,4%. Dans les corridors du Brenner et du Vintimille, l'augmentation des véhicules lourds a atteint presque 6%. Sur les corridors de Fréjus et du Mont Blanc, 3 % d'augmentation et dans les corridors suisses du Gotthard et de San Bernardino, 2%.

Simultanément, les corridors suisses assistent à la plus grosse augmentation de véhicules légers avec une augmentation de plus de 8%. Le corridor du Brenner est une nouvelle fois celui ayant le plus de passages transalpins (environ 23 600 véhicules légers et 6 400 véhicules lourds par jour). Suivi par Vintimille (18 900 et 5 300). Concernant la totalité du transport de marchandise sur la route et sur le rail, une augmentation similaire de 4,9% peut être observée entre 2015 et 2016. Les corridors suisses du Gotthard et Simplon revendiquent le meilleur taux de report modal avec même une augmentation entre 2015 et 2016. Alors que celui du Brenner, de Fréjus, du Mont Blanc et de Cenis diminue. La concentration annuelle de polluants dans l'air de PM<sub>10</sub> et NO<sub>2</sub> est en chute constante. Les modalités tarifaires des péages conservent le même modèle avec des prix en augmentation pour celui du Fréjus et du Mont Blanc, des prix en diminutions pour ceux du Brenner, Tarvisio, Vintimille et des prix en stagnation pour les corridors suisses. Le prix du diesel et de l'essence a augmenté entre 2015 et 2016 pour la 1ère fois depuis 2012.

### ***Pratiques exemplaires - ajustements dynamiques des mesures visant à limiter les pressions environnementales***

En 2017, le développement lié aux mesures régionales et nationales fait apparaître un besoin d'action encore important. En particulier le long du corridor du Brenner, les objectifs de qualité de l'air ne sont toujours pas respectés et les régions sont en difficulté pour mettre en œuvre des mesures efficaces. Encore une fois, il devient évident qu'un ensemble de mesures réglementaires et initiatives ambitieuses est nécessaire pour atteindre une réduction de la pression environnementale. Ainsi, **les interdictions de circulation ajustées de manière dynamique** dans le Tyrol et les provinces autonomes de Bolzano et Trento ont encore montré **l'efficacité des limites de vitesse adaptatives**. En outre, les embouteillages sont devenus un problème urgent sur le Brenner, conduisant à l'introduction d'un **système de dosage** fin 2016. Les **systèmes de subventions pour le transport combiné** du côté italien du Brenner ont été mis en service en 2017 (Trento) ou seront bientôt opérationnels (Bolzano). En ce qui concerne le transport de voyageurs, la collecte des meilleures pratiques montre de plus en plus le **besoin d'un ensemble de mesures diverses**: le transfert modal du transport de passagers ne sera possible qu'avec une amélioration des infrastructures et des services (exemple des meilleures pratiques en Suisse). Dans les régions transfrontalières, cela nécessite également une intégration plus poussée des services et des tickets pour offrir des options de mobilité intégrés (exemple de meilleure pratique Tessin-Lombardie). Cependant, une part importante du transport motorisé de passagers subsistera, nécessitant des solutions à faibles émissions pour réduire les impacts sur la qualité de l'air, les changements climatiques et le bruit.

### ***Le cadre de la politique des transports - évolution au niveau de l'UE***

En 2017, la révision de certaines politiques majeures de l'UE a été lancée et une législation supplémentaire visant à décarboner le secteur des transports a été mise en œuvre par la Commission européenne. Fin mai 2017, la Commission européenne a publié une première série d'initiatives législatives visant à soutenir la transition vers une mobilité propre, compétitive et connectée. « **Europe on the Move** » est un vaste ensemble d'initiatives qui rendra le trafic plus sûr, encouragera la tarification routière intelligente, réduira les émissions de CO<sub>2</sub>, la pollution atmosphérique et les embouteillages, et améliorera les dispositions sociales dans le secteur des transports. Le point le plus important pour iMONITRAF!, concerne **la révision de la Directive Eurovignette**. Avec le « **Clean Mobility Package** » lancé en novembre 2017, la Commission a pris d'autres mesures décisives dans la mise en œuvre des engagements de l'UE dans le cadre de l'accord de Paris. Pour le secteur des transports, le paquet comprend une série de six documents pour soutenir la transition vers des véhicules à faibles émissions, y compris de nouvelles normes CO<sub>2</sub> pour les voitures et une révision de la directive sur le transport combiné. En outre, la Commission a pris les premières mesures pour concevoir le cadre de financement du RTE-T pour la période 2021-2030.

### ***Perspectives 2018 et au-delà***

Pour 2018, le programme de travail d'iMONITRAF! comprend des activités concernant la mise en œuvre du système de sur-péage « Toll Plus » mais vise également à mettre en place de nouvelles actions. Pour cela, une réunion stratégique est prévue en février 2018 pour envisager des évolutions récentes (y compris des innovations technologiques) et leur pertinence pour les activités futures d'iMONITRAF!. A l'automne 2018, l'organisation d'un forum transports et / ou d'une table ronde politique permettront d'alimenter à nouveau une plateforme d'échange entre les niveaux technique et politique. Les liens avec la stratégie macro-régionale SUERA seront renforcés. En 2018, le Tyrol présidera la SUERA et une attention particulière sera accordée au groupe de travail

4 « Mobilité ». Pour la période postérieure à 2018, aucun suivi spécifique n'a encore été convenu. La nécessité d'une coopération renforcée est évidente : « Toll Plus » n'est qu'un élément d'une politique de transfert modal commune pour la région alpine. Plusieurs autres éléments pourraient être développés dans le cadre d'iMONITRAF! et le défi de renforcer la voix des régions demeure important au sein des autres organisations et projets.

## iMONITRAF! nel 2017: L'essenziale in breve

### ***iMONITRAF! 2017: la revisione dell'Eurovignetta come opportunità***

Le pressioni legate al trasporto merci transalpino su strada rimangono elevate nei quattro principali corridoi di attraversamento (Brennero, Gottardo, Monte Bianco e Fréjus). Sebbene tutte le regioni abbiano introdotto politiche di *modal shift* per incrementare l'utilizzo del trasporto ferroviario, non si è riusciti ad arrestare l'ulteriore crescita dei volumi di traffico stradale. Ad eccezione del corridoio del Gottardo, il trasferimento modale dalla strada alla rotaia è in una fase di stagnazione. Inoltre, gli indicatori che monitorano la qualità dell'aria rilevano un superamento dei limiti in molte aree e l'esposizione al rumore rimane elevata. Le regioni localizzate lungo i principali corridoi di transito hanno quindi deciso di continuare la loro cooperazione nell'ambito di iMONITRAF! per il biennio 2017-2018, con una forte attenzione all'ulteriore sviluppo di politiche comuni rivolte al *modal shift*, in particolare attraverso il potenziamento e l'armonizzazione dei loro sistemi di tariffazione per il trasporto stradale di merci – il Toll Plus.

Sulla base della risoluzione politica sul Toll Plus firmata nel novembre 2016, la recente cooperazione all'interno di iMONITRAF! mira prevalentemente a un'attività di networking per l'attuazione della misura a scala regionale. La recente revisione della direttiva Eurovignetta come quadro normativo di riferimento offre una grande opportunità per iMONITRAF!, poiché potrebbe attribuire particolare rilevanza al sistema Toll Plus all'interno della direttiva stessa. Nel 2017, i partner di iMONITRAF! hanno sviluppato una strategia di lobby per raggiungere gli stakeholder. Le prime attività di questa strategia sono state realizzate con successo. A tal proposito, un'ampia attività di comunicazione ha portato a nuovi contatti con i portatori d'interesse e con i membri del Parlamento europeo competenti per il tema dei trasporti. A Bruxelles, nel dicembre 2017, si sono svolti incontri diretti per presentare le proposte portate avanti da iMONITRAF!. Le proposte di iMONITRAF! hanno trovato un grande sostegno durante questi incontri e gli eurodeputati hanno concordato di sostenere, a gennaio 2018, l'organizzazione di uno specifico evento presso il Parlamento europeo. Inoltre, potrebbero essere stabilite delle nuove alleanze - tra cui nuove cooperazioni e un rafforzato contatto con le ONG nelle Alpi.

### ***Toll Plus: uno studio approfondito a livello regionale***

Evitare impatti eccessivi per il trasporto regionale è uno degli elementi centrali della risoluzione di iMONITRAF! sul Toll Plus. Per questo motivo iMONITRAF! ha commissionato un rapporto (realizzato e presentato da Rapp Trans nel 2017) per esplorare gli aspetti tecnici, giuridici e amministrativi di diverse misure a favore del trasporto regionale. L'analisi degli elementi esistenti e relativi ai sistemi di tariffazione e alle misure di regolamentazione sia per il trasporto merci che per i passeggeri ha portato alla conclusione che nessun approccio esistente può essere trasferito al Toll plus, a causa di ostacoli tecnici e legali. Lo studio conclude che è difficile prevedere misure

di accompagnamento a favore del trasporto regionale e che sarebbe pertanto preferibile concentrarsi su un approccio che fin dall'inizio consideri le specificità regionali. Un'analisi dei dati fornisce informazioni più dettagliate in merito alla quota di trasporto regionale che potrebbe essere oggetto di un limite di peso. Viene mostrato come solo una piccola quota di trasporto regionale sia raggiungibile da questo approccio, mentre il 12-17% del trasporto regionale utilizza veicoli di peso inferiore a 12t (o, per approssimazione, veicoli a 2 assi) e un limite di peso maggiore (18t o, per approssimazione, veicoli a 3 assi) sostiene il 16-23% circa del trasporto regionale. Per regolamentazioni specifiche basate sulle caratteristiche geografiche, gli autori dello studio concludono che tutte le misure attualmente previste sono incompatibili con la legislazione dell'UE. Tuttavia, sembrano possibili delle esenzioni basate su determinati tipi di merce, come il latte o il legname, o per i veicoli coinvolti nel trasporto combinato. Un'altra misura complementare potrebbe essere l'esenzione dei trasporti per l'approvvigionamento locale, riconoscendo il fatto che non esistono alternative di trasporto possibili.

### ***Aggiornamento dei dati di monitoraggio per l'anno 2016***

Il perimetro di monitoraggio è stato ampliato: oltre ai corridoi transalpini del Fréjus, Monte Bianco, Gottardo, Brennero e Tarvisio, che erano stati oggetto del sistema di monitoraggio iMONITRAF! fino al 2015, sono stati aggiunti altri tre corridoi, ovvero quelli di Ventimiglia (Francia-Italia), del Sempione (Svizzera-Italia) e del San Bernardino (Svizzera). Dal 2015 al 2016, a livello aggregato, su tutti i corridoi monitorati da iMONITRAF! si è registrato un aumento dei volumi di traffico. I veicoli pesanti sono aumentati del 4,6%, mentre i veicoli leggeri sono cresciuti del 2,4%. Lungo il Brennero e Ventimiglia l'aumento dei veicoli pesanti ha raggiunto quasi il 6%; sui corridoi franco-italiani del Fréjus e del Monte Bianco la crescita è stata del 3%; sui corridoi svizzeri del Gottardo e del San Bernardino l'incremento è stato pari al 2%. Allo stesso tempo, i corridoi svizzeri mostrano la crescita maggiore (oltre l'8%) per quanto riguarda i veicoli leggeri. Con una media di circa 23.600 veicoli leggeri e 6.400 veicoli pesanti al giorno, il Brennero continua ad essere il corridoio con il maggior numero di passaggi transalpini, seguito da Ventimiglia, con circa 23.600 veicoli leggeri e 6.400 veicoli pesanti. Per quanto riguarda i volumi complessivi di merci, che comprendono il trasporto su strada e su rotaia, è stato registrato un aumento del 4,9% dal 2015 al 2016. I corridoi ferroviari svizzeri del Gottardo e del Sempione mostrano la quota percentuale più alta per quanto concerne il trasporto ferroviario, con un ulteriore incremento rispetto agli anni precedenti. Lo share modale è costante al Brennero e in calo lungo il Fréjus/Moncenisio. Le concentrazioni annuali di PM<sub>10</sub> e NO<sub>2</sub> continuano a diminuire. I prezzi dei pedaggi mostrano un quadro simile agli anni precedenti: i valori più elevati si registrano lungo il Fréjus e il Monte Bianco, valori inferiori si trovano lungo il Brennero, il Tarvisio e per Ventimiglia, mentre valori intermedi sono registrati per i corridoi svizzeri. Infine, i prezzi del diesel e della benzina sono tornati a salire per la prima volta dal 2012.

### ***Buone pratiche – aggiustamenti dinamici per limitare la pressione ambientale***

Nel 2017 lo sviluppo di misure regionali e nazionali fa emergere la necessità di un'azione che rimanga ad un livello elevato. Soprattutto lungo il corridoio del Brennero, i limiti normativi relativi alla qualità dell'aria sono stati ancora una volta superati e le regioni coinvolte stanno lottando per attuare misure efficaci. Ancora una volta è parso evidente come sia necessaria l'introduzione congiunta di misure push e pull per garantire una riduzione delle pressioni ambientali. Alla luce di ciò, i divieti di circolazione sono stati adeguati dinamicamente in Tirolo, mentre le province autonome di Bolzano e Trento hanno ulteriormente testato l'efficacia dei limiti di velocità dinamici. Inoltre, la congestione è diventata un aspetto critico che ha portato all'introduzione di un sistema di blocco degli accessi alla fine del 2016. I sistemi di sussidio per il trasporto combinato sul lato

italiano del Brennero sono entrati in vigore nel 2017 nel caso della Provincia autonoma di Trento, mentre saranno presto operativi per quanto riguarda la Provincia autonoma di Bolzano. In merito al trasporto passeggeri, la raccolta di buone pratiche mostra la necessità di un set integrato di misure: il trasferimento modale è possibile solo con un ulteriore miglioramento delle infrastrutture e dei servizi (sull'esempio del modello svizzero). Nelle regioni transfrontaliere, è necessaria un'ulteriore integrazione di servizi e di bigliettazione per garantire un servizio continuo (sull'esempio di quanto realizzato tra Ticino e Lombardia). Tuttavia una larga parte di utenti continua ad usare il proprio mezzo di trasporto, confermando la necessità di soluzioni a basse emissioni per ridurre gli impatti sulla qualità dell'aria, sui cambiamenti climatici e sul rumore.

### ***Il quadro della politica dei trasporti: sviluppi a livello dell'UE***

Al fine di ottenere una decarbonizzazione del settore dei trasporti, nel 2017 è stata lanciata la revisione di alcune importanti policy dell'UE e ulteriori leggi sono state proposte da parte della Commissione europea. Alla fine di maggio 2017, la Commissione europea ha pubblicato una prima serie di iniziative legislative per sostenere la transizione verso una mobilità pulita, competitiva e connessa in modo intelligente. "Europe on the Move" è un'ampia gamma di iniziative di alto livello, che contribuirà a rendere più sicuro il traffico, incoraggerà un'applicazione di pedaggi stradali più equi, ridurrà le emissioni di CO<sub>2</sub>, l'inquinamento atmosferico e la congestione e migliorerà le implicazioni sociali nel settore dei trasporti. La questione più importante per iMONITRAF! è costituita dall'iniziativa che punta alla revisione della direttiva Eurovignetta. Con il "Pacchetto mobilità pulita", lanciato nel novembre 2017, la Commissione ha intrapreso ulteriori iniziative per l'attuazione degli impegni dell'UE nell'ambito dell'accordo di Parigi. Per il settore dei trasporti, il pacchetto comprende una serie di sei documenti per sostenere la transizione verso veicoli a basse emissioni, tra cui nuovi standard di CO<sub>2</sub> per le automobili e una revisione della direttiva sui trasporti combinati. Inoltre, la Commissione ha iniziato a definire il quadro finanziario TEN-T per il periodo 2021-2030.

### ***Uno sguardo sul 2018 e oltre***

Per il 2018, il piano di lavoro di iMONITRAF! prevede di sviluppare sia ulteriori attività relative all'attuazione del Toll Plus, sia di definire in parallelo anche un'agenda più ampia. Per questo motivo, a febbraio 2018, è prevista una riunione strategica per discutere i recenti sviluppi (comprese le innovazioni tecnologiche) e la loro rilevanza per le attività future di iMONITRAF!. Per l'autunno 2018 è prevista l'organizzazione di un forum sui trasporti e/o di una tavola rotonda politica per garantire una piattaforma di scambio tra il livello tecnico e quello politico. Continueranno a rafforzarsi i collegamenti con la strategia macro regionale EUSALP. Nel 2018 infatti, il Tirolo ne assumerà la presidenza e un focus particolare sarà assegnato al Gruppo d'Azione 4 sulla mobilità. Per il periodo successivo al 2018 non è stato ancora concordato alcun proseguimento delle attività. In generale, tuttavia, risulta del tutto evidente la necessità di un'ulteriore cooperazione: il Toll Plus è solo uno degli elementi di una politica di trasferimento modale comune per la regione alpina. Diversi altri elementi potrebbero essere ulteriormente sviluppati nell'ambito di iMONITRAF! e la sfida di rinforzare la voce regionale rimane una priorità in un insieme di collaborazioni e progetti in corso di realizzazione.

# 1 Background and objectives

## ***iMONITRAF! network – maintaining the common voice of the Alpine regions***

Since 2005, the Alpine regions Auvergne-Rhône-Alpes,<sup>1</sup> the autonomous Provinces of Bolzano and Trento, the autonomous Regions of Aosta Valley and Friuli-Venezia Giulia, the Region Piemonte, the Canton of Ticino, the Region Central Switzerland, the Land of Tyrol as well as the Accademia Europea di Bolzano (EURAC) have developed a platform and knowledge-hub on transalpine transport topics. The regions along the corridors Brenner, Gotthard, Mont Blanc and Fréjus have to cope with the highest transit volumes and are challenged to find solutions for limiting negative environmental and social impacts. After the successful realisation of two projects in the frame of the Alpine Space Programme, in 2013 the iMONITRAF! network entered an independent phase with the establishment of a Coordination Point financed by the regions.

In its first phase 2013-2016, the Coordination Point had the objective to further develop first elements of the transport strategy of the Alpine regions as signed in May 2012 in Lyon. Especially, activities focused on the design and implementation steps of short-term common measures – with a strong focus on Toll Plus<sup>2</sup>. Discussions on this common measure made clear that an ambitious design of transport policies can only be achieved when all affected regions join their forces and speak with a common voice and on the basis of a sound knowledge-base. As result of this phase, political representatives signed a resolution on Toll Plus including some core elements for a specific design of Toll Plus from the regional viewpoint. As the Alpine regions have very limited responsibilities for adjusting pricing systems on the motorways, the resolution includes a strong commitment to bring the regional viewpoint to the attention of the national and EU level. Specifically, it was agreed to lobby towards an ambitious revision of the Eurovignette Directive as relevant legal framework.

## ***Objectives 2017 – Lobbying for Toll Plus and revision of monitoring system***

The second phase of the Coordination Point 2017-2018 thus aims at networking for the implementation of the regional Toll Plus proposal, especially focusing on a strong lobbying at European and national level in the frame of the Eurovignette revision process. For 2017, it was agreed to develop a detailed lobbying strategy for Toll Plus and to work towards its implementation – in line with the European process. Further, the work programme for 2017-2018 includes additional in-depth analysis on Toll Plus, especially regarding the consideration of regional transport in the frame of Toll Plus. A study was launched at the beginning of 2017 with the objective to present results in autumn 2017, so that its outcome can be used in the frame of the lobbying process.

Also, the revision of the common monitoring system is included in the work plan 2017-2018. Over the last Coordination Point period, some difficulties with indicators of the monitoring system became visible and it was decided to update the definition of several indicators, especially the indicators specifying traffic volumes, since the countries use different and incompatible definitions for vehicle categories. In addition, the need for cross-checking the indicator toll prices became evident, so that it is in line with the activities related to Toll Plus. This revision of the monitoring system was launched in 2017 and could be successfully implemented in the frame of the data collection.

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<sup>1</sup> Please note that the region Rhône-Alpes has been merged with the region Auvergne during the regional reorganization of France in 2015. The official name of the region as well as its organizational structure were confirmed in 2016.

<sup>2</sup> Additional charging of heavy goods vehicles for the use of certain roads.

### ***Annual Report 2017 – Insights and overview of iMONITRAF! activities***

The Annual Report 2017 provides an overview on iMONITRAF! activities as well as on recent developments in the Alpine regions, on national as well as on European level. Its target groups are policy makers at the different political levels as well as the broader network working on trans-alpine transport policy.

The report includes detailed information on the lobbying strategy as developed in the frame of iMONITRAF! and presents a summary of the in-depth study on regional transport. Also, the report presents recent results of the common monitoring activities, including detailed information on the adjustments of monitoring indicators. As in the previous years, it also gives an update of Best Practices in the iMONITRAF! regions as well as an overview on relevant activities on national and European level. In addition, it gives an overview on networking activities and provides an outlook on activities in 2018 and beyond.

## **2 Lobbying strategy and in-depth analyses for Toll Plus**

The iMONITRAF! strategy of 2012 calls for the implementation of a common modal shift policy in the mid-term. Thus, the iMONITRAF! network has taken forward this claim in its previous phase 2013 to 2016 – with a special focus on developing a proposal for an improved pricing system for transalpine freight transport on the Alpine corridors: Toll Plus. As major milestone, political representatives of the iMONITRAF! regions have signed a political resolution on Toll Plus in November 2016 which proposes some core elements for an ambitious Toll Plus System from the regional viewpoint. The implementation of these core elements however requires an adjustment of the relevant legal framework at EU level, the Eurovignette Directive, which currently leaves little room for further developments of pricing systems. Also, the national level needs to be convinced about the need for a further development of pricing systems in the Alpine regions, as the relevant legal frameworks are defined at national level.

Thus, it was agreed to focus iMONITRAF! activities in the year 2017 on lobbying for Toll Plus and on further developing the iMONITRAF! proposal on Toll Plus. With the ongoing revision process of the Eurovignette Directive, iMONITRAF! can use a crucial window-of-opportunity for communicating its proposals and for finding further support. In parallel to the lobbying activities, it was agreed to further develop the Toll Plus proposal, with a special focus on developing a proposal for regional transport in the frame of Toll Plus.

### **Networking related to Toll Plus**

The recent revision of the Eurovignette Directive as relevant legal framework at EU level provides a great window-of-opportunity for the iMONITRAF! network to present its proposals and to actively lobby for a consideration of its ideas in the revised Directive. As first step of the revision, the European Commission has launched a public consultation process in autumn 2016, for which both the iMONITRAF! CoP as well as several partners have provided an answer. Based on this consultation process, the European Commission has published a progressive and from the iMONITRAF! viewpoint very satisfying draft Proposal for the revised Directive at the end of May 2017. As a strong communication has already been established between iMONITRAF! and the European Commission, it was agreed to develop a lobbying strategy to reach out to relevant stakeholders and of course Members of the European Parliament (MEP) which will shape the content of the Eurovignette Directive in the parliamentary process. Three major building blocks for a lobbying strategy were agreed:

- **Communication activity:** a broad dissemination of the iMONITRAF! political resolution on Toll Plus and the accompanying factsheet to all relevant decision makers at political and technical level. Especially, it was agreed to establish contacts with all relevant national ministries and as well as with key persons of the European process (technical staff of political groups in the European Parliament (EP), rapporteur and shadow rapporteurs of Eurovignette Dossier, etc.).
- **Information events with broader focus:** in addition to written and bilateral communications, target information events shall provide a direct platform to present the iMONITRAF! proposal and to launch a discussion process with relevant stakeholders. Especially, an information event for MEPs was identified as effective platform to reach out to this target group.
- **Building alliances for Toll Plus:** the revision of the Eurovignette Directive has of course also motivated other stakeholders to present their ideas – some of them following similar objectives as iMONITRAF!. Joining forces with these stakeholders will be crucial for an effective lobbying and to make sure that the common voice will be recognized at EU level.

In 2017, the following results could be achieved in the frame of the different lobbying activities:

- The broad communication round has led to new contacts with relevant stakeholders as well as relevant MEPs of the Transport Committee (TRAN). Bilateral contacts were established with the rapporteur for the Eurovignette, as well as with several shadow-rapporteurs and direct meetings to present iMONITRAF! ideas took place in Brussels in December 2017. The proposals of iMONITRAF! found great support during these meetings and relevant MEPs agreed to support the organisation of a specific lunch event in the EP.
- For new alliances, a strong link with the NGO Transport & Environment (T&E) could be established which is also lobbying for an ambitious revision of the Eurovignette Directive, especially regarding its impact on reducing CO<sub>2</sub> emissions of road freight transport. Also, the link with other relevant non-state actors in the Alps could be strengthened, especially with the Alpeninitiative and CIPRA and their networks.
- The organisation of events has been shifted to beginning of 2018, as the EP's Transport Committee (TRAN) will discuss the Eurovignette in January and February 2018. Two events are planned for 23<sup>rd</sup> January 2018 in Brussels, a lunch event targeted especially at MEPs and some selected major stakeholders and a broader evening event organised by the representation of the European Region Tyrol – South Tyrol – Trentino with a political roundtable discussion.
- A fact sheet on Toll Plus and the major claims of iMONITRAF! has been developed to support the lobbying activities.

Most activities have focused at the European level in 2017. A bilateral communication with the national level has also been established in the frame of the communication round, and its follow-up will become a major focus for 2018. Especially, it will be crucial to strengthen the contact to the follow-up Zurich Process in 2018 as the publication of an in-depth analysis on Toll Plus as commissioned by the Zurich Process is foreseen for spring 2018.

#### **Further specifying the proposal on Toll Plus: in-depth report on regional transport**

The avoidance of over-proportional impacts for regional transport is one of the core elements of the iMONITRAF! resolution on Toll Plus (iMONITRAF! network 2016). Thus, iMONITRAF! has commissioned a report to explore the technical, legal and administrative aspects of different “build-in” options and accompanying measures for regional transport (Rapp Trans 2017).

- In a first step, this report analyses existing elements for regional transport in pricing systems, regulatory measures for freight transport (e.g. sectoral driving ban Tyrol) as well passenger transport (e.g. environmental zones for low-emission vehicles). Several measures are assessed on the basis of legal, technical and administrative considerations, leading to the conclusion that no existing approach can be directly transferred to Toll Plus. For example, the specific regulations for regional transport in the frame of the sectoral driving ban lead to a manageable administrative effort with its implementation in one region but would be over-proportionally complex in an Alpine-wide application. Other measures face legal obstacles, especially considering the proposed changes to the Eurovignette Directive as included in the Commission proposal of 31st May 2017 (see legal analysis below for further details).
- The study thus concludes that accompanying measures for regional transport will be difficult to design and that it would thus be favourable to focus on “build-in” approaches. A data analysis of the CAFT database on the composition of vehicle weight for different traffic relations (transit, export, import, internal) provides insights into the share of regional transport which could be targeted through a weight limit for applying Toll Plus. It is illustrated that only a small share of regional transport can be targeted through this approach, 12-17 % of regional transport uses vehicles below a total weight limit of 12 t (or a 2-axle limit as approximation) a higher weight limit of 18 t (or 3 axles as approximation) would relief about 16-23 % of regional transport operations.
- In addition to vehicle based characteristics as basis for “build-in” approaches, the study then also analysis regulations based on geographical characteristics and on goods-based characteristics. For special regulations based on geographical characteristics the authors come to the conclusion that all proposed measures face considerable legal difficulties and will not be compatible with EU law. Goods-based exemptions focusing on transport of certain goods, such as milk and raw wood, or for vehicles in combined transport. These vehicles are by necessity in the 4+ axles category and would be subject to Toll Plus, and also have no other viable transport options. In fact, their routes and mode of transport are fully determined by their type of load. Another complementing measure might be to exempt transports for local supply, acknowledging the fact that no viable transport alternatives exist. Such exemptions might be granted for certain vehicles on a combination of route- and goods-based characteristics, which with thorough enactment could be implemented in a non-discriminatory and cost effective way (based for example on recent regulations for local supply in the frame of the sectoral driving ban in Tyrol).

The results of this in-depth study will be shared with relevant decision makers and stakeholders in 2018, especially during the lobbying events planned for January 2018 in Brussels. Also, the results can be used as input for a potential political communication from the iMONITRAF! regions which is foreseen as output of the recent iMONITRAF! phase 2017-2018.

### **3 Synergies with EUSALP - EU Strategy for the Alpine Region**

In 2017, the EU Strategy for the Alpine Region (EUSALP) entered its operative phase and the relevant Action Group 4 (AG4) on Mobility launched several activities with a direct link to iMONITRAF!. As the Land of Tyrol is the operative leader of AG4 and is also lead partner for the recent iMONITRAF! cooperation, a full use of potential synergies could be ensured. Especially, the following activities provided direct inputs and/or synergies to iMONITRAF!:

- In its cross-topic initiatives, EUSALP AG4 launched a study on **updating the estimates on external costs in mountain areas**. This study was based on the fact that the scientific basis on external costs in mountain areas had not been updated in a systematic way over the last 10 years and that a basic piece of information was missing for the design of common policy instruments (especially for a common approach on pricing systems). The update study focusing on the external cost elements air pollution, noise, nature and landscape as well as accidents was finalised at the end of 2017. For air pollution and noise it leads to slightly lower mountain factors as the previous analysis dating from 2006 but it shows that the consideration of external costs related to nature and landscape and external costs would also require a differentiation for mountain regions.<sup>3</sup> Moreover, the resulting external cost factors for air and noise calculated in the study are significantly higher (more than twice as high) than the reference values as mentioned in the current Eurovignette Directive.
- Similar to iMONITRAF!, EUSALP AG4 includes a work focus on implementation of modal shift policies with a focus on toll systems. Under this work focus, the iMONITRAF! proposal was presented to additional Alpine regions with the aim to gain further support. The discussion made clear that the information however needs to be strengthened for other regions and corridors to support the decision making process. Thus, a feedback round was initiated to **analyse the support for each core element of the iMONITRAF! proposal** and to identify additional research needs. However, before launching additional research on Toll Plus, it was agreed to wait for the upcoming in-depth study of the follow-up Zurich Process which will be published in spring 2018.
- Also under its cross-topic initiatives, EUSALP AG4 includes an activity on public acceptance of modal shift (infrastructure and policy instruments). Under this activity, the **development of a conflict map** was launched with the aim to develop existing as well as future conflicts related to freight and passenger transport in the Alps. This conflict map will provide insights into major conflict topics and their geographical relevance to design targeted activities to improve acceptance. A first version of the conflict map was presented to the public at the EUSALP Annual Forum that took place on 23<sup>rd</sup> and 24<sup>th</sup> of November 2017 in Munich.
- AG4 further includes activities aiming at interconnecting public transport services. Even as the recent activities of iMONITRAF! focus at freight transport, the better connection of public transport services has been identified in the iMONITRAF! transport strategy of 2012 with a major focus on developing an integrated **multi-modal information and ticketing platform for the Alpine Region**. This objective was taken up by the AG4 in a recent project proposal to the Alpine Space Programme (for further information see section 5.1.4)

AG4 had three meetings in 2017 and also organized a Mobility Conference, held on 25<sup>th</sup> of October 2017 in Bolzano. Furthermore, it presented its priority topics and activities during the annual EUSALP Annual Forum and on several other occasions. The discussions during all events made clear that the focus of interest in AG4 is much broader than in iMONITRAF!, due to the broader geographical focus and the representation of both national and regional levels. While some activities in AG4 are rather “straightforward” and are implemented according to the initial work plan, other activities have shown the need for flexibility along the implementation path and have made clear that finding a consensus in this larger group is much more challenging. Here, the advantages of iMONITRAF! with its comparatively homogenous interests and its well-established coordination become obvious.

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<sup>3</sup> Infras and Herry Consult (2017): External costs in mountain areas. Report commissioned by the EU Strategy for the Alpine Region EUSALP, Action Group 4 Mobility.

## 4 Monitoring of iMONITRAF! indicators

This chapter provides the main findings from the data analysis of the iMONITRAF indicators, which include road traffic volumes, the transported tons and modal split, the concentration of the air pollutants nitrogen dioxide and particulate matter, the exposure to noise, toll prices and prices of fuels. To identify the eight transalpine corridors object of the analysis, a consistent color scale is adopted: **yellow** = Ventimiglia, **orange** = Fréjus/Mont Cenis, **red** = Mont Blanc, **blue** = Gotthard, **light blue** = San Bernardino, **cyan** = Simplon, **green** = Brenner, **violet** = Tarvisio.

### **Indicator “Road traffic volumes”**

Road traffic volumes can be counted in different ways, according to the country considered and the methodology adopted. This may lead to some incompatibilities in the evaluation of the corridors. In comparison to the previous reports, some changes in the measuring stations and in the counting system have been introduced, in order to reduce the incompatibilities. Regarding the **measuring stations** for Fréjus, Mont Blanc, San Bernardino and Gotthard data is taken from the stations at the entrance of the tunnels. For Brenner and Tarvisio, the data series stem from the Austrian stations of Brennersee and Maglern, which are the closest toll stations to the Italian-Austrian border. Finally, for Ventimiglia, the Italian-French boundary toll station of Ventimiglia has been considered. Regarding the **counting systems**,

- Brenner and Tarvisio corridors adopt the Austrian classification for road detection, as provided by ASFINAG: All vehicles below 3.5 t are counted as light vehicles, whereas those above 3.5 t are classified as heavy vehicles.
- For Swiss corridors, the official classification adopted by the Swiss Federal Office of Transport (FOT) has been considered: vehicles belonging to classes 1-3 are counted as light vehicles; those belonging to classes 4-7<sup>4</sup> as heavy vehicles.
- Finally, vehicles along Italian-French corridors are reckoned according to the system used by the Italian highways: light-vehicle category consists of vehicles belonging to class A (height below 1.3 m), while heavy-vehicle category include those means belonging to class B (height above 1.3 m) and classes 3,4,5 (according to the number of axles).

Figure 1 analyses the **overall annual average daily traffic for all vehicles** in the years 2005-2016. This indicator is the sum of total light and heavy vehicles circulating along the different corridors, divided by 365 (366 in leap years). With an average of 30,012 vehicles per day, the Brenner corridor presents the highest traffic flows, followed by Ventimiglia (24,225) and Gotthard (17,650). Tarvisio lies in the middle (13,867), followed by the San Bernardino (7,197). Finally, Mont Blanc (5,168) and Fréjus (4,916) present the lowest values.

The analysis since 2005 shows different trends. The Brenner presents the highest absolute traffic volumes and a generalized increase of flows until 2016 (+15.9 %), despite a significant reduction in years 2009-2011, which was due to the international economic crisis. Also Ventimiglia and Gotthard show an overall positive trend (+5.3 % and +9.8 %). For Tarvisio, data are available only from 2012 onwards and register a high increase (+9.8 %).

In the short term (yearly variation between 2015 and 2016), all corridors registered an increase of values. The highest growth has been registered along San Bernardino (+30.4 %, thus recovering the previous decrease registered in 2015<sup>5</sup>), at Brenner (+5.2 %) and at Tarvisio (+3.5 %). Also the volumes along the Mont Blanc and the Fréjus corridors increased (+0.7 % and +3.9 %),

<sup>4</sup> Vehicles belonging to class 1-3 include passenger cars, motorcycles and light commercial vehicles, whereas vehicles belonging to class 4-7 include buses, coaches, HDV trucks, HDV truck trailers and HDV articulated trucks.

<sup>5</sup> This reduction can be partially justified by the night closure of the tunnel between May and June 2015.

reaching in both cases the highest levels of the last decade. The sum of all vehicles over all corridors (except Tarvisio) in 2016 was 11 % higher than the corresponding sum in 2005.

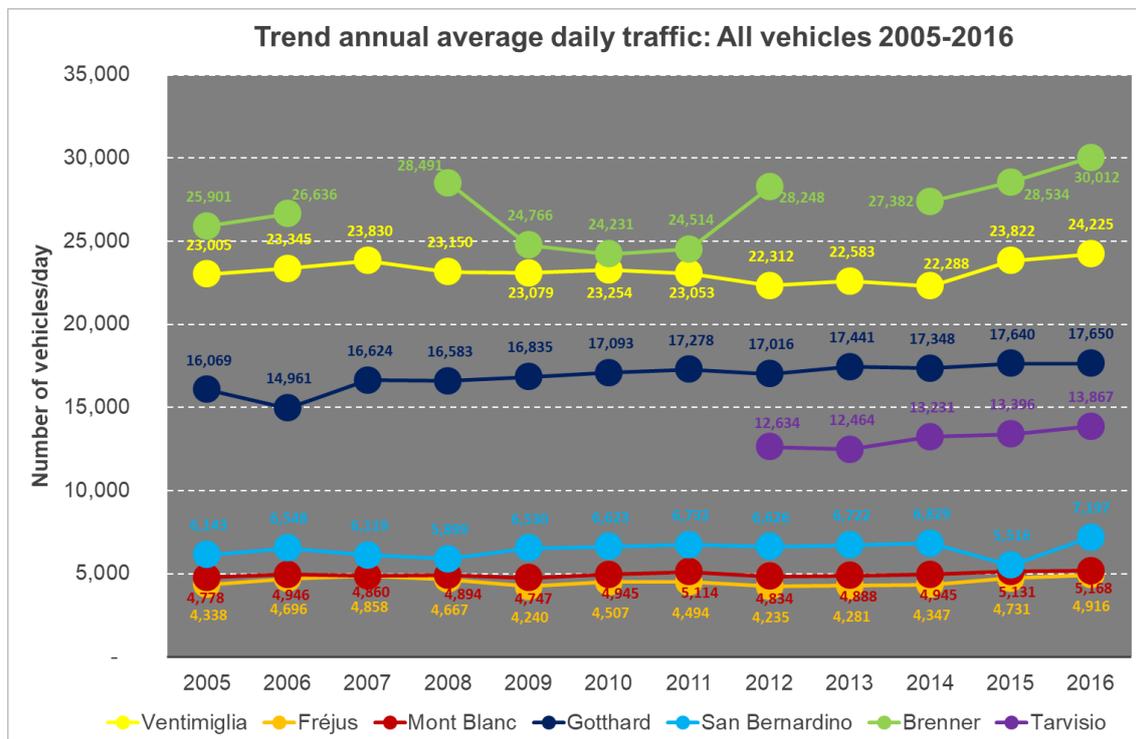


Figure 1: Annual average daily traffic: all vehicle categories.

For the Gotthard corridor, vehicle categories can be further differentiated. The share of the categories in 2016 is as follows: 78 % passenger cars and motorcycles, 9 % light commercial vehicles (LCV), 12 % heavy duty vehicles (HDV) and 1 % coaches. Since 2005, the share of HDVs decreased by 2 percent points, whereas LCV increased by 2 percent points. This is an expression of the shift from mean-size HDV to large HDV and LCV. At Brenner, a similar distinction cannot be provided. The share of HDVs in 2016 is similar to the values registered in 2005 (with a decrease by less than 1 %), whereas LCVs increase by 21 %.

As far as the **annual average daily traffic of heavy vehicles** is concerned (Figure 2), the highest values are registered at Brenner again, where in 2016 about 6,400 heavy vehicles per day were counted on average (+5.8 % in comparison to 2015). Ventimiglia and Tarvisio follow, with about 5,300 (+5.9 %) and 3,250 (+5.4 %) heavy vehicles per day. Along these three corridors, a constant increase has been registered since 2012. On the contrary, a negative trend can be observed at Gotthard, where the values decreased since 2010 by 15 % and reached a level in 2016 of 2,338 vehicles/day (-0.26 % compared to 2015). Finally, the values registered along Fréjus, Mont Blanc and San Bernardino are lower (between 2,000 and 575 vehicles/day). Restrictive measures and high toll prices on these four axes (see indicator toll prices) contribute to explain these results.

By analyzing the period 2005-2016, several distinct phases can be distinguished: between 2005 and 2007, the flow of heavy vehicles increased in all corridors. This development is followed by a decline until 2009, which reflects the impact of the international economic crisis. The year 2010 shows some recovery (except for Brenner), followed by another generalized decrease in 2011-2013. In the last three years, a new increase has been registered at Brenner, Tarvisio, Ventimiglia, and softly at Fréjus, Mt. Blanc. San Bernardino is more or less stable, whereas at Gotthard the

decrease continued. A comparison between values registered in 2005 and in 2016 reveals that three corridors present a ten-year negative trend: Fréjus (-15.5 %), Mont Blanc (-2.2 %) and Gotthard (-13.8 %); Brenner and Ventimiglia recovered the effects of the economic crisis (+0.6 % and +6.0 %); whereas, other corridors registered a higher increase (San Bernardino +14.3 %, Tarvisio +17.1 %, but in this case the comparison is made with 2012, due to the lack of previous data). The sum of heavy vehicles over all corridors (except Tarvisio) in 2016 was 2 % lower than the corresponding sum in 2005.

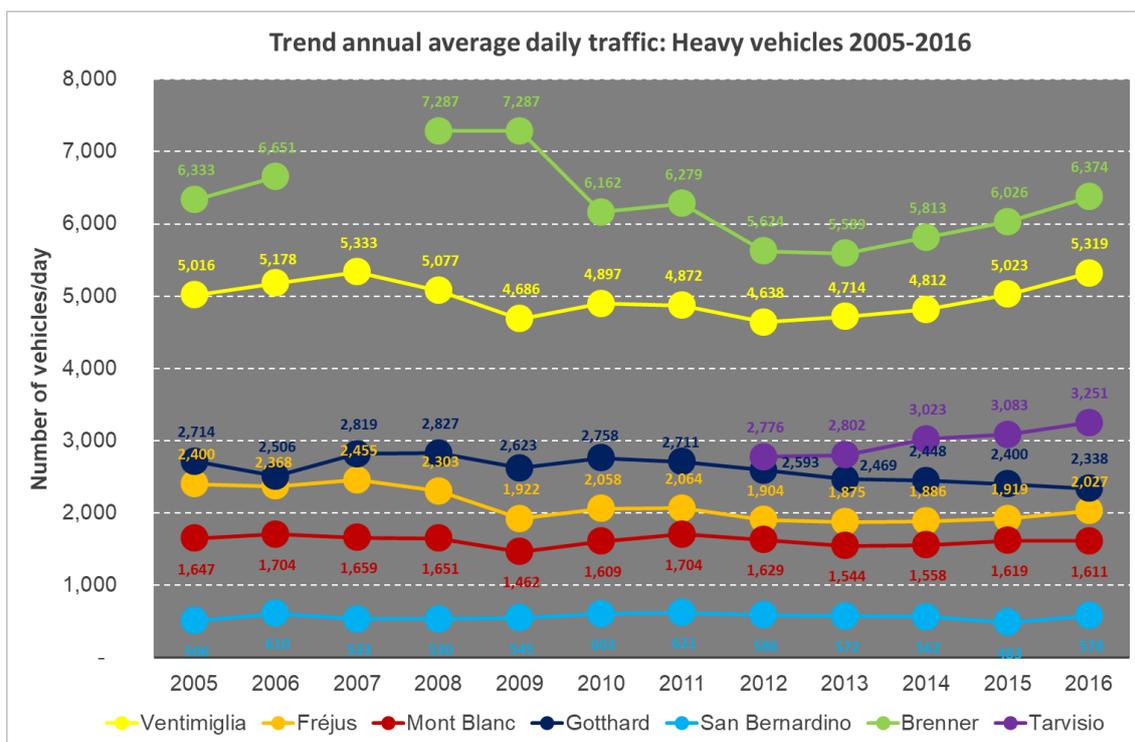


Figure 2: Annual average daily traffic: Heavy vehicles (including heavy duty vehicles and coaches).

The analysis of the **annual average daily traffic for light vehicles** (Figure 3) indicates the highest values again at Brenner, with 23,638 vehicles per day in 2016. Brenner is followed by Ventimiglia (18,905), Gotthard (15,311), Tarvisio (10,616) and San Bernardino (6,619), while the number of the transits between France and Italy along Mont Blanc and Fréjus is the lowest (3,558 and 2,889 vehicles per day). Compared to the year 2015, the most relevant annual growth is detected at San Bernardino (+1,600 vehicles, equal to an increase by +31.5 %), followed by Brenner (+1,100 light vehicles/day, +5.0 %). Lowest increases are registered along Gotthard (+0.5 %) and in Ventimiglia (+0.6 %).

The analysis of the development since the year 2005 depicts a moderate increase of light vehicles until 2009, followed by a general stabilization for the years 2010-2013 (not valid for the Brenner corridor, which registered a significant reduction of flows in 2010 and 2011). After this phase, a general increase is recognized for all corridors in 2014, 2015 (except for San Bernardino, for the reasons mentioned above) and 2016. By comparing the numbers of 2005 with those of 2016, a generalized increase of flows along all corridors is registered. The highest growth is detected at Fréjus (+49 %), followed by Brenner (+20.8 %) and the Swiss corridors of San Bernardino (+17.4 %) and Gotthard (+14.6 %). The sum of light vehicles over all corridors (except Tarvisio) in 2016 was 15 % higher than the corresponding sum in 2005. This observation is in contrast to the overall decrease of heavy vehicles in the same period.

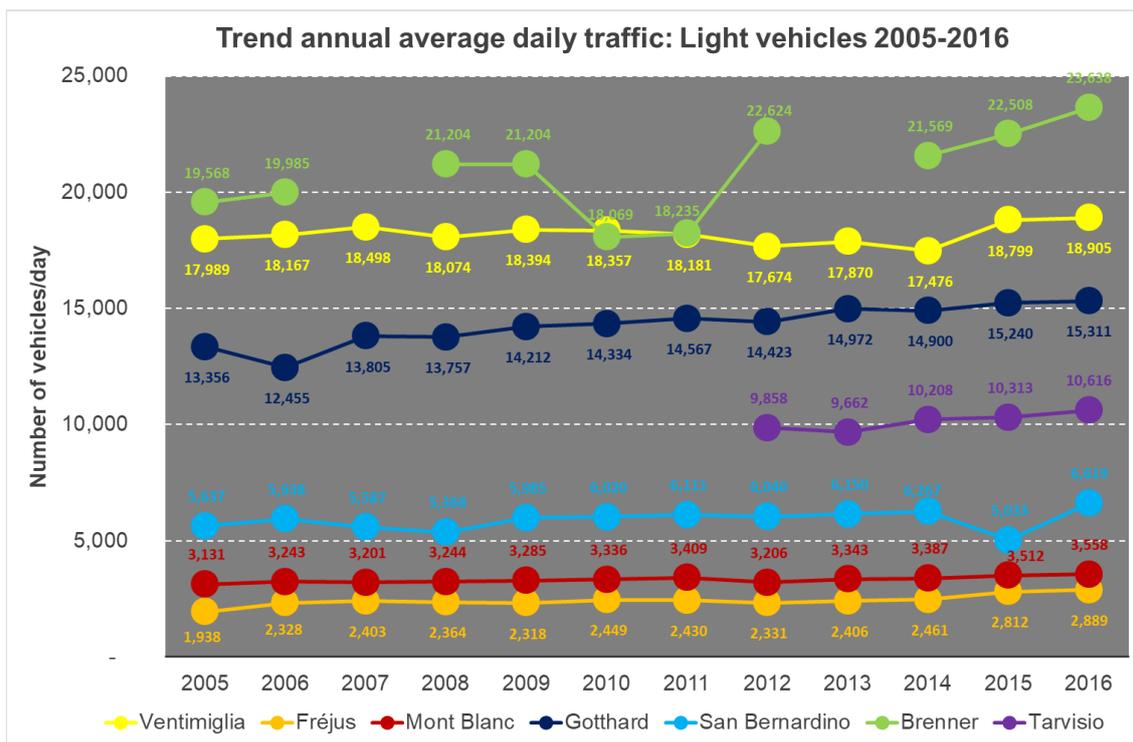


Figure 3: Annual average daily traffic: Light vehicles (including passenger cars, light commercial vehicles and motorcycles).

### Indicator Transalpine rail traffic flows

The analysis of the freight transported per year is affected by the difficulties in finding reliable and consistent data. However, thanks to the information provided by the Swiss Ministry of Transport, data for all corridors have been collected until 2016 (Alpinfo, 2017), see Figure 4, with the relevant exception of Tarvisio for the last two years.

Regarding the variation between 2015 and 2016, at Brenner an increase of the overall freight volumes from 43.7 megatons (Mt) to 46.9 Mt is detected; the increase involved both road (passing from 31.2 Mt to 33.5 Mt) and rail transport (from 12.6 Mt to 13.4 Mt). The trend at Gotthard is inverse: the overall transported tons have decreased, passing from 23.9 Mt in 2015 to 23.7 Mt in 2016. This reduction is due to the road component only (from 8.7 Mt to 8.4 Mt), while the rail transport is stable at 15.3 Mt. However, if the two other Alpine corridors in Switzerland (San Bernardino and Simplon) are taken into account, the sum of freight transport (road and rail) showed a growth from 38.5 Mt to 40.0 Mt (+4 %) from 2015 to 2016. This is mainly caused by a significant increase of rail transport over Simplon (from 11.7 to 13.4 Mt). Along the French-Italian corridors, the percentage of rail transport appears more limited. At Ventimiglia, it contributes for about 2 % of overall freight transport (0.3 Mt out of 19.7 Mt). Along Mont Blanc, no rail connection is available and goods are transported only by road (8.7 Mt). Finally, the percentage at Fréjus/Mont Cenis of rail is higher than other French-Italian corridors, where it contributes for about 22 % of the total (2.9 Mt out of 13.5 Mt). The freight transported over all corridors (except Tarvisio) increased in 2016 by 4.9 % compared to 2015. For road only the increase is 4.7 %, for rail only 5.3 %.

If 2016 is compared with 2005, the sum of freight transported on road and rail increased by 5.4 %, 1.1 % on the road and 14.6 % on the rail. The average share of rail (modal shift, see below) increased from 32 % to 35 %.

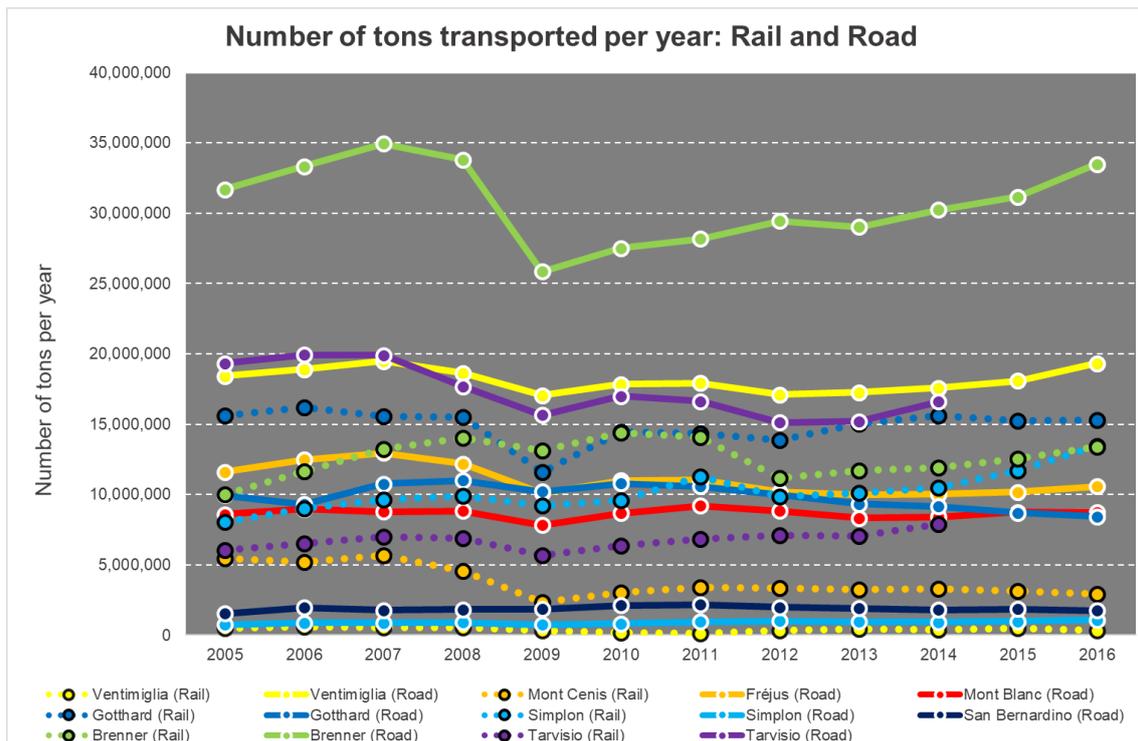


Figure 4: Transported tons per corridor

For the modal split, Simplon and Gotthard show the highest share of rail (Figure 5). Volumes at Gotthard increased in the period 2009-2014 and remained stable at 64 % in the years 2015-2016, while Simplon presented always values over 90 %, in 2016 it even reached a share of 93 %. On the other hand, along Brenner rail transport shows a decreasing trend since 2010, ending at 28 % in 2014. In 2015 a slight increase was visible (from 28 % to 29 %); this percentage is confirmed also for the year 2016. Referring to Fréjus/Mt. Cenis, data of the year 2016 (22 % rail, 78 % road) shows a further reduction of the rail component. Mont Blanc and San Bernardino do not have a transalpine rail connection, therefore 100 % of the freight is transported on the road. Finally, no data has been available for Tarvisio after the year 2014, when the percentage was at 32 % for rail.

When referring to the railway component, it is also possible to distinguish the type of service that is performed (Figure 6). Along the French-Italian corridors, conventional rail transport plays the major role. Along the Ventimiglia line, it constitutes 100 % of rail movements; along Mont Cenis, it counts for about 75 %, followed by unaccompanied combined transport (UCT, 23 %), while accompanied combined transport (ACT, with the service between Aiton and Orbassano) is limited to 2 %. The condition is different along the two Swiss corridors: UCT is the main component (58 % at Gotthard and 68 % at Simplon), followed by conventional transport (41 % at Gotthard and 19 % at Simplon). ACT is limited along Gotthard (1 %) and more developed at Simplon (19 %), mostly thanks to the RoLa service between Freiburg and Novara. Finally, along Italian-Austrian corridors different conditions are visible: along Brenner, UCT and ACT (connection Wörgl-Brennersee-Trento) contribute, respectively, for 55 % and 26 % of total rail transport, while conventional rail is the lowest mode (19 %). Finally, along Tarvisio the situation is inverse: conventional transport is the most frequent form of rail transport (59 %), followed by UCT and ACT (39 % and 3 %, with the connection Trieste-Salzburg).

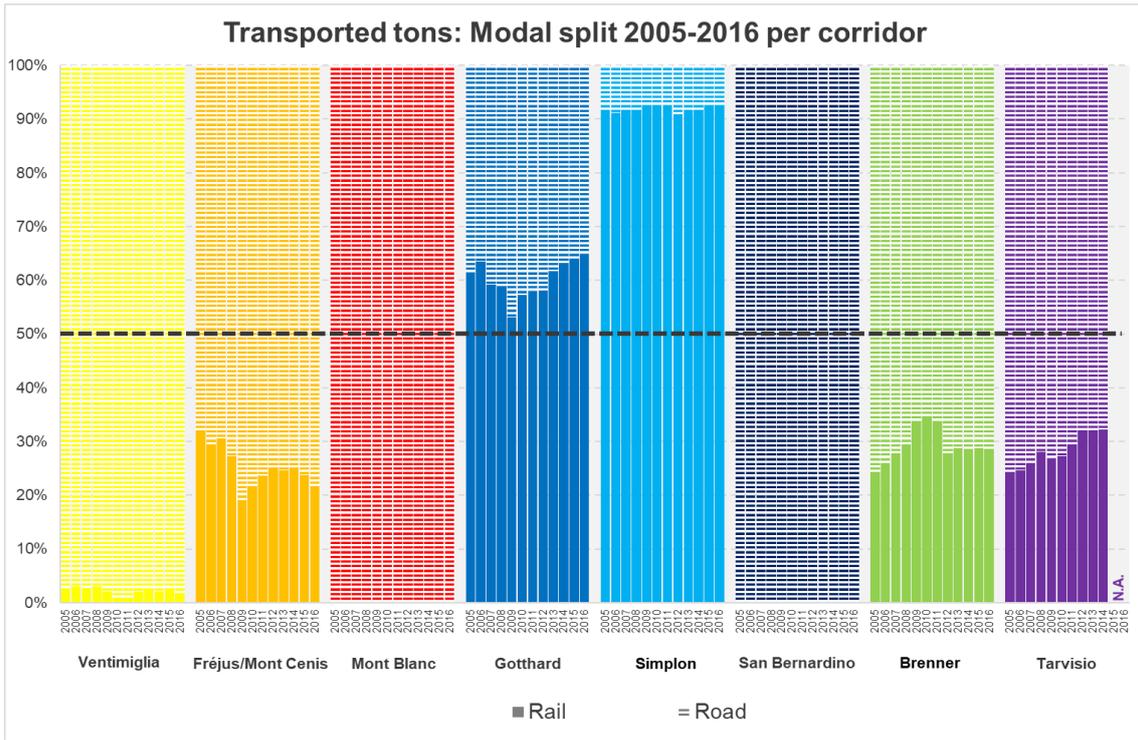


Figure 5: Transported tons, modal split per corridor.

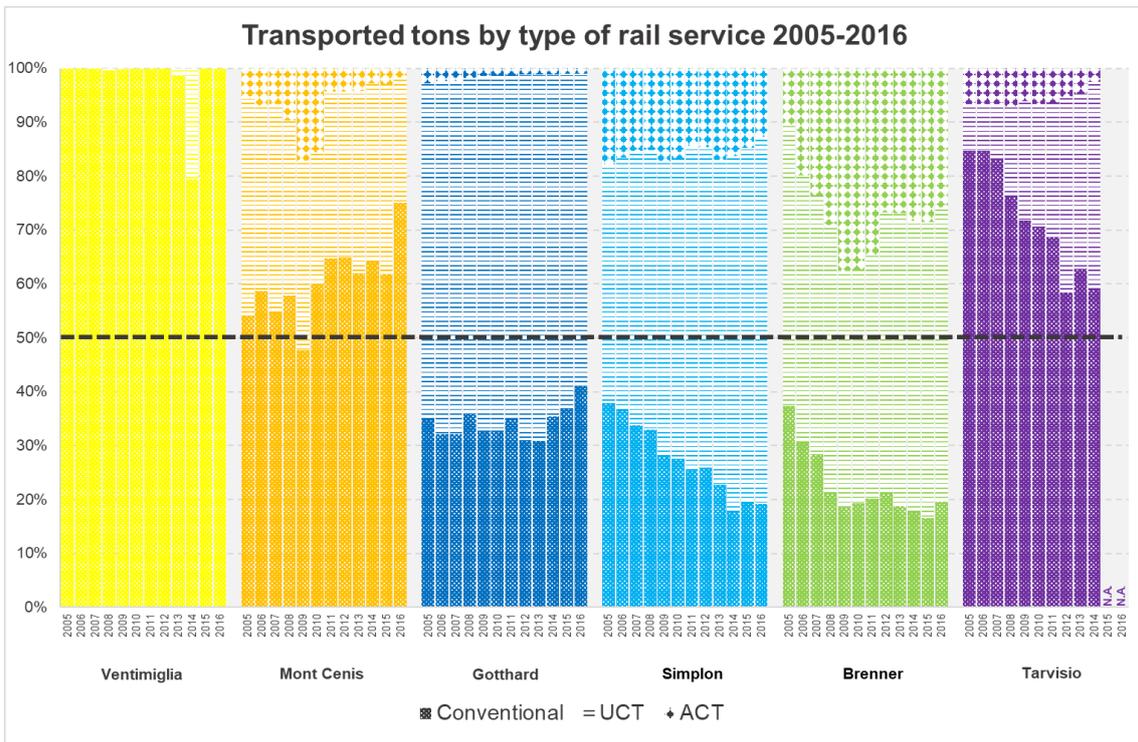


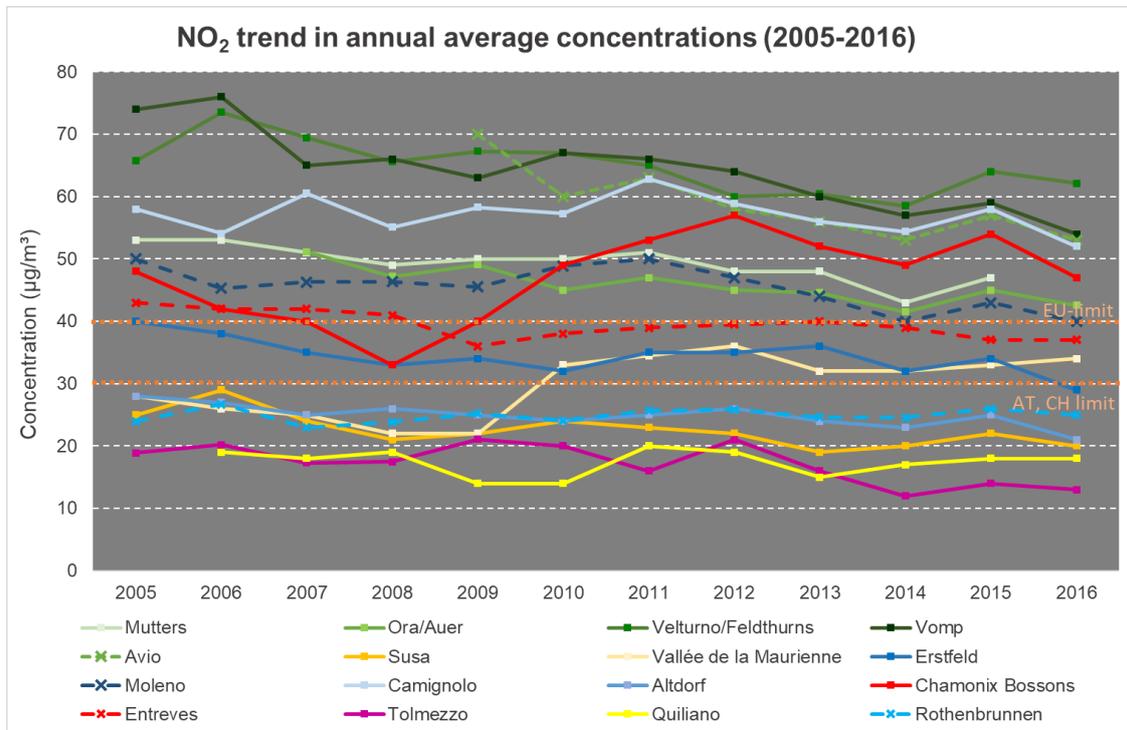
Figure 6: Transported tons by type of rail services (UCT: unaccompanied combined transport, ACT: accompanied combined transport).

**Indicator Air concentrations measured**

Figure 7 illustrates the trend in annual averages for **nitrogen dioxide (NO<sub>2</sub>)** concentrations between 2005 and 2016 near the corridor highways (NO<sub>2</sub> is mainly related to road transport, and particularly to diesel vehicles). In the long term, a general decrease of NO<sub>2</sub> concentrations registered in the period between 2005 and 2016. The trend results from a significant decrease of the NO<sub>x</sub> emission factors of all vehicle categories and a simultaneous slight increase in the traffic volume (the decrease dominates the development of the emissions and the ambient concentrations). Short term fluctuations as in 2006 and 2015 are due to heat waves in Europe during summer time. Along Mont Blanc, Brenner and Gotthard, this reduction is not sufficient to comply with the air quality standards (annual limit values) of Italy and France (40 µg/m<sup>3</sup>) and of Austria and Switzerland (30 µg/m<sup>3</sup>) respectively.

More in detail, the highest concentrations in 2016 are measured along Brenner (green color scale), Mont Blanc (red) and Gotthard (blue) corridors, while lower values are measured along Fréjus, Ventimiglia, San Bernardino and Tarvisio (orange, yellow, light blue and violet colors). The local values are strongly correlated to the road traffic volumes presented in Figure 1 to Figure 3, but are also influenced by the composition of vehicle fleet (share of vehicle categories, share of Euro classes), by the local topography and meteorology.

The annual average values of NO<sub>2</sub> exceed the annual limit value of 40 µg/m<sup>3</sup> for the French station of Chamonix-Bossons (Mont Blanc) and for all monitoring stations of the Brenner corridor: Mutters, Ora/Auer, Vomp, Avio and Velturmo/Feldthurns. With 62 µg/m<sup>3</sup>, Ora/Auer registered the highest values. Values are below the EU limit in Quiliano (Ventimiglia), Entrèves (Mont Blanc), Vallée de la Maurienne and Susa (Fréjus), and Tolmezzo (Tarvisio). Along the Gotthard axis, the stations of Moleno and Camignolo exceed the Swiss annual limit value of 30 µg/m<sup>3</sup>; whereas, Rothenbrunnen (San Bernardino) is below the limit value.



**Figure 7: Trends of annual average NO<sub>2</sub> concentrations<sup>6</sup>.**

<sup>6</sup> The value for the station Vallée de la Maurienne in 2011 represents the average 2010-2012; the value for Entreves in 2011 and 2012 represents the average 2010-2013.



As for NO<sub>2</sub>, the analysis of the **particulate matter (PM<sub>10</sub>)** concentration is restricted to the road-side stations (Figure 8). Similar to NO<sub>2</sub>, a general decrease is monitored over the period 2005-2016 including peaks in years with long winter-smog periods (local or regional inversions) happened in 2006, 2011, 2013 and 2015. The limit value for the annual average for France and Italy is 40 µg/m<sup>3</sup>, which is not exceeded at any station. The highest values in 2016 are registered at Quiliano (Ventimiglia) and Vallee de la Maurienne (Fréjus), with 21 µg/m<sup>3</sup>. The limit value of Austria and Switzerland (20 µg/m<sup>3</sup>) is not exceeded in any Austrian or Swiss station.

The long-term trend is again essentially influenced by steadily improving emission factors of diesel vehicles due to particle filter systems. Further reductions are also realized in industrial plants and heating systems. Note that about half of the PM<sub>10</sub>, ambient concentrations consists of secondary particle built from gaseous precursor emissions (NO<sub>x</sub>, SO<sub>2</sub>, NH<sub>3</sub>, VOC). The reductions of these emissions contribute to the declining trend of PM<sub>10</sub> concentrations on a larger spatial scale (the transformation from gas to particulate phase takes hours). Therefore, the fluctuations identified in Figure 8 may not only be explained by the development of the local road transport emissions.

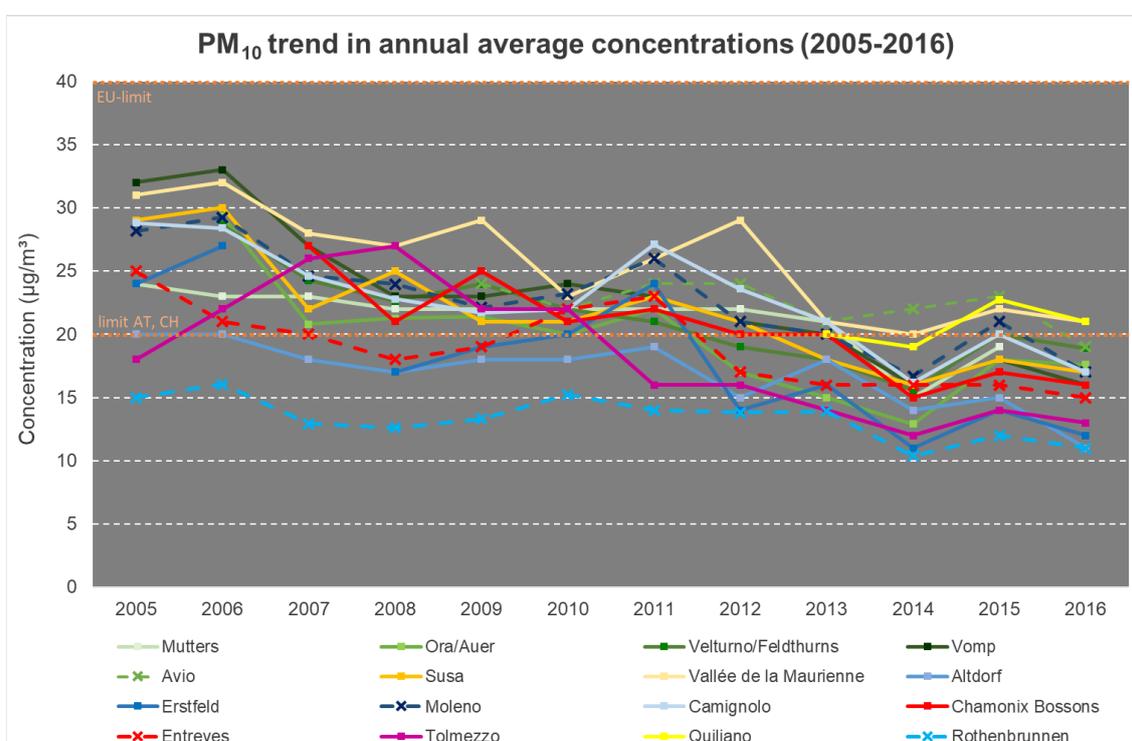


Figure 8: Trends of annual average PM<sub>10</sub> concentrations<sup>7</sup>.

### Indicator noise

Noise is measured by the indicators L<sub>den</sub> and L<sub>night</sub>. The former defines the overall level registered during the day, evening and night and is used to describe the annoyance caused by exposure to noise. The latter is the indicator for the sound level during the night and it is used to describe sleep disturbance. A comparison between the values registered in different corridors is normally

<sup>7</sup> The value for Vallée de la Maurienne in 2011 represents the average of the years 2010 and 2012.

not adequate, because the distance of the microphones to the streets is not homogeneous. However, the variations along the individual corridors are consistent throughout the years.

Gotthard and Mont Blanc are the only corridors with continuous data collection for the period 2005-2015 (measuring stations of Camignolo, Reiden and Courmayeur), whereas noise is not monitored along Brenner and Ventimiglia. Only partial data is available along the Tarvisio (Camporosso), San Bernardino (Rothenbrunnen) and Fréjus corridors (Bardonecchia). Regarding the first two stations, data collection started, respectively, in 2011 and 2012, and is currently ongoing; in Bardonecchia measurements started in 2011 and finished in 2014.

Figure 9 show that  $L_{den}$  lies in the range between the 80.2 dB(A) (Reiden) and 70.7 dB(A) (Camporosso) while  $L_{night}$ , (Figure 10), lies between the 72.7 dB(A) (Reiden) and 63.6 dB(A) (Rothenbrunnen). Increasing noise levels are recognized at Reiden and Camignolo for  $L_{den}$  and  $L_{night}$ , whereas reductions were measured at Camporosso. In 2016,  $L_{den}$  and  $L_{night}$  in Camignolo started to increase again, after some years of decreasing values, which resulted from the installation of a new noise-reductive paving. Such kind of paving was also installed in Rothenbrunnen.

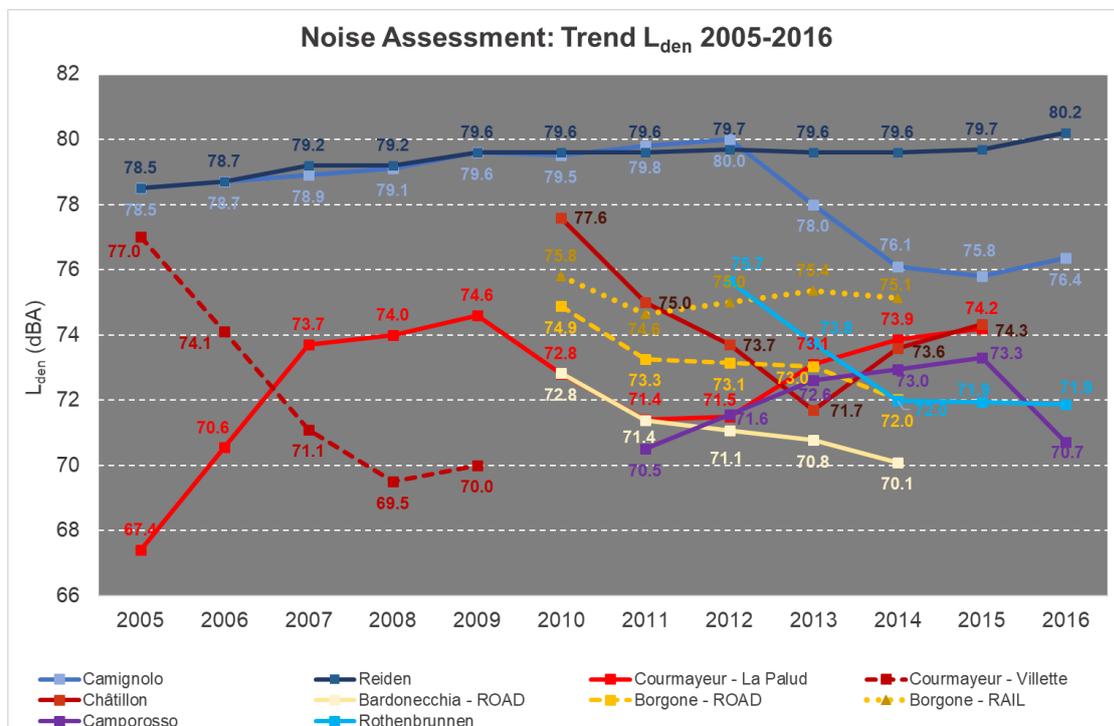


Figure 9: Trend of annual average  $L_{den}$  measurement<sup>8</sup>.

<sup>8</sup> Data for Courmayeur – La Palud (year 2006), Bardonecchia and Camporosso (year 2012) is not available. The average value between the previous and the following year has been considered.

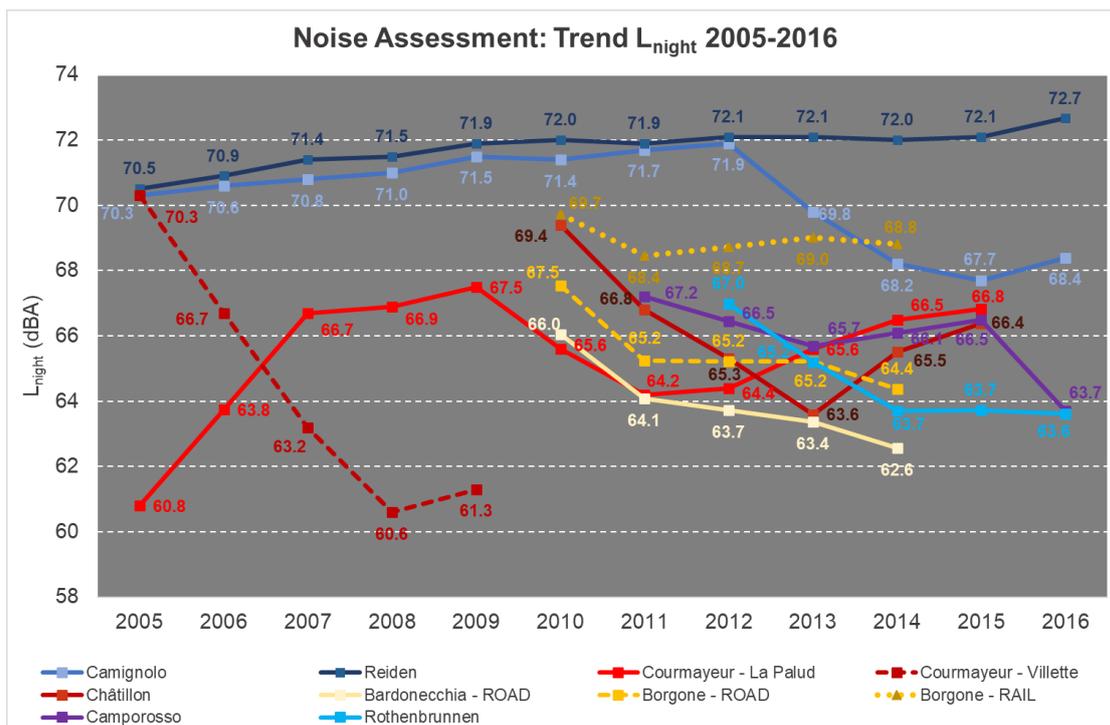


Figure 10: Trend of annual average  $L_{night}$  measurement<sup>9</sup>.

### Indicator Toll prices

Toll prices are calculated as costs for driving definite distances between the entering and exiting toll stations of localities along the transalpine axis. The toll stations are chosen for relevant nodes of the infrastructural network. Compared to the previous annual reports, origins and destinations have been redefined as follows, in order to have more homogeneous distances:

- Ventimiglia: from Marseilles (FR) to Genoa (IT) via Ventimiglia (381 km)
- Fréjus: from Lyon (FR) to Turin (IT) via Fréjus road tunnel (298 km)
- Mont Blanc: from Bellegarde-sur-Valserine (FR) to Ivrea (IT) via Mont Blanc road tunnel (228 km)
- Simplon: from Brig (CH) to Gravellona Toce (IT), via Simplon pass (99 km)
- Gotthard: from Basle (CH) to Chiasso (CH) via Gotthard road tunnel (288 km)
- San Bernardino: from Chur (CH) to Chiasso (CH) via San Bernardino road tunnel (170 km)
- Brenner: from Kufstein (AT) to Verona (IT) via Brenner pass (333 km)
- Tarvisio: from Salzburg (AT) to Udine Nord (IT) via Villach (313 km)

The assessment is performed for the passage of a standard passenger car and three standard heavy duty vehicles of 5 axles and 40 t, with distinction between EURO-classes II, V and VI. The sums for the single alpine passages for the year 2017 are visualized in Figure 11. The prices refer to the prices for a single passage. This holds for the Fréjus and Mont Blanc tunnels, the Austrian highway vignette and the separate Brenner highway toll on the A13 in Austria as well as for the Swiss highway toll (for passenger cars). For these corridors return tickets and yearly subscriptions are also available, which would lower the overall cost for a single passage. For Switzerland only a yearly ticket is available, meaning that only the first passage costs € 34.96, while all subsequent passages within the same year are free.

<sup>9</sup> Data for Courmayeur – La Palud (year 2006), Bardonecchia and Camporosso (year 2012) is not available. The average value between the previous and the following year has been considered.

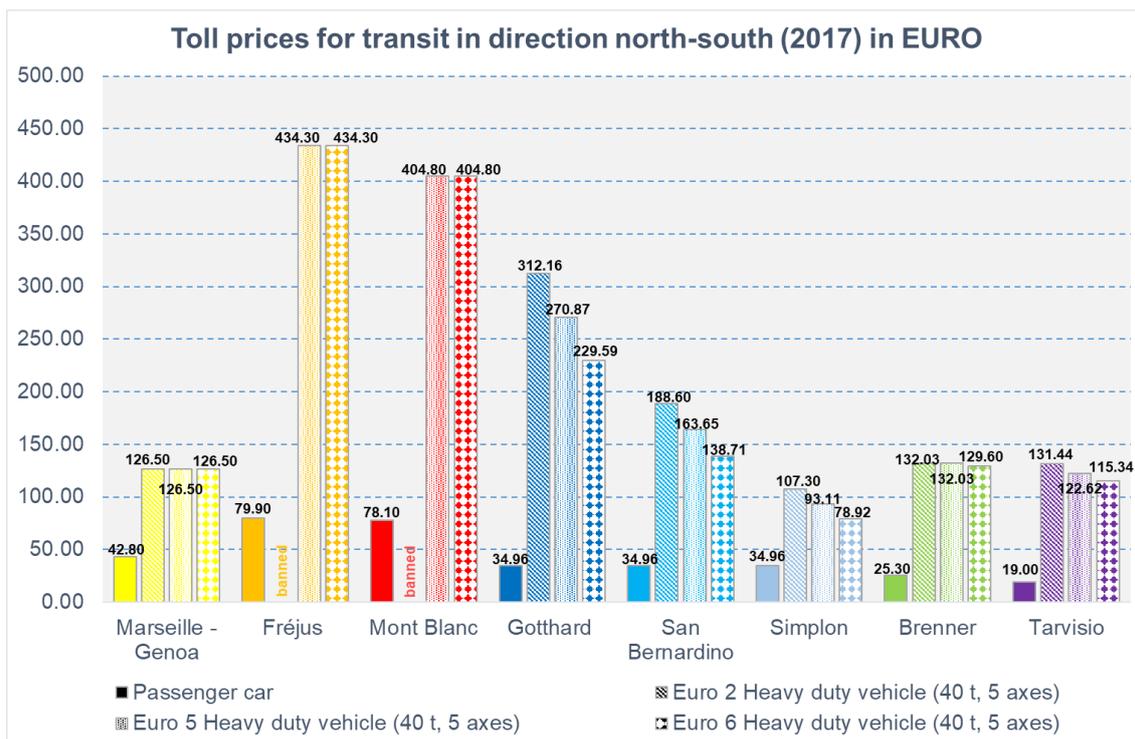


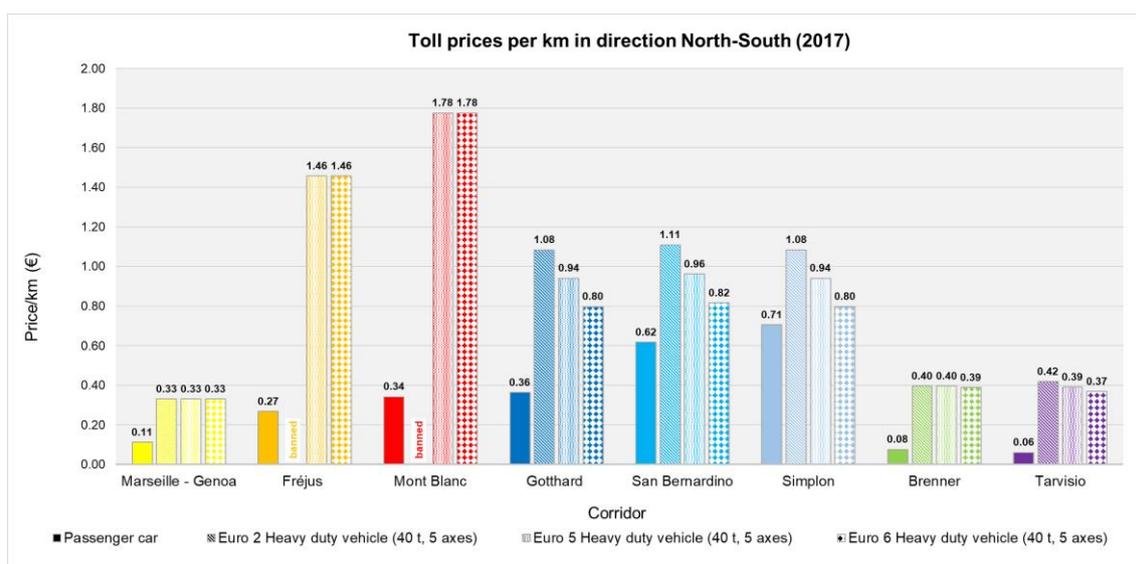
Figure 11: Toll Prices for a single transit on the iMONITRAF! corridors in direction North-South.

For **passenger cars** the highest charges are applied for the Fréjus and Mont Blanc corridors. Here, apart from the highway tolls, the additional tunnel tolls are responsible for the high overall sum compared to the other corridors. It is also important to point out that the tunnel tolls on the Fréjus and the Mont Blanc differ according to the direction of travel, due to the different VAT applied: they are higher when travelling from Italy to France (€ 44.20 instead of € 43.50 for both Fréjus and Mont Blanc). With € 34.96, the charges for the Swiss highways are in the midrange of the corridors, while the cost for a passage on Brenner and Tarvisio are the lowest (€ 25.30 and € 19.00).

For **heavy duty vehicles**, road tolls follow the similar West-East-divide as for passenger cars. Fréjus and Mont Blanc charge the highest tolls, while Gotthard and San Bernardino charge medium-ranged sums. Leaving aside Simplon (whose distance is noticeably shorter compared to other corridors), Ventimiglia, Tarvisio and Brenner charge the lowest tolls for a passage. Worthy to be mentioned, the Italian toll system has not yet applied a distinction of charges between single emission classes. For instance, the toll of the Italian part of the Brenner corridor (from Brenner to Verona) is € 39.70 for each EURO class. On the contrary, the Austrian system (from Kufstein to Brenner) introduces differences to the tolls according to the EURO classes (€ 92.33 for EURO II and V HDVs, € 89.90 for a EURO VI HDV), which explains the slight difference visible in Figure 11. The biggest difference among Euro classes is visible at Mont Blanc and at Fréjus, where EURO II vehicles are not allowed any more to circulate. A further analogy with the situation of passenger cars is that the tunnel tolls on Fréjus and Mont Blanc differ according to the direction of travel for heavy duty vehicles: due to the different VAT, the charge is higher when travelling from Italy to France (€ 322.50 compared to € 317.50 for a EURO V or EURO VI truck). Finally, along the Swiss corridors, a EURO V truck pays about 87 % of the charge of a EURO II vehicle. This percentage further lowers to 74 % when we compare EURO VI and EURO II trucks.

This analysis shows the absolute costs of selected trips. For freight forwarders, the specific costs – meant as costs per vehicle kilometer – is another important criterion for choosing the most

convenient corridor and transport mode. To this aim, Figure 12 shows the specific costs by dividing the costs presented in Figure 11 by the number of kilometers for each corridor, as expressed at the beginning of this section. The order of corridors from highest to lowest costs remains similar as for the absolute costs: if we consider a heavy vehicle with EURO VI technology and 40 tons, specific toll prices are the highest at Fréjus and at Mont Blanc (€ 1.78/veh-km and € 1.46/veh-km). They lie in the mid-range for Swiss corridors (€ 0.80/veh-km at Gotthard and Simplon, € 0.82/veh-km at San Bernardino) and are the lowest at Brenner (€ 0.39/veh-km), Tarvisio (€ 0.37/veh-km) and Ventimiglia (€ 0.33/veh-km).



**Figure 12: Specific toll Prices (€/km) for a transit on the iMONITRAF! corridors in direction North-South.**

A general feature of absolute and relative costs is that high tolls correlate with low traffic volumes and vice versa: recalling Figure 1 and Figure 11, the Fréjus and the Mont Blanc have high tolls and low traffic volumes, while Brenner, Ventimiglia and Tarvisio have lower costs and higher traffic volumes.

### **Indicator fuel price**

This indicator monitors the average prices of diesel and petrol at the national level in Austria, France, Italy and Switzerland. The values shown in Figure 13 are the annual averages of the values officially registered in every country on four different dates (namely, on the 15<sup>th</sup> of January, May, July and October). Data is provided by ÖAMTC for Austria, the Federal Statistical Office for Switzerland, ISTAT for Italy and INSEE for France.

In comparison to 2005, an overall increase of prices happened in all countries, but with a significant fluctuation during the economic crises of 2008 and 2009. From 2009 onwards, there has been a strong increasing trend until 2012, followed by a decrease in all countries for the years 2013-2016. The decrease is particularly relevant in the last year (2014-2016) for Italy, France and Austria. It is caused by the dramatic decrease of the price of crude oil. In Switzerland the decrease seems less marked (diesel) or even in countertrends (petrol). However, this result has to be interpreted carefully by considering the currency selected for our analysis (€) and the financial policies adopted by the Swiss National Bank, which in January 2015 decided to discontinue the minimum exchange rate of CHF 1.20 per EUR and to lower the interest rate. If the costs of petrol

and diesel in Switzerland were expressed in CHF, a trend would result, which is similar to those registered in other countries and about 15 % lower than in 2014. Finally, after four years of decreasing prices, 2017 shows a generalized growth, which has led to the level of the year 2015.

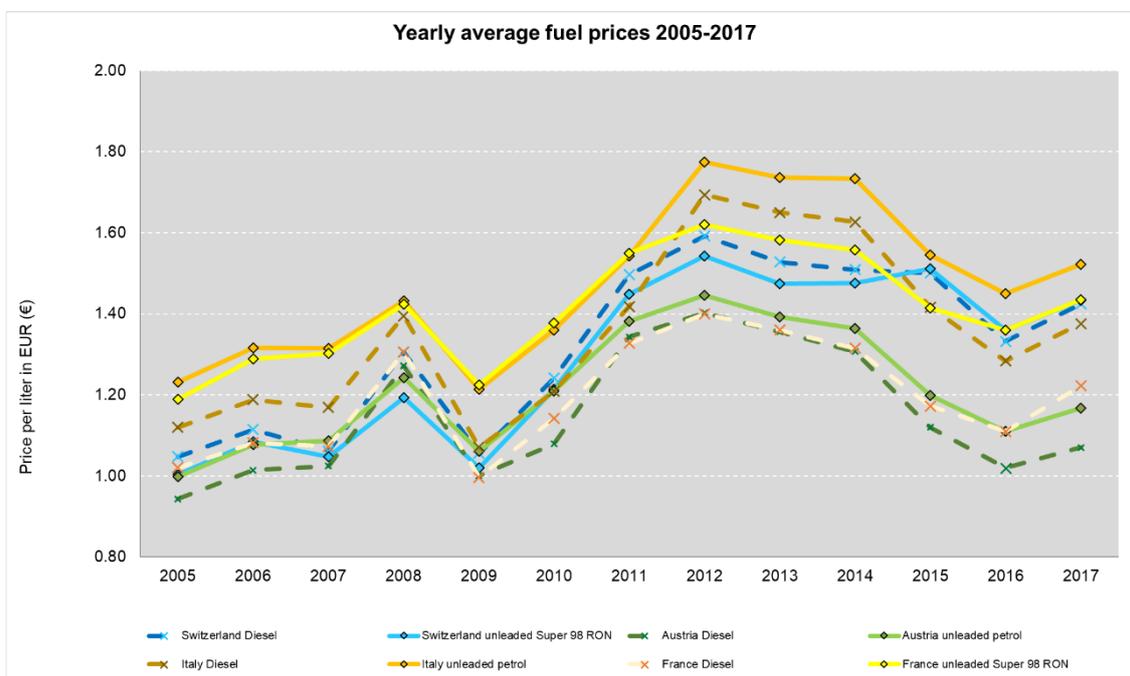


Figure 13: Annual average fuel prices.

## 5 Moving ahead on regional and national level: Update on Best Practices

iMONITRAF! partners and observers have provided information on developments in transport policy in their respective region and country for 2017 in order to update the collection of Best Practices. The Best Practice collection reflects the remaining challenges related to transalpine freight transport: as air quality limits are still exceeded in several regions (see chapter 4), additional measures had to be implemented, some of them with rather high impacts for transport operations. In addition to the further improvement of modal shift policies (pillar 3), the year 2017 saw many adjustments or additional implementations of regulatory measures with the aim to limit negative environmental impacts (pillar 2). The overview on the set of measures on the Brenner corridor (regions Tyrol, South Tyrol and Trentino) show the increased awareness on coordinated approaches, especially regarding an effective modal shift policy. Also, some measures related to passenger transport were reported in 2017, with a focus not only on the further development of public transport but also on the support of electric mobility. In addition, several innovative approaches have emerged from the intensified cooperation and networking in the Alpine Space.

OVERVIEW: BEST PRACTICE UPDATE 2017

Policy Pillar	Name of measure	Country/region
<b>Pillar 1: Monitoring, Information &amp; aware- ness raising</b>	Installation of Infopoint to better inform stakeholders and citizens about the construction of the Brenner Base Tunnel and related infrastructure projects.	Autonomous Province of Trento
<b>Pillar 2: Limiting negative im- pacts of Al- pine transport</b>	Test-phase on speed limits within LIFE project "BrennerLEC"	Autonomous Province of Trento and Autonomous Province of Bolzano
	Establishment of noise barriers along the Brenner railway line	Autonomous Province of Trento and Autonomous Province of Bolzano
	Intensification of freight transport controls	Switzerland
	Block admission system for HGV	Tyrol
	Dynamic adjustment of driving bans	Tyrol
<b>Pillar 3: Modal Shift</b>	<b>Modal shift policy mix</b>	
	Implementation of combined transport subsidy system for combined transport	Autonomous Province of Trento, Autonomous Province of Bolzano
	Revision of concession contract for A22 motorway (Brenner), including considerations to charge external costs	Autonomous Province of Trento, Autonomous Province of Bolzano
	Launch of study to analyse the implementation of the Eurovignette on the Brenner motorway A22	Autonomous Province of Bolzano
	Continuation of subsidies for accompanied CT and ROLA (rolling motorways)	Switzerland
	<b>Infrastructure</b>	
	Agreement between RFI and Interporto of Trento to improve infrastructures for combined transport	Autonomous Province of Trento
	Continuation of Switzerland's financial contribution to investments for terminals of combined transport in Italy, Switzerland, Germany, Belgium	Switzerland
<b>Pillar 4: Passenger transport</b>	Further development of public transport infrastructures and services	Autonomous Province of Bolzano
	New cross-border tickets for Ticino and Lombardia	Canton of Ticino
	Federal Councils report 2017 to substantiate STEP 2035 (national programme to extend rail capacities in Switzerland): regional projects to extend passenger (and freight) capacities in Switzerland's Alpine regions	Switzerland
	Introduction of EuregioFamilyPass	European Region Tyrol-South Tyrol-Trentino
	Launch of EUSALP project "CrossBorder"	Tyrol as EUSALP AG4 Lead with other partners
	Reform of public transport tariff system	Tyrol

## OVERVIEW: BEST PRACTICE UPDATE 2017

	Subsidy system for purchase of electric cars	Autonomous Province of Bolzano, Autonomous Province of Trento
	Improvement of infrastructures for electric cars	Autonomous Province of Bolzano, Autonomous Province of Trento
<b>Pillar 5: Innovative approaches</b>	Further improvement of cooperation along Brenner corridor	
	Project proposal STRIPE to develop multimodal information platform for passenger transport	Tyrol as EUSALP AG4 Lead as project initiator, STA Struttore Trasporto Alto Adige Spa as Lead Partner, EGTC as partner in project consortium
	Participation of iMONITRAF! in AlpinnoCT project	iMONITRAF! network and several partners are involved as observers

*Table 1: Source: Compilation of the iMONITRAF! network*

## 5.1 Overview on revised and new Best Practices

### 5.1.1 Pillar 1: Information, monitoring, awareness raising

Overall, monitoring campaigns are continued as in previous years and as summarized by the iMONITRAF! monitoring activities (see chapter 4).

In addition, few specific measures on information, monitoring and awareness raising were reported by the iMONITRAF! partners. This is due to the fact that some measures are streamlined in the frame of EUSALP, especially regarding information and awareness raising. The relevant activities are highlighted in chapter 3.

A specific information measure has been implemented by the autonomous Province of **Trento**. In the context of the **Observatory for the development of the Brenner Base Tunnel** and the connected infrastructure corridor of Trento, an **Infopoint** is under construction with the aim to better inform the institutions and citizens. For this purpose, an agreement has been approved between the Province and the Observatory of Fortezza. The main objective of the observatory is to inform about the construction of the Brenner Base Tunnel, mainly about the development of the projects of the access routes in Trentino, their challenges and perspectives inside the wider project of the corridor.

### 5.1.2 Pillar 2: Limiting impacts of Alpine transport

Pillar 2 includes command-and-control measures to limit negative impacts of transalpine freight transport as well as accompanying measures for modal shift. Especially along the Brenner corridor, the increasing pressure with respect to road transit traffic and its environmental impacts has led to the implementation of further regulatory measures in 2017 and to a further optimization and coordination of the overall instrument mix.

Due to cheap tolls for heavy goods vehicle (HGV) on the Brenner corridor and cheap fuel prices in Austria (“fuel tourism”) congestion levels caused in particular by road freight transport remains high on motorways in Tyrol. The situation is aggravated during peak travelling times around public holidays when road traffic caused by tourism is particularly high and when the temporary driving ban for HGV (on weekends and public holidays) is lifted. The congestion caused by these elevated traffic numbers on certain days mean that the supply of the local population and traffic safety is no longer guaranteed. Thus, drastic measures to control the number of HGV have been taken by the regional government of **Tyrol**, with **block admission systems** imposed on certain days. A cap of max. 300 HGVs per hour to pass the checkpoint on the A12 motorway in Kufstein-Nord in the direction of Innsbruck is imposed. The first block admission for HGV was imposed on 4 October 2017. Following dates were 27 October, 2 November, 7 December 2017 and 8 January 2018. Further dates are foreseen in 2018. A long term objective remains the reduction of transit traffic on road with a shift to transporting goods on rail which shall lead to less congestion on the motorways and improvements in air quality.

To reduce environmental impacts of transalpine freight transport, the region of **Tyrol** has also adjusted its set of regulatory measures throughout 2017. In the frame of the **sectoral driving ban**, the exemption for EURO V HGV was stopped at the end of April 2017, so that exemptions now only remain for EURO VI with the obligation to provide specific verifications of the vehicle emissions standard. Also, the **overall ban of high-emitting HGV** has been adjusted at the end of 2017, from 2018 onwards HGV of EURO class III will also be banned from specific stretches on the A12 Lower Inn Valley motorway.

In order to improve air quality along the Brenner corridor, the **autonomous Province of Bolzano** as well as the **autonomous Province of Trento** with their two Environmental Protection Agencies have taken further implementation steps in the LIFE European project “**Brenner LEC - Brenner Lower Emissions Corridor**”, especially regarding the implementation of speed limits. During the months of February, March and April the first field test of Brenner LEC covered the stretch between Trento South – Rovereto South in direction south, and has been performed in some days with heavy traffic with the aim of relieving traffic congestion along this highway stretch. During these first test session, the speed limit applied to light vehicles has been decreased from 130 km/h to 110 km/h. Similar pilot activities were repeated during the summer time, in particular during the week-ends in which the transit tourist flows are maximum. During the days with heaviest traffic, the speed limits is been further reduced down to 90 km/h and in some limited cases the emergency lane is been temporarily used as additional transit lane. Further test sessions will be used to adjust the second test phase which will start in March 2018. The second field test of Brenner LEC covers the stretch between Egna / Ora and S.Michele in both directions. The first tests have tried to decrease the normal speed limits first to 110 km/h and then up to 100 km/h. The reduction of speed limits is functional to the assessment of the air quality conditions near the highway. In this field stretch, in the period between May 2017 and April 2018 the speed limit of 100 km/h will be dynamically alternated with the conventional speed limit of 130 km/h as a function of a pre-defined calendar which will be however updated underway as a function of the first empirical tests obtained. The objective is to obtain data for a number of hours that is statistically sufficient during an entire solar year. The results obtained in this first pilot phase will be used to better organize the following pilot activities, and above to start understanding how to manage the dynamic activation of the speed limits as a function of the current and predicted air quality conditions.

As mentioned in the last Annual Report, the **Autonomous Provinces of Bolzano and Trento** have also agreed to further develop **noise barriers** along the Brenner railway line. In 2017, first projects related to the municipalities of Bressanone (BZ) and Isera (TN) have been taken forward and call of tenders for their construction have been published in autumn 2017.

In **Switzerland**, the **controls of freight transport** on the road were intensified in 2017. Illegal manipulations on the emission control devices of HDV to save money but to take higher air pollutant emissions into account have been detected (not only in Switzerland but also in the neighbouring countries) and lead to technically adequate and more frequent controls. More than 100,000 working hours were carried out for the intensification in Switzerland.

### 5.1.3 Pillar 3: Modal shift

Pillar 3 focuses on modal shift measures, including both push and pull measures. It includes policy measures related to modal shift, with a special focus on developments related to the common measures of the iMONITRAF! strategy as well as infrastructure measures.

#### Policy measures

As described in the last Annual Report of iMONITRAF!, the **autonomous Province of Bolzano** and the **autonomous Province of Trento** have the objective to implement a **subsidy system for combined transport** so that financial incentives are extended beyond the existing system on the Tyrolean part of the Brenner corridor. The autonomous Province of Trento has been able to implement its financing system in 2017. In fact, after the examination and authorization of the European Commission of the aid scheme, the autonomous Province of Trento has approved the criteria and methods for granting state aids to combined transport (ROLA), with a first availability of 600.000,- EUR in the years 2017, 2018, 2019. For the system of the autonomous Province of Bolzano, a final approval from the European Commission is still necessary and the system is foreseen to start in 2018. Aids will be provided to multimodal transport operators and railway companies that conduct freight services on rail in the provincial territory. The aids are pointed to the development of provincial CT. They are related to the rail freight services and to the building, the management, the adjustment or the extension of railway infrastructures and/or of intermodal terminals. Different aids are provided for the Brenner - Salorno railway line or vice versa according to the different type of service (both accompanied and unaccompanied Combined Transport).

Regarding push measures, the **Autonomous Province of Bolzano** has taken further steps to improve financial incentives for modal shift. A close cooperation between the regional Office for transport and environment and the management company of the Brenner motorway A22 has been established, including a joint **study to analyse the introduction of the Eurovignette** on the Brenner motorway.

This study will also be relevant for the **new concession contract for the Brenner motorway** which will be signed presumably in early 2018. The **Autonomous Provinces of Bolzano and Trento**, the Trentino/Alto Adige region and the provinces of Mantua, Verona and Modena have applied to manage the A22 Brenner motorway for the next 30 years. The concession contract includes information on revenue use: thanks to the available tolls, important modal shift projects for the Alpine area can be funded (for example BBT and its related infrastructures, the RoLa motorway, the intermodal terminal of Trento, the installation of noise barriers and the Bolzano bypass).

In **Switzerland**, the financial **support of accompanied combined transport and rolling motorway** (ROLA) continued also in 2017. However, the compensation rates have been reduced between 10 % and 15 % compared to former years. For instance, unaccompanied freight transports from Belgium and northern Germany received € 1,650 per train in 2017 and € 1,840 in 2016 (- 10 %). The sum of payments was 150 Mio. CHF (ca. 130 Mio. EUR) in 2017.

Switzerland continued in 2017 its **financial contribution to the investments for extensions of terminals for combined transport** (e.g. Melzo/Italy, Singen/Germany, Antwerp/Belgium). The total payment in 2017 summed up to 37 Mio. CHF (32 Mio. EUR). The support will continued in the next years.

Several **toll levels** have been adjusted with effect of 2017. In Austria, a new toll system has been introduced at the beginning of 2017 with a differentiation between infrastructure and external costs (for further information and impacts see Annual Report 2016). For the Brenner, this new toll system lead to increasing tolls for EURO VI HGV but will at the same time reduce costs for older HGV (especially EURO 0-III).<sup>10</sup> Overall, the differentiation of tolls and thus incentives for the modernization of the vehicle fleet are reduced under this new toll system. In Switzerland, the rates of the LSVAs have also been adjusted at the beginning of 2017, with a focus on adjusting the categories of charges: Euro classes III, IV and V are shifted into higher charge categories and the special discount for EURO VI as well as for vehicles with additional particle filters is discontinued (for further information see chapter 4 , section on indicator “toll prices”).

### Infrastructure measures

Construction works have continued for both the Brenner and Lyon-Turin base tunnels. For the **Lyon-Turin Base Tunnel** which is jointly developed by France and Italy, complementary works are currently in progress for the achievement of the infrastructure: three access tunnels are already completed in France, for an overall length of 9 km. In Italy, the Maddalena survey gallery (Chiomonte, Susa Valley) has been completed in February 2017. Another survey gallery is currently being built down the Saint-Martin-La-Porte access tunnel, where in summer 2016 an 11,21 m diameter Tunnel Boring Machine (TBM) started the excavation. The machine will excavate 9 km in order to study the geology of one of the most complex section of the Mont Cenis base tunnel, but already at the diameter and on the axis of the base tunnel. To make full use of the innovation potential of the tunnel, a partnership between the Politecnico Torino and the tunnel construction company TELT (Tunnel Euralpin Lyon-Turin) has been established in December 2017.

For the **Brenner Base Tunnel**, the breakthrough of the eastern connecting tunnel took place below the town of Lans (south of Innsbruck) in May 2017. Excavation is now complete on the first of the connecting tunnels that link the Innsbruck railway bypass with the Brenner Base Tunnel. The second connecting tunnel was excavated in summer 2017. The two connecting tunnels link the Innsbruck railway bypass, which has been operational since 1994, with the two main tunnels of the Brenner Base Tunnel. So far, about 66 km have been driven of the entire Brenner Base Tunnel project, thus close to 30 % of all the excavation work which needs to be done.

The shift from road to rail not only requires the development of further rail capacities but also requires additional high-quality terminal infrastructures. Recognizing some bottlenecks on the southern side of the Brenner corridor, an agreement was signed between the relevant terminal operator in Trento (Interporto of Trento) and the national railway operator RFI to improve the existing combined transport infrastructures in the autonomous Province of Trento.

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<sup>10</sup> This is due to the fact that external cost charges will not be applied on the Brenner motorway as this section is already charged through the mark-up factor and an overlap is not possible according to the Eurovignette Directive.

#### 5.1.4 Pillar 4: Passenger transport

With respect to passenger transport, all iMONITRAF! regions have taken further steps to improve public transport infrastructures and services but also to support the decarbonization of passenger cars (especially with respect to electric mobility).

Several activities to improve public transport infrastructures and services have been identified by iMONITRAF! partners for the Best Practice collection 2017. The **Autonomous Province of Bolzano** encourages the electrification of the **Val Venosta railway line**; the development of the **Val di Riga railway line** (3.5 km railway link-between Sciaves and the Brenner railway line) and of **new mobility centres in Brunico and Bressanone**; the increase of the railway capacity between Bolzano and Merano. For the electrification of the Val Venosta railway line, the preparatory work is proceeding. In 2017 in different rail stations platforms has been extended and pedestrian underpasses have been built.

In **Switzerland**, the Federal Council published his report on the national programme STEP 2035. The programme aims at a general extension of the rail capacities in the whole country. For the first time, concrete projects are listed in the report. A number of projects aim at **the improvement of passenger transport capacities within the Alpine regions**. (Other projects are also contained to increase freight capacity on the main transalpine transport tracks.)

The Alpine regions have also taken further steps to improve cross-border mobility through integrated ticketing and improved services:

- **Tickets and monthly pass for Ticino and Lombardia:** in its cooperation with Lombardia, the Canton of Ticino has established a new integrated service to improve cross-border mobility in the Swiss-Italian border region. The new “cross-border” tickets (single fares or monthly tickets) allow travelling on the relevant network in Lombardia of the Arcobaleno transport system as well as the regional and suburban transport system of Trenord.
- In the **European Region (Euregio) Tyrol-South Tyrol-Trentino**, public transport services shall be further improved. The existing Family Pass was harmonised between the three regions to form the new “EuregioFamilyPass” as of December 2017. In public transport, special tariffs for families are now valid in the entire Euregio. For owners of the pass, one adult pays the full price while the other family members travel for free.
- The implementation of the EUSALP macro-regional strategy is making further progress. The project **CrossBorder** was accepted under the newly launched ARPAF fund to carry out an in-depth analysis of cross-border commuting mobility flows in the Alpine Region with the objective to improve the situation for sustainable mobility use, reducing road congestion and the environmental impact of transport while taking advantage of solutions provided by digitalisation. The project is a collaboration between the Leads of EUSALP Action Groups 4 and 5 and will run for two years, starting in January 2018.
- In **Tyrol**, an important step has been made to make public transport services more attractive, encouraging the use of sustainable mobility and reducing individual motorized transport. the implementation of the new public transport tariff system was introduced in Spring 2017. An annual ticket for adults giving access to all public transport systems in the entire region now costs 490 €. The tariff system reform is particularly attractive for commuters and regular users with significant fare reductions on annual tickets.

Also, several regions have identified the need to support the transformation of the passenger car vehicle fleet towards low-carbon modes:

- The Autonomous Province of Bolzano as well as the Autonomous Province of Trento have established an Action Plan to support electric mobility – including a specific programme to spread charging stations for electric cars. Also, an incentive system for purchasing electric cars has been established.
- the Autonomous Province of Bolzano grants financial aids to small, medium and large enterprises (in the branch of craft, industry, commerce, services and tourism) for the purchase of electric vehicles or plug-in hybrid vehicles both for freight and passenger transport, electric bicycles (max 150 kg) and charging stations.

### 5.1.5 Pillar 5: Innovative approaches

Along the Brenner corridor, the cooperation has been further developed. It was agreed to extend the presidency of the autonomous Province of Trento of the Brenner Action Community to 2018, with a programme to better connect the work of the Observatories along the Brenner Corridor and widen information and transparency. During 2017, the regions along the Brenner have used the available organisations and networks that address related issues (such as BCP, EUSALP AG4, Euregio, CAB/AGB) to launch new projects and activities:

Under the 3<sup>rd</sup> call of the Alpine Space Programme, the project proposal **STRIPE “Seamless TRavel options for Intelligent Passenger mobility in the Alpine space”** has been prepared by a project team initiated in the frame of EUSALP AG4. STRIPE has the objective to further develop multimodal travel information systems, as already implemented in other projects like AlpInfoNet. STRIPE has the objective to offer innovative solutions for connecting multimodal travel information services, within the entire Alpine Space. The project proposal foresees an in-depth gap analysis to identify missing transport and information links, the development of common interfaces and, tools as well as a strategy for seamless, cross-border travel information to improve the integration of sustainable mobility services across borders in the Alpine Space.

As the development of a multimodal information and ticketing platform is identified as a potential common measure for iMONITRAF! activities related to passenger transport, the STRIPE project also has a direct link to iMONITRAF! and its objectives. Since Tyrol as Lead Partner of iMONITRAF! will play a crucial role in the STRIPE project and since other iMONITRAF! partners (South Tyrol represented by project Lead Partner STA, Trento as observer) will be involved if approved, a direct link between iMONITRAF! and STRIPE can be ensured.

Also, iMONITRAF! acts as observer to the Interreg Alpine Space **project AlpinnoCT** which was officially launched at the beginning of 2017 and which has the objectives i) to improve processes and cooperation in Combined Transport networks, ii) to integrate innovative approaches fostering modal shift from road to rail and iii) to enhance knowledge and to reinforce participation possibilities for each stakeholder in freight transport. Within the third objective, a set of stakeholder dialogues is planned in the frame of AlpinnoCT which could be used as platform to further discuss Toll Plus as well as other policies for modal shift (corridor workshops are foreseen for 2018).

Furthermore, the iMONITRAF! partners EURAC Research and the autonomous Provinces of Bolzano and Trento (as observers) take part in SMARTLOGI, a project funded under the Interreg Italy-Austria programme. SMARTLOGI aims to create a permanent cross-border institutional cooperation platform to develop policies (incentives for transport in support of intermodality) and common solutions (including through ICT systems) for the purposes of a modal shift of freight from road to rail, with a special focus on the Brenner axis and the cooperation between the port of Trieste (Italy) and the RRT of FÜRnitz (Austria). The project lifetime is 24 months until the end of 2019.

## 5.2 Best Practice Update in the light of previous recommendations and latest trends in transalpine traffic

In 2017, the development related to regional and national measures indicate a need for action that remains on a very high level. Especially along the Brenner corridor, traffic volumes are still very high, leading to congestion as well as negative environmental impacts. Thus, additional regulatory measures had to be introduced. Also, the coordination and harmonisation along the corridors was further improved in 2017, especially along the Brenner where several measures were streamlined or further developed by a common approach.

Regarding the implementation of the iMONITRAF! strategy of 2012 and implementation of the recent resolution on Toll Plus, the following highlights of the Best Practice Update 2017 can be summarized:

- Pillar 1: Few specific regional measures have been reported under this pillar. This shows the success with implementing common and coordinated solutions for this policy pillar: monitoring activities have been coordinated in the frame of iMONITRAF! over the last years and information as well as awareness raising campaigns have also been better integrated, e.g. in the frame of EUSALP AG4. Specific information measures are however still necessary, e.g. supporting the acceptability of new large-scale infrastructures (e.g. Infopoint in Trento on Brenner Base Tunnel and access routes, especially on Trentino questions, even in order to create a net of the Observatories along the Corridor).
- Pillar 2: Especially along the Brenner corridor, air quality targets are still exceeded and all regions are struggling to implement effective regulatory measures to limit negative environmental impacts of transalpine transport. Again, it became clear that only a set of ambitious regulatory and incentive measures is sufficient for reaching a reduction of air pollution. Thus, driving bans were adjusted dynamically in Tyrol and the autonomous Provinces of Bolzano and Trento have further tested the effectiveness of dynamic speed limits. In addition, congestion became a more pressing issue on the Brenner in the last year, leading to the introduction of the block admission system in 2017.
- Pillar 3: With respect to pillar 3 and modal shift measures, developments in 2017 further support the objective to develop a common and harmonised modal shift policy. The subsidy systems for combined transport on the Italian side of the Brenner corridor have been taken into operation in 2017 (Trento) or will soon be operationalized (Bolzano), leading to a higher competition for rail freight transport on the overall Brenner corridor. Also, the adjustments of toll prices set further incentives for modal shift, with slight limitations with incentive for high-emitting HGV under the new Austrian system.  
In order to provide the relevant rail capacities for modal shift, the construction works for the Brenner and Lyon-Turin base tunnels took major milestones and additional infrastructure projects, also related to specific combined transport infrastructures, were agreed in several iMONITRAF! regions.
- Pillars 4: With respect to passenger transport, the collection of Best Practices more and more shows the need for a diverse set of measures: modal shift of passenger transport will only be possible with a further ambitious improvement of infrastructures and services. In cross-border regions, this also requires the further integration of services and tickets to provide seamless mobility options. However, a large share of motorized passenger transport will remain, requiring the need for low-emissions solutions to reduce impacts on air quality and climate change.
- Pillar 5: With respect to innovative approaches, the effectiveness of the increased level of cooperation needs to be highlighted. Especially, the cooperation bodies along the

Brenner corridor but also the cooperation in the frame of EUSALP have initialized highly interesting projects with a direct relevance for iMONITRAF!.

## 6 Trends for transport and environmental policies on national and EU levels

The discussion at regional level is shaped not only by developments at national level and along the corridors, but also by European frameworks and legislation. In 2017, the revision of some major EU policies was launched and additional legislation to achieve a decarbonisation of the transport sector have been taken forward by the European Commission. The following section highlights some major developments of European transport and environmental policies.

### ***“Europe on the Move” initiative of May 2017***

At the end of May 2017, the European Commission has published a first set of legislative initiatives to support the transition to a clean, competitive and connected mobility. ‘Europe on the Move’ is a wide-ranging set of initiatives that will make traffic safer, encourage smart road charging, reduce CO<sub>2</sub> emissions, air pollution and congestion as well as improve social provisions in the transport sector. The initiative is accompanied by a first series of eight legislative initiatives specifically targeting road transport:<sup>11</sup>

As most important issue for iMONITRAF!, the initiative includes the revision of the Eurovignette Directive. Here, the Commission presented a progressive proposal for adjusting the legislative framework, including the following key elements:

- The revised Directive foresees a broader scope, including light-duty vehicles, incl. buses and coaches as well as passenger cars (incl. minibuses and vans).
- The Directive is extended to the broader road network beyond TEN-T. For international network, time-based user charges (vignettes) shall be phased-out, first for HGV (until end of 2023) and buses/coaches, later also for passenger cars.
- The limiting scope to HGV > 12 t is phased-out until 2020, after that time all HGV need to be charged.
- External costs charging: introduces reference values instead of maximum values (these are adjusted dynamically, considering inflation and state-of-the-art on external costs). A new paragraph is added requiring the application of external-cost charging on at least those parts of the tolled network where air pollution and noise generated by HGV is most significant.
- Congestion charging: new provision that allows congestion charges on top of infrastructure charges to address interurban congestion (instead of revenue-neutral variation as until now).
- Variation of charges: phase-out of variation according to Euro classes (until 2020), instead introduction of variation of infrastructure charges according to the CO<sub>2</sub> emission of

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<sup>11</sup> [https://ec.europa.eu/transport/modes/road/news/2017-05-31-europe-on-the-move\\_en](https://ec.europa.eu/transport/modes/road/news/2017-05-31-europe-on-the-move_en)

HDV, as soon as possible after the necessary certified CO<sub>2</sub> emission data become available.

In addition, the 'Europe on the Move' initiative includes a Recast of the Directive on the interoperability of electronic road toll systems (European Electronic Toll Service, EETS), a revision of cabotage rules as well as several documents aiming at the improvement of social conditions in the transport market.

### ***Clean Mobility Package of November 2017***

In November 2017, the Commission took further decisive steps forward in implementing the EU's commitments under the Paris Agreement for a binding domestic CO<sub>2</sub> reduction of at least 40 % till 2030. For the transport sector, the "Clean Mobility Package" includes a set of six documents to support the transition towards low-emission vehicles, which further support the "Europe on the Move" initiative:<sup>12</sup>

- New CO<sub>2</sub> standards for cars, which proposes a limit of average emissions for new cars in 2030 to be 30 % lower than the 2021 target of 95 g of CO<sub>2</sub> per vehicle-km.
- An action plan and investment solutions for the trans-European deployment of alternative fuels infrastructure. The aim is to support national policy frameworks, by supporting investments in the transport network (the trans-European transport network or "TEN-T") and in urban areas. This will ensure availability of alternative fuels for road users. A special amount of the CEF Transport blending call (see above) is being focused on alternative fuels infrastructures and further funding instruments are adjusted to improve the availability of European funding.
- Regarding this objective, the package also includes a flagship initiative on batteries alongside this new proposal with additional € 200 million to support European battery development and innovation from 2018 to 2020.
- The Clean Vehicles Directive to promote clean mobility solutions in public procurement tenders
- The revision of the Combined Transport Directive, which promotes the combined use of different modes for freight transport (e.g. lorries and trains), will make it easier for companies to claim incentives and therefore stimulate the combined use of trucks and trains, barges or ships for the transport of goods.
- The Directive on Passenger Coach Services, to stimulate the development of bus connections over long distances across Europe and offer alternative options to the use of private cars

### ***Review of TEN-T implementation and investment needs***

In preparation for the next multi-annual financial framework (MFF) 2021-2030, the European Commission has reviewed the state of implementation of the Core Network Corridor Work Plans and has estimated remaining investment needs for the period beyond 2020.<sup>13</sup> Following this analysis, it is expected that the investments from 2016 until 2030 needed for realising the core network in its totality amounts to about EUR 750 billion. Assuming that investments are spread equally

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<sup>12</sup> [https://ec.europa.eu/transport/modes/road/news/2017-11-08-driving-clean-mobility\\_en](https://ec.europa.eu/transport/modes/road/news/2017-11-08-driving-clean-mobility_en)

<sup>13</sup> The document "" summarises key data on the European transport sector and EU transport policy objectives including estimated investment needs for transport infrastructure, framework conditions and related impacts such as jobs.

over the period, the needs for 2021-2030 to realise the core network would thus amount to about EUR 500 billion for the EU27. To meet this funding needs, the review of TEN-T has identified the need for simplifying the rules and procedures for obtaining CEF grants (incl. via blending with funds from public or private banks) and the monitoring thereof, to allow more flexibility and to align CEF and other EU funds. As a first pilot for supporting new funding models, a CEF blending call was published in February 2017 which has the objective to test the leverage of private involvement (funding amount of 1,35 bn. EUR).

### ***Revision of EU Emissions Trading System***

In December 2017, the European Parliament and Council have reached a provisional agreement to revise the EU Emissions Trading System (EU ETS) for the period after 2020. This revision will contribute to put the EU on track to achieving a significant part of its commitment under the Paris Agreement to reduce greenhouse gas emissions by at least 40 % by 2030. Building on the Commission's proposal, the main improvements agreed by Parliament and Council include:

- Significant changes to the system in order to speed up emissions reductions and strengthen the Market Stability Reserve to speed up the reduction of the current oversupply of allowances on the carbon market;
- Additional safeguards to provide European industry with extra protection, if needed, against the risk of carbon leakage;
- Several support mechanisms to help the industry and the power sectors meet the innovation and investment challenges of the transition to a low-carbon economy.

This revision does not include any specific regulations for the transport sector. During the revision process, an inclusion of road transport emissions was proposed by several stakeholders<sup>14</sup> and some Member States have called for the implementation of a minimum CO<sub>2</sub> price which could have been also applied to the transport sector. Now, the provisional agreement keeps its focus on the roughly 11,000 installations in the power sector and energy intensive industry.

### ***Improved environmental governance – Environmental Implementation Review***

In February 2017, the European Commission adopted the Environmental Implementation Review. It marks the beginning of a new process in improving how environmental laws are applied for the benefit of citizens, administrations and economy. The Commission will address with Member States the causes of implementation gaps and find solutions before problems become urgent in areas such as waste management, nature and biodiversity, air quality and water quality. Today's package includes: 28 country reports which map national strengths, opportunities and weaknesses; a Communication summarising the political conclusions of the country reports and examining common trend; and recommendations for improvements to all Member States. For air quality, the Review shows for example that in 23 out of 28 Member States standards are still exceeded – in total in over more than 130 cities across Europe. There are a number of root causes common to several Member States: ineffective coordination between administrative levels, insufficient capacity, and lack of knowledge and data.

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<sup>14</sup> The possibility of extending the EU ETS scope to include road transport was considered in the European Commission's Communication on "A policy framework for climate and energy in the period from 2020 up to 2030". However, the proposal for a revised EU ETS directive, submitted July 2015, does not contain the prospect for the inclusion of new sectors.

## 7 Outlook 2018 and beyond

2017 has been a successful year for continuing the iMONITRAF! cooperation: the foreseen activities of the work plan 2017-2018 have been successfully implemented and especially the networking activities around Toll Plus have provided many linking points and opportunities for further activities. 2018 will be very important to ensure that the Eurovignette Directive, as one crucial framework element at EU level, will be revised in a progressive way so that the iMONITRAF! regions can continue their coordination activities at national level to make sure that new potentials are fully used. Also, 2018 will again be a crucial year to improve political support for iMONITRAF! and to make clear that there is a high need to continue the successful coordination of the Alpine regions. This last chapter of the Annual Report provides a short outlook on major challenges and activities of 2018.

### ***Further coordination of Toll Plus proposal and implementation***

In 2017, iMONITRAF! has focused its activities on lobbying for an ambitious revision of the Eurovignette Directive – leaving more flexibility in the relevant European framework to implement elements of Toll Plus. This process will continue in 2018 with the take-up of the dossier by the European Parliament. In January 2018, two events will be hosted by iMONITRAF! in Brussels with the objective to directly present the core elements of Toll Plus to members of the European Parliament and develop stronger alliances with other stakeholders. The outcome of these events will provide further lobbying opportunities.

Also, in 2018 it will be crucial to further develop the coordination with the national process. The follow-up Zurich Process has developed an in-depth analysis on Toll Plus in 2017, results will be published in spring 2018. It will be essential to carefully check the results of this in-depth analysis and to identify synergies and/or divergences with respect to the iMONITRAF! proposal. If possible, it should then be possible to stronger coordinate regional and national activities. The AG4 EUSALP could serve as platform to follow-up this exchange. In 2018, EUSALP will give special attention to mobility, the incoming Tyrolean Presidency having it high on its agenda.

### ***Cross-check of target system and DPSIR***

iMONITRAF! has successfully managed to streamline and further develop its common monitoring system in 2017. Result of this process are illustrated in chapter 4. As next step, it will now be necessary to cross-check the target system of iMONITRAF!. The targets were set by each region/corridor as input to the iMONITRAF! strategy 2012. Since then, several target systems on national and EU level were re-adjusted – especially the target system related to climate change. It thus needs to be checked if the target system is a) still in line with the new definition of indicators as included in the updated monitoring system and b) if it reflects the new developments at national and EU level. If the target system will be updated, the DPSIR system should be adjusted accordingly.

### ***Platform for technical and political exchange in 2018***

The European process with the revision of the Eurovignette will have a major focus in the first half year of 2017 and it will then be crucial for iMONITRAF! to strengthen the coordination with the national level but also to identify further measures of the common transport strategy to be further developed. For this process, the network foresees to organise a platform for technical and political exchange in autumn 2018. Especially, this platform should serve for an exchange with relevant

decision makers and stakeholders and should support the agenda-setting for a potential continuation of iMONITRAF! beyond 2018. With its activities on Toll Plus, the iMONITRAF! network has provided a showcase for an effective consideration of regional policy proposals and it will be crucial to build on this example for further elements of the common transport strategy.

### ***Further need for action remains high: potential activities for iMONITRAF! beyond 2018***

The recent partnership agreement of iMONITRAF! relates to the period 2017-2018, no specific follow-up has been defined yet. Political representatives agreed to again check if iMONITRAF! can be merged with EUSALP AG4 after that point of time or if there will be the need to continue iMONITRAF! as independent network. This question needs to be tackled in the upcoming year 2018 and, if a merger with EUSALP AG4 is not deemed appropriate, the relevant financial resources need to be secured for continuing the network. The political discussion during the planned events in Brussels on 23<sup>rd</sup> January 2018 will provide a first insight on the political viewpoint, which can be further specified and agreed as input for the 2018 Transport Forum and/or political roundtable.

In general, the need for further cooperation is evident: Toll Plus is only one element of a common modal shift policy for the Alpine region. Several other elements could be further developed in the frame of iMONITRAF! in coordination with relevant projects and networks:

- There is a high need for further coordinating and improving modal shift policies and infrastructures. This need can be illustrated by an incident which took place in summer 2017: due to an accident related to the construction of a new rail tunnel, the main freight rail track between Rastatt and Baden-Baden (in the German part of the Rhine valley) was closed from mid-August to beginning of October in 2017. The closure had severe consequences on the European north-south rail freight transport system. Approximately 1,500 transalpine freight trains had to be cancelled, and 4,000 transalpine freight trains had to be rerouted. The loss of transport volume of the rail system in Switzerland is estimated to be 4 % of the annual volume 2017 for the transalpine volume only. During the closure about 1,000 additional HDV passages were detected on the Swiss Alpine north-south corridors per week. The closure will deviate the modal shift in 2017 in Switzerland by about one percent point towards the road. The accident shows the vulnerability of the current rail system and makes the necessity aware to extend the rail system in order to sustain the rail freight transport also in case of sudden events.
- At European and national levels, there is currently a strong policy focus on decarbonisation of passenger and freight transport to meet the objectives of the Paris Agreement. This requires the development and broad deployment of innovative technologies, especially regarding low-carbon drive-trains (electric and hybrid systems). With respect to freight transport, several pilot projects focus on the development of highway systems which aim at an electrification of HGV via overhead contact lines. From the viewpoint of iMONITRAF!, the deployment of such innovative technologies focusing at road transport need to be carefully embedded in the modal shift policy and it needs to be guaranteed that the attractiveness of rail will be further maintained and improved.
- Several networks and institutions at Alpine Space level also deal with the further development of modal shift and sustainable transport policies. However, not all of them have a specific focus on the needs of the core Alpine regions situated at the major Alpine corridors. For example, EUSALP AG4 has a broader geographical focus, as the EUSALP perimeter goes beyond the perimeter of the Alpine Convention and also covers regions with completely other characteristics and needs. Thus, finding consensus at technical and political level is much more difficult than in the rather homogenous group of iMONITRAF!.