Annual Report 2020

New policy scenarios re-confirm the need for an ambitious and coordinated modal shift policy

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iMONITRAF! Annual Report 2020

New policy scenarios re-confirm the need for an ambitious and coordinated modal shift policy

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CONTENT

The iMONITRAF! year 2020 at a glance

iMONITRAF! – Pushing modal shift with a common voice

Pressures related to transalpine road freight transport remain high on the major Alpine transit corridors, even in 2020 when the Corona pandemic and the related lockdown measures led to a decrease in many economic activities. 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. The Gotthard corridor is the main exception thanks to the ambitious policy approach in Switzerland and the now finalised new base tunnel infrastructures. The Gotthard corridor is the first Alpine corridor which is fully developed to the 4m profile and experiences can help to finetune the policy mix in other regions. The network of iMONITRAF! provides a platform for technical and political exchange and for coordinating policy measures and strategies. The priority for modal shift as a key measure to reduce negative impacts of transalpine freight transport provides the basis for the cooperation and, over the last years, iMONITRAF! partners have put considerable efforts in developing ambitious road pricing measures.

Objectives 2020 – Setting the political agenda up to 2030

Framework conditions and political priorities have changed considerably over the last years, especially climate change and new and innovative technologies have moved up on the political agenda. As a basis for the discussion, the iMONITRAF! partners have developed new policy scenarios 2030: Only a scenario combining ambitious modal shift measures and innovative technologies guarantees a considerable reduction of traffic and environmental nuisances according to the iMONITRAF! aims. These insights were taken up in a new iMONITRAF! resolution which was signed by political representatives during a virtual roundtable discussion in November 2020.

Toll Plus – finally moving ahead at European level

With their common resolution (2016), the Alpine regions call for a consideration of the over-proportional external costs related to freight transport in the Alps, more flexibility in using the mark-up factor as well as a cross-financing approach for revenues. To ensure that propositions are taken up at EU level, iMONITRAF! is closely following the revision process of the Eurovignette Directive. After a stand-still, the discussion on the Eurovignette was picked up in 2020 and some key issues for finalizing a compromise became visible. These main topics include a CO_2 differentiation of charges, especially the exceptions for low- and zero-emission vehicles as well as the mark-up for mountain areas (Art. 7f of the Eurovignette). In its proposal, iMONITRAF! partners highlighted the need for more flexibility in applying the mark-up and especially in extending the mark-up beyond the current 25% threshold.

An ambitious EU-wide approach to road pricing is also a key element of the new “Sustainable and Smart Mobility Strategy and Action Plan” which lays the foundation to implement the EU Green Deal in the transport sector. Measures that create co-benefits with Toll Plus, e.g. support measures for combined transport as well as reviewing energy taxation, are highlighted in the revision of the TEN-T framework as well as the Evaluation of the EU Transport White Paper.

Monitoring update for the year 2019

About 23,800 **heavy vehicles** per day (HV/day) crossed the iMONITRAF! corridors in 2019. This is an increase of 0.6% compared to 2018. In 2019, about half of these vehicles passed the Brenner and the Ventimiglia corridors. The total of **light vehicles** per day (LV/day) on the same corridors in 2019 was about 81,800 LV/day, -1.6% compared to 2018. The **transported goods** over

the iMONITRAF! corridors sum up to a total of about 160.3 mio. t in 2019 with a share of 33% on rail, almost the same amount as in 2018. The goods in 2019 on road increased by 1%, whereas rail lost 3%. The Swiss corridors Simplon and Gotthard have the highest share of rail, respectively 91% and 65%, Tauern 34%, Brenner 26%, Fréjus/Mt. Cenis 20%, Ventimiglia 3%.

The annual **air pollutant** concentrations of NO_2 show a general decreasing trend since 2005. After a decrease, PM_{10} concentrations start to increase slightly between 2014 and 2018 and then decrease again in 2019. Peaks in some years for PM_{10} and NO_2 may be caused by extremely hot weather periods in the Alps during summer months. **Noise** levels remain on high levels (between 71 and 80 dB(A) in the daily average and about 7 dB(A) lower during night hours).

The COVID-19 crisis has reduced traffic volumes in 2020. In the first half-year, the reduction amounts to 10 to 20% as compared to 2019, for road and rail in a similar magnitude. In 2020, toll prices also significantly changed as compared to 2019. Average decreases of 9% for diesel and 10% for petrol prices were registered. This trend involves all countries.

Two new indicators have been introduced in the monitoring system: (1) Regarding alternative fuels, electric vehicle (EV) charging stations and LPG service stations are available along all iMONITRAF! corridors. The highest numbers are recorded along the Brenner and Ventimiglia corridor. (2) As concerns the national pricing components for road transport, the most significant variations over the period 2016-2020 is related to registration tax. In particular, in France and Austria, values slightly grew for both petrol cars and diesel HVs. As regards the ownership tax, electric cars are exempt from this tax in all countries beside Switzerland (year 2020). The same applies to electric heavy vehicles in Switzerland, Italy and Austria.

Best Practices 2020 – infrastructure development and finetuning of measures

On the Gotthard, the positive impacts of the Ceneri base tunnel and the 4m corridor can now be evaluated and lessons-learned can be shared with decision makers at the Brenner and Mont Cenis. Several further infrastructure projects were reported to improve cross-border services but also to link the Alpine region to highspeed rail connections throughout Europe. To set additional incentives for modal shift and to limit environmental impacts of freight transport, the policy mix of regulatory measures as well as pricing measures has been further finetuned in 2020, e.g. with an extension of the sectoral driving ban in Tyrol or with the decision to adjust pricing categories in the Swiss HGV fee. On the Brenner corridor, innovative technologies become more relevant, including measures to support automatisation, traffic management and control in a “digital corridor” approach as well as measures to support the take-up of low-emission vehicles.

2021 as milestone for continuing cooperation

As the new provisions of the Eurovignette Directive will hopefully be finalised in 2021 and as the revision process of the HGV-fee in Switzerland will be specified and first results of the impact of new infrastructure will be available, the partnership will have a “testing field” to move forward with ambitious implementation of iMONITRAF! common measures. The EU Year of Rail 2021 offers a great window of opportunity to raise awareness on these topics and to bring a new dynamic into the process – together with the broader Alpine community.

iMONITRAF! Aktivitäten im Jahr 2020 – Das Wichtigste in Kürze

iMONITRAF! – Gemeinsam für eine ambitionierte Verlagerungspolitik

Der Handlungsdruck entlang der wichtigsten Alpentransitkorridoren blieb auch im Jahr 2020 weiterhin sehr hoch, obwohl die COVID-19 Pandemie und die damit einhergehenden Lockdown-Maßnahmen zu einem Rückgang vieler wirtschaftlicher Aktivitäten führten. Obwohl alle Regionen bereits Verlagerungsmaßnahmen umsetzen, steigt das Verkehrsvolumen weiter an und die Verlagerung von der Straße auf die Schiene stagniert. Der Gotthard-Korridor stellt dank der ambitionierten Verlagerungspolitik in der Schweiz und der nun fertiggestellten Basistunnel eine Ausnahme dar. Er ist der erste Alpenkorridor, der durchgängig auf das 4-m-Profil ausgebaut ist und nun mögliche Erfahrungen aus der Anwendung können anderen Regionen bei der Optimierung ihres Instrumentenmixes helfen. iMONITRAF! bietet eine Plattform für den technischen und politischen Austausch und für die Koordination politischer Maßnahmen und Strategien. Ein Kernelement in der iMONITRAF! Strategie stellt die Umsetzung eines ambitionierten Road pricings dar und iMONITRAF!-hat seit 2016 viel Energie in die Entwicklung eines gemeinsamen Ansatzes gesteckt.

Zielstellungen 2020 – Definition von Leitplanken für die politische Agenda bis 2030

Rahmenbedingungen und politische Prioritäten haben sich in den letzten Jahren stark verändert, insbesondere der Klimawandel und innovative Technologien sind auf der politischen Agenda nach oben gerückt. Als Diskussionsgrundlage haben die iMONITRAF!-Partner neue Politikszenarien 2030 entwickelt: danach kann eine deutliche Reduzierung der Verkehrs- und Umweltbelastung nur in einem Szenario erreicht werden, das ehrgeizige Verlagerungsmaßnahmen und innovative Technologien kombiniert. Diese Erkenntnisse wurden in einer neuen iMONITRAF!-Resolution aufgegriffen, die im Rahmen eines virtuellen Runden Tisches im November 2020 von politischen Vertretern der iMONITRAF! Regionen unterzeichnet wurde.

Toll Plus – Fortschritte beim Prozess auf EU-Ebene

Mit ihrer gemeinsamen Resolution (2016) fordern die Alpenregionen eine Berücksichtigung der durch den Güterverkehr verursachten überproportionalen externen Kosten in den Alpen, mehr Flexibilität bei der Verwendung des „Mark-up“-Faktors sowie eine Stärkung des Querfinanzierungsansatzes. Um sicherzustellen, dass die Vorschläge auf EU-Ebene aufgegriffen werden, begleitet iMONITRAF! schon über einige Jahre den Revisionsprozess der EU Wegekosten-Richtlinie (Eurovignette). Nach fast zweijährigem Stillstand wurde die Diskussion um die Eurovignette 2020 wieder aufgenommen und es zeichneten sich Eckpunkte für einen Kompromiss ab. Zu den kompromissrelevanten Themen gehört die CO_2-Differenzierung der Gebühren, insbesondere die Ausnahmeregelungen für emissionsarme und emissionsfreie Fahrzeuge sowie der Aufschlag („Mark-up“) für Berggebiete (Art. 7f der Eurovignette). In ihrem Vorschlag haben die iMONITRAF!-Partner die Notwendigkeit für mehr Flexibilität bei der Anwendung des Aufschlags und insbesondere bei der Ausweitung des Aufschlags über die derzeitige 25 %-Schwelle hinaus hervorgehoben.

Ein ehrgeiziger EU-weiter Ansatz für Straßenbenutzungsgebühren ist auch ein Schlüsselelement der neuen "Sustainable and Smart Mobility Strategy and Action Plan", der die Grundlage für die Umsetzung des EU Green Deal im Verkehrssektor bildet. Maßnahmen, die Synergien mit Toll Plus schaffen, z. B. Fördermaßnahmen für den kombinierten Verkehr sowie die Überprüfung der Energiebesteuerung, werden in der Überarbeitung der TEN-T Regulierung sowie in der Evaluierung des EU-Verkehrsweißbuchs einen wichtigen Stellenwert einnehmen.

Monitoring Update für das Jahr 2019

Etwa 24 000 **schwere Güterfahrzeuge** überquerten im Jahr 2019 täglich die iMONITRAF! Korridore (SGF/Tag). Dies entspricht einer Zunahme von 0.6% im Vergleich zu 2018. Die Hälfte dieser Fahrzeuge überquerte im Jahr 2019 die Korridore Brenner und Ventimiglia. Die Gesamtzahl der **leichten Fahrzeuge** pro Tag auf denselben Korridoren ging 2019 im Vergleich zu 2018 um 1.6% zurück, 2019 lag die Zahl bei täglich etwa 81 000 Fahrzeugen. Die über die iMONITRAF!-Korridore **transportierten Güter** belaufen sich im Jahr 2019 auf insgesamt 160.3 Millionen Tonnen, wobei der Schienenanteil bei 33% lag - ähnlich wie im Vorjahr. Das Gütervolumen ist im Jahr 2018 auf der Straße um 1% gestiegen, während die Schiene im Vergleich zu 2018 3% verloren hat. Die Schweizer Korridore Simplon und Gotthard haben mit 91% und 65% den höchsten Schienenanteil; die anderen Korridore liegen deutlich darunter: Tauern 34%, Brenner 26%, Fréjus/Mt. Cenis 20%, Ventimiglia 3%.

Die jährlichen **Luftschadstoffkonzentrationen** von NO_2 zeigen seit 2005 eine allgemein abnehmende Tendenz. Für PM_{10} gibt es einen ähnlichen Trend zwischen 2005 und 2014, zwischen 2014 und 2018 gab es wieder einen leichten Anstieg, der im Jahr 2019 aber wieder rückgängig war. Spitzenwerte in einigen Jahren für PM_{10} und NO_2 können durch extrem heiße Wetterperioden in den Alpen während der Sommermonate verursacht werden. Die **Lärmpegel** bleiben auf hohem Niveau (zwischen 71 und 80 dB(A) im Tagesdurchschnitt (Lden) und etwa 7 dB niedriger während der Nachtstunden (Lnight)).

Die COVID-19-Pandemie hat das Verkehrsaufkommen im Jahr 2020 reduziert. Im ersten Halbjahr beläuft sich der Rückgang auf 10 bis 20 % im Vergleich zu 2019, für Straße und Schiene in ähnlicher Größenordnung. Im Jahr 2020 haben sich auch die Mautpreise im Vergleich zu 2019 deutlich verändert. Bei den Kraftstoffen fielen die Preise um 9 % für Diesel und 10 % für Benzin.

Im Vergleich zum Vorjahr wurden zwei neue Indikatoren eingeführt: (1) In Bezug auf alternative Kraftstoffe sind Ladestationen für Elektrofahrzeuge (EV) und LPG-Tankstellen entlang aller iMONITRAF!-Korridore verfügbar. Die höchste Anzahl ist entlang des Brenner- und Ventimiglia-Korridors zu verzeichnen. (2) Was die nationalen Preiskomponenten für den Straßenverkehr betrifft, so sind die größten Schwankungen im Zeitraum 2016-2020 bei der Zulassungssteuer zu verzeichnen. Insbesondere in Frankreich und Österreich stiegen die Werte sowohl für Benzin-Pkw als auch für Diesel-SGFs leicht an. Was die jährliche Kfz-Steuer betrifft, so sind Elektroautos in allen Ländern außer der Schweiz von dieser Steuer befreit (Jahr 2020). Das Gleiche gilt für elektrische Schwerfahrzeuge in der Schweiz, Italien und Österreich.

Best Practices 2020 - Ausbau der Infrastruktur und Feinjustierung der Maßnahmen

Am Gotthard können nun die positiven Auswirkungen des Ceneri-Basistunnels und des 4 m-Korridors evaluiert und die gewonnenen Erkenntnisse mit den Entscheidungsträgern am Brenner und Mont Cenis geteilt werden. Im Rahmen der Best Practice Sammlung wurden weitere Infrastrukturmaßnahmen genannt, welche als Ziel entweder eine Verbesserung beim grenzüberschreitenden Service verfolgen oder eine bessere Anbindung des Alpenraums an Hochgeschwindigkeits-Bahnverbindungen in ganz Europa. Um zusätzliche Anreize für die Verkehrsverlagerung zu setzen und die Umweltauswirkungen des Güterverkehrs zu begrenzen, wurde der Policy-Mix aus regulatorischen und Anreiz-Instrumenten im Jahr 2020 weiter verfeinert, z. B. mit einer Ausweitung des sektoralen Fahrverbots in Tirol oder mit der Entscheidung, die Preiskategorien der Schweizer Schwerverkehrsabgabe (LSVA) anzupassen. Auf dem Brenner-Korridor werden innovative Technologien relevanter, einschließlich Maßnahmen zur Unterstützung der Automatisierung des Verkehrsmanagements, der Steuerung in einem "digitalen Korridor"-Ansatz sowie Förderungsmaßnahmen für emissionsarmer Fahrzeuge.

2021 als Meilenstein für die Fortsetzung der Kooperation

Wenn die neuen Bestimmungen der Eurovignetten-Richtlinie hoffentlich 2021 finalisiert sind und wenn der Revisionsprozess der LSVA in der Schweiz spezifiziert ist und erste Ergebnisse über die Auswirkungen der neuen Infrastruktur vorliegen, wird die Partnerschaft ein "Testfeld" haben, um mit der ehrgeizigen Umsetzung voranzukommen. Das EU-Jahr der Schiene 2021 bietet ein gutes Window-of-opportunity, um das Bewusstsein für die iMONITRAF! Themen zu schärfen und eine neue Dynamik in den Prozess zu bringen - gemeinsam mit der breiteren Alpen-Community.

iMONITRAF! nel 2020: L'essenziale in breve

iMONITRAF! –Favorire il trasferimento modale con una voce comune

Le pressioni legate al trasporto merci transalpino su strada, lungo i principali corridoi di transito, continuano ad essere elevate anche nel 2020, nonostante la pandemia di COVID-19 e le relative misure abbiano comportato una diminuzione di molte attività economiche. Sebbene tutte le regioni abbiano attuato politiche di trasferimento modale, l´ulteriore incremento dei volumi di traffico sembra inarrestabile e il trasferimento modale dalla strada alla ferrovia rimane stagnante. La principale eccezione è rappresentata dal corridoio del Gottardo ed è legata sia ad un ambizioso approccio politico adottato in Svizzera, sia alla conclusione dei lavori per le nuove infrastrutture del tunnel di base. Il corridoio del Gottardo è infatti il primo corridoio alpino completamente adeguato al profilo di 4 m. Le esperienze in esso attuate possono aiutare a mettere a punto una combinazione di politiche anche in altre regioni. La rete di iMONITRAF! costituisce una piattaforma sia per lo scambio tecnico e politico, sia per il coordinamento di misure e strategie politiche. La priorità del trasferimento modale come misura chiave per ridurre gli impatti negativi del trasporto merci transalpino costituisce la base della collaborazione e, negli ultimi anni, i partner di iMONITRAF! hanno compiuto considerevoli sforzi per sviluppare misure legate al tema dei pedaggi stradali.

Obiettivi 2020 - Definire l'agenda politica fino al 2030

Le condizioni generali e le priorità politiche sono cambiate considerevolmente negli ultimi anni. In particolare, le tematiche legate al cambiamento climatico ed alle tecnologie innovative sono state portate a livelli prioritari nell'agenda politica. Come base per la discussione, i partner di iMONITRAF! hanno sviluppato nuovi scenari politici per il 2030: solo lo scenario che unisce le ambiziose misure di trasferimento modale con le tecnologie innovative garantisce una considerevole riduzione del traffico e degli effetti dannosi legati all'ambiente, secondo gli obiettivi di iMONITRAF!. Questi risultati sono stati inclusi nella nuova risoluzione di iMONITRAF!, firmata dai rappresentanti politici durante la discussione avvenuta a novembre 2020, in occasione della tavola rotonda virtuale.

Toll Plus - finalmente un passo avanti a livello europeo

Con la loro risoluzione comune (2016), le regioni alpine chiedono che vengano presi in considerazione gli elevati costi esterni legati al trasporto merci nelle Alpi e che venga attuata una maggiore flessibilità nell´uso del fattore di maggiorazione, così come un metodo di finanziamento per i ricavi intersettoriale. Per garantire che queste proposte vengano prese in considerazione a livello europeo, iMONITRAF! sta seguendo da vicino il processo di revisione della *Direttiva Eurovignette*. Dopo una fase di stallo, il confronto sulla *Eurovignette* è ripreso nel 2020 e sono stati messi a punto alcuni elementi chiave per il raggiungimento di un compromesso. I temi principali includono

una differenziazione delle tariffe in funzione alle emissioni di CO_2, con l´esenzione per i veicoli a basse e zero emissioni, oltre che l´introduzione di una maggiorazione per le aree montane (Art. 7f dell' *Eurovignette*). Nella proposta, i partner di iMONITRAF! hanno evidenziato la necessità di attuare una maggiore flessibilità nell'applicazione della maggiorazione e soprattutto nella sua estensione oltre l'attuale soglia del 25%.

Inoltre, un ambizioso approccio a livello europeo in materia di pedaggi stradali è un elemento fondamentale della nuova "*Strategia per una mobilità intelligente e sostenibile*" che, insieme a un Piano d'Azione, getta le basi per l´attuazione del Green Deal Europeo per il settore dei trasporti. Le misure integrative al Toll Plus e quelle che producono benefici comuni, quali ad esempio le misure a supporto del trasporto combinato, così come il riesame della tassazione dell´energia, sono messe in rilievo nella revisione del quadro TEN-T, oltre che nella valutazione del Libro Bianco sui trasporti dell'UE.

Aggiornamento sul monitoraggio per l´anno 2019

Nel 2019, circa 23.800 veicoli pesanti al giorno hanno attraversato i corridoi iMONITRAF!, con un incremento dello 0,6% rispetto al 2018. Circa la metà di questi veicoli ha attraversato, nel 2019, il corridoio del Brennero e quello di Ventimiglia. Per quanto riguarda il totale dei veicoli leggeri al giorno rilevati lungo gli stessi corridoi, esso risulta pari a circa 81.800 veicoli/giorno, registrando un decremento dell´1,6% rispetto al 2018. Nel 2019, le merci trasportate lungo i medesimi corridoi ammontano complessivamente a circa 160,3 milioni di tonnellate, con una suddivisione modale del 33% via ferrovia, circa la stessa percentuale registrata nel 2018. Complessivamente nel 2019, il totale delle merci trasportato via strada è incrementato dell´1%, mentre via ferrovia è diminuito del 3%. I corridoi svizzeri del Sempione e del Gottardo hanno evidenziato le percentuali più alte di merce trasportata via ferrovia, rispettivamente 91% e 65%, seguono i Tauri (34%), il Brennero (26%), il Fréjus/Moncenisio (20%) e Ventimiglia (3%).

In generale, le concentrazioni annuali dell'inquinante atmosferico NO_2 mostrano una tendenziale diminuzione dal 2005. Per il PM_{10}, dopo un calo, le concentrazioni sembrano aumentare lievemente tra il 2014 ed il 2018 e successivamente diminuire nuovamente nel 2019. I picchi rilevati in certi anni per il PM_{10} ed il NO_2 possono essere influenzati dalle punte di calore estivo nelle Alpi. I livelli di rumore rimangono elevati, compresi tra 71 e 80 dB(A) per la media giornaliera e circa 7 dB(A) più bassi durante le ore notturne.

La crisi legata alla pandemia di COVID-19 ha ridotto i livelli di traffico nel 2020. Nel primo semestre, è stata rilevata una diminuzione del 10-20% rispetto al 2019, con un ordine di grandezza simile sia per la componente stradale, sia per quella ferroviaria. Nel 2020, anche i pedaggi sono cambiati significativamente rispetto al 2019. E` stata registrata in media una diminuzione dei prezzi del 9% per il diesel e del 10% per la benzina. Questa tendenza coinvolge tutti i Paesi.

Quest´anno sono stati inseriti due nuovi indicatori: (1) per quanto riguarda i carburanti alternativi, le stazioni di ricarica per veicoli elettrici e di rifornimento GPL sono disponibili lungo tutti i corridoi iMONITRAF!. I numeri più elevati vengono registrati lungo i corridoi del Brennero e di Ventimiglia; (2) per quanto riguarda le componenti tariffarie nazionali del trasporto stradale, le variazioni più significative nel periodo 2016-2020 sono legate alla tassa di registrazione dei veicoli. In particolare, in Francia e in Austria, i valori sono leggermente cresciuti sia per le auto a benzina, sia per i veicoli commerciali diesel. Per quanto riguarda la tassa sul possesso di veicoli, in tutti i Paesi, ad eccezione della Svizzera, le auto elettriche sono esenti (anno 2020). Lo stesso vale per i veicoli pesanti elettrici in Svizzera, Italia e Austria.

Migliori pratiche 2020 - sviluppo delle infrastrutture e perfezionamento delle misure

Lungo il corridoio del Gottardo, gli impatti positivi della galleria di base del Ceneri e del "corridoio di 4 metri" adesso possono essere valutati e le esperienze acquisite possono essere condivise con i decisori per il corridoio del Brennero e del Moncenisio. Sono stati identificati diversi altri progetti infrastrutturali sia per migliorare i servizi transfrontalieri, sia per unire la regione alpina ai collegamenti ferroviari ad alta velocità in tutta Europa. Per stabilire ulteriori incentivi per il trasferimento modale e per limitare gli impatti ambientali del trasporto merci, è stata ulteriormente perfezionata una combinazione di politiche che includa sia misure di regolamentazione, sia misure tariffarie, ad esempio tramite l´estensione del divieto di circolazione settoriale in Tirolo o attraverso la decisione di modificare le categorie tariffarie della tassa sui mezzi pesanti in Svizzera. Lungo il corridoio del Brennero, le misure legate alle tecnologie innovative stanno acquistando sempre maggiore rilevanza e comprendono misure volte a sostenere l'automazione, la gestione e il controllo del traffico in un´ottica strategica di sviluppo di un "corridoio digitale", nonché le misure per supportare l´adozione di veicoli a basse emissioni.

2021 come tappa fondamentale per favorire la continuazione della cooperazione

Auspicabilmente, quando le nuove disposizioni della *Direttiva Eurovignette* saranno finalizzate, il processo di revisione della tassa sul traffico pesante in Svizzera sarà definito e saranno inoltre disponibili i primi risultati dell'impatto delle nuove infrastrutture, il partenariato avrà un "*banco di prova*" per portare avanti un'ambiziosa implementazione delle politiche/misure da attuare. L'anno Europeo della ferrovia 2021 offre una grande opportunità per sviluppare una maggiore consapevolezza in merito a questi temi e per imprimere un nuovo dinamismo al processo - insieme al resto della comunità alpina.

L'anné 2020 d'iMONITRAF! En un coup d'oeil

iMONITRAF! – promouvoir le report modal d'une seule voix

Les pressions relatives au fret routier restent élevées sur les principaux corridors de transit, y compris en 2020 où la pandémie de COVID et les mesures de confinement qui en ont découlé ont conduit à un ralentissement de nombreuses activités économiques. Bien que toutes les régions aient adopté des politiques de report modal, la croissance du trafic routier n'a pas pu être jugulée et le report modal de la route vers le rail connait une stagnation. Le corridor du Gothard est la principale exception grâce à l'approche politique ambitieuse de la Suisse et la finalisation des infrastructures du nouveau tunnel. Le corridor du Gothard est le premier corridor alpin qui est pleinement adapté au profil de 4m et ces expériences peuvent aider à affiner le mix de mesures à adopter dans d'autres régions. Le réseau iMONITRAF! fournit une tribune destinée aux échanges techniques et politiques ainsi qu'à la coordination des mesures politiques et des stratégies. La priorité donnée au report modal pour réduire les impacts négatifs du fret transalpin est une base de coopération et, ces dernières années, les partenaires iMONITRAF! ont fourni des efforts considérables pour mettre en œuvre de mesures tarifaires ambitieuses.

Objectifs 2020 – Fixer l'agenda politique jusqu'en 2030

Les conditions structurelles et les priorités politiques ont considérablement évolué au cours des dernières années, le changement climatique et les technologie innovantes en particulier se sont

imposés dans l'agenda politique. Les partenaires iMONITRAF! ont développé des nouveau scénarios politiques comme base de discussions pour 2030 : seul un scenario combinant des mesures ambitieuses de report modal et l'usage de technologies innovantes garantit une réduction significative du trafic et des nuisances environnementales conforme aux objectifs d'iMONITRAF!. Ces nouvelles données ont été insérées dans une résolution iMONITRAF! signée par les représentants politiques lors d'une table-ronde virtuelle en novembre 2020.

Toll Plus – enfin des avancées au niveau européen

Avec leur résolution commune (2016), le régions alpines appellent à la prise en compte des coûts externes disproportionnés liés au fret dans les Alpes, à plus de flexibilité dans la définition des facteurs de majoration ainsi qu'à une approche financière croisée pour ce qui concerne les revenus. Pour s'assurer que ces propositions soient reprises au niveau européen, iMONITRAF! suit de près le processus de révision de la Directive Eurovignette. Après une période de paralysie, les discussions ont repris en 2020 et certains enjeux clés pour la finalisation d'un compromise sont devenus visibles. Ces principaux sujets concernent notamment une différenciation des charges de CO_2 en particulier les exceptions pour les véhicules à basse ou à zéro émission ainsi que l'augmentation pour les zones de montagne (Art. 7f de l'Eurovignette). Dans leur proposition, les partenaires iMONITRAF! ont souligné la nécessité de plus de flexibilité dans la définition des augmentations, notamment en ce qui concerne l'extension de l'augmentation au-delà du seuil des 25%.

La mise à jour des activités de suivi pour l'année 2019

Environ 23.800 véhicules poids lourds (VPL/jour) ont traversé les corridors iMONITRAF! en 2019. Cela représente une augmentation de 0,6% par rapport à 2018. En 2019, à peu près la moitié de ces véhicules sont passés par le corridor du Brenner ou celui de Vintimille. Le total des véhicules légers par jour (VL/jour) sur les mêmes corridors en 2019 s'élève à environ 81.800, une diminution de 1,6% par rapport à 2018. Les marchandises transportées sur les corridors iMONITRAF! s'élèvent à un total d'environ 160,3 millions de tonnes en 2019, avec une part de 33% pour le rail, quasiment le même total qu'en 2018. Le transport de marchandises par la route a augmenté de 1% pendant que la part du rail diminuait de 3%. Les corridrs suisses de du Simplon et du Gothard ont la part du rail la plus élevée, avec respectivement 91% et 65%, Tauern 34%, Brenner 26%, Fréjus/Mt Cenis 20%, Vintimille 3%.

La concentration annuelle de polluant atmosphérique NO_2 montre une tendance à la baisse générale depuis 2005. Après une décrue, les concentrations de PM_{10} ont réamorcé une légère augmentation en 2019. Les pics de PM_{10} et NO_2 peuvent avoir été causes par les périodes de fortes chaleurs constates durant les mois d'été dans les Alpes. Les nuisances sonores demeurent à un niveau élevé (entre 71 et 80 dB (A) en journée et environ 7 dB(A) durant les heures de nuit).

La pandémie de COVID-19 a réduit les niveaux de trafic en 2020. A premier semestre, la réduction atteint 10 à 20% par rapport à 2019, dans les mêmes proportions pour la route et le rail. En 2020, les prix des péages ont aussi connu des évolutions significatives. Des baisses de 9% pour le Diesel et de 10% pour l'essence en moyenne ont été constatées. Cette tendance concerne tous les pays.

Deux nouveaux indicateurs ont été introduits par rapport à l'année précédente : (1) Concernant les carburants alternatifs, les stations de recharge des véhicules électriques (VE) et des stations-service GPL sont désormais disponibles le long de tous les corridors iMONITRAF!. Pour ce qui

concerne les volets nationaux du transport routier, les variations les plus significatives sur la période 2016-2020 concernent les taxes d'immatriculation, particulièrement en France et en Autriche où les augmentations concernent les VPL Diesel comme les véhicules à essence. Pour ce qui concerne les taxes sur la priorité, dans tous les pays hormis la Suisse, les voitures électriques sont exemptées de cette taxe (année 2020). La réciproque s'applique aux véhicules électriques lourds en Suisse, en Italie et en Autriche.

Meilleures pratiques 2020 – développement d'infrastructures et harmonisation de mesures

Sur le Gothard, les impacts positifs du tunnel de base de Ceneri et le corridor de 4m peuvent désormais être évalués et des leçons tirées peuvent être partagées avec les décideurs autour du Brenner et du Mont Cenis. Plusieurs autres projets d'infrastructures ont été signalés pour améliorer les services transfrontaliers mais aussi pour relier les Alpes aux connections avec les lignes à grande vitesse à travers l'Europe. Pour mettre en place de nouvelles mesures incitatives en faveur du report modal et pour limiter l'impact environnemental du fret, le mix de mesures réglementaires et de mesures relatives au prix a été harmonisé en 2020 notamment avec une extension du tronçon interdit aux véhicules au Tyrol ou avec la décision d'ajuster les catégories de prix en Suisse. Sur le corridor du Brenner, les technologies innovantes deviennent plus pertinentes, notamment les mesures de soutien à l'automatisation, la gestion du trafic et les contrôles dans une approche de "corridor numérique" ainsi que des mesures de soutien au développement des véhicules à basse émission.

2020, une année charnière dans la poursuite de la coopération

Lorsque les nouvelles négociations sur la Directive Eurovignette seront finalisées, en 2021 espérons-le, lorsque le processus de révision de la redevance poids lourds en Suisse sera précisée et que l'impact des nouvelles infrastructures sera connu, le partenariat aura un champ d'expérimentation pour avancer vers de nouvelles réalisations ambitieuses. L'Année européenne du rail 2021 offre une belle opportunité d'attirer l'attention sur ces sujets et d'impulser une nouvelle dynamique avec le reste de la communauté alpine.

iMONITRAF! network – Small but powerful

iMONITRAF! is a network that brings together the Alpine regions along the major transit corridors. Individual policies have shown limited success in reducing negative impacts of transalpine traffic. Hence, the Alpine regions Land of Tyrol, the autonomous Provinces of Bolzano and Trento, the Region Central Switzerland (as partner regions) as well as the Canton of Ticino, the Région Provence-Alpes-Côte-d'Azur and Bavaria (as observers) have continued their cooperation, to develop joint and coordinated solutions to reduce the impacts of transalpine traffic. Launched under the Alpine Space Programme in 2005, iMONITRAF! has become a "Best Practice" project for political involvement, for technical exchanges and networking and for giving a common voice to the Alpine regions with respect to decision making processes at national, macroregional and European level. iMONITRAF! takes a distinctive role in the governance structure: compared to other networks, it is the direct "mouthpiece" of the most affected transit regions, and partners strive at finding coordinated solutions which fit the characteristics and specific needs of the regions.

Objectives 2020 – Policy scenarios as a political decision making tool

Framework conditions and political priorities have changed considerably over the last years, especially climate change has moved up on the political agenda. Also, technological change has taken on a much greater dynamic than anticipated and new insights are available on the functioning of the new railway base tunnels. Thus, it seemed necessary to align iMONITRAF!'s activities to these new developments and to discuss focus topics for the upcoming cooperation phase. As basis for the discussion, new policy scenarios 2030 were developed by the partners, making use of the DPSIR approach which was already used for the previous policy scenarios. The scenarios included a Reference Scenario, a Modal shift Scenario with ambitious modal shift measures, an Innovative technologies Scenario focusing on road transport and a Combined Scenario which integrates the positive aspects of both scenarios. The Combined Scenario illustrates that an effective improvement of the DPSIR indicators is only possible with a reduction of overall HGV transport volumes, confirming the existing strategy and measures of iMONITRAF!. Insights of the policy scenarios were taken up in a new iMONITRAF! resolution which was signed by political representatives during a virtual roundtable discussion in November 2020.

Monitoring system 2020

Taking into account the increasing pressure to take ambitious action on climate change, the impacts of measures targeted at transalpine transport not only with respect to modal shift but also with respect to CO_2 reductions becomes more and more relevant at political level. As the iMONITRAF! indicators did not represent the aspect of decarbonisation up until now, the monitoring system was further developed in the frame of 2020. The technical group of iMONITRAF! with support of EURAC Research has checked the availability of indicators and their comparability and has identified two new indicators which are already implemented in the monitoring system: a new indicator on alternative fuels that illustrates charging stations for electric vehicles (EVs) and service stations providing alternative fuels along the iMONITRAF! corridors as well as a new indicator that compares pricing components of different vehicle technologies.

COVID-19 impacts on iMONITRAF!

With the beginning of the COVID-19 crisis and the lockdown measures, iMONITRAF! partners have been keeping a close eye on the pandemic's impacts on transalpine transport. During the

first lockdown phase, the crisis led to reduced freight transport volumes in spring and early summer 2020. However, a recovery can be observed since then and it can be expected that this drop in traffic numbers will have little effect in long-term perspective. The monitoring data as presented in this Annual Report relates to the year 2019 and thus illustrates the situation before the COVID-19 pandemic. But chapter 5 on monitoring includes a first synthesis of already available traffic data for 2020 – especially illustrating the effects of the first phase of the pandemic in spring and early summer. Much more, the COVID-19 pandemic has illustrated the systemic relevance of a well-functioning transport system on the Alpine transit corridors as they link the economic centres in countries on the southern side of the Alps as well as the globally operating ports in Italy and France with the rest of Europe. This higher awareness on a well-functioning transport system in the Alps improves the visibility of iMONITRAF! and its activities at EU level.

Like all other networks, iMONITRAF! did not only observe the impacts of the crisis but also had to deal with restrictions and new challenges itself: the network management shifted to a fully virtual format in 2020 and even the political roundtable had to be organised as a virtual event in November 2020.

Annual Report 2020 – compact overview on main activities

The Annual Report 2020 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 acting on transalpine transport policy.

The report includes main activities of the year 2020. It starts out with a description of the framework and approach of the new policy scenarios and their role for the iMONITRAF! Political Resolution 2020 (chapter 2) and a summary on activities on Toll Plus (chapter 3). Chapter 4 presents networking activities with EUSALP AG4 and other relevant Alpine-wide institutions, initiatives and projects. In chapter 5, an update of monitoring results is presented, including an interpretation of new indicators as well as information about short-term impacts of the first phase of the COVID-19 pandemic. Chapter 6 presents the update of Best Practices which are framed by developments at European level (chapter 7). Finally, the report includes an outlook on the next two years.

Policy scenarios 2030 as decision making tool

Already in its previous activities, iMONITRAF! has recognised the need for developing policy scenarios as a tool for guiding strategic discussions on common targets and measures. Based on insights of the monitoring system and evaluations of potential instruments, iMONITRAF! has defined a common target system as well as a set of policy instruments in its Transport Strategy. To illustrate the potential effects of these instruments on traffic volumes and the environment up to 2020, a simple evaluation scheme based on the DPSIR approach was developed in 2012 to serve as decision making aid to the transport strategy.

The need for new scenarios

Within the cooperation phase 2019-2020, the need for policy scenarios became obvious again as many framework conditions have changed considerably since 2012 and as technological developments take on a much greater dynamic than assumed in 2012. Also, within iMONITRAF!, the focus topics have changed over the years: Toll Plus with its pricing approach has gained a crucial role within the network and has previously not been integrated in the DPSIR analysis and the objective of decarbonisation of transport has gained importance. Therefore, an update of the scenarios for the timeframe 2030 and a modification of the indicator system to better illustrate climate mitigation became necessary.

As some of the targets are not specified for the 2030 timeframe, the policy scenarios take a new approach and start from a Reference scenario 2030, which is derived from today's situation. In addition, three policy scenarios which consider different rationales are assessed:

- **Modal shift scenario:** assuming a very ambitious modal shift policy, making use of push and pull measures
- **Technology scenario:** assuming an accelerated market diffusion of alternative technologies
- **Combined scenario:** combining the positive aspects of both approaches

The 2030 Reference scenario is derived with the help of a model for transalpine freight transport for the Alpine Arc between Ventimiglia and Tarvisio.

Insights from the new scenarios: less HGV traffic remains common rationale

Results of the DPSIR study serve as decision making aid for political representatives of the iMONITRAF! regions. The scenarios show the improvements that can be achieved by implementing adequate measures and thus serve as basis for the exchange and discussion at political level and motivate political decision makers to continue the cooperation of iMONITRAF!.

Indeed, the new policy scenarios illustrate the need for an ambitious policy approach, coordinated between and along the transalpine transit corridors. The new rail infrastructures will need additional efforts and measures to be put in place, otherwise traffic volumes on the road remain above an environmentally compatible level. The Combined scenario illustrates that an effective improvement of the DPSIR indicators is only possible with a reduction of overall HGV transport volumes. This confirms the existing strategy of iMONITRAF! and illustrates that the measures as proposed in the common strategy of 2012 are still valid (see figure 1).

DPSIR SCENARIOS: COMBINED SCENARIO COMPARED TO THE REFERENCE SCENARIO 2030

Combinded Modals shift and Technology scenario vs. Reference									
Indicators		**Corridors**							
		Ventimiglia	Fréjus/MC	Mont Blanc	Simplon	Gotthard	S.Bernardino	Brenner	Tauern
Driver (Traffic)	HGV	-0,3%	-29,2%	-2,9%	-4,8%	-6,1%	-4,7%	-18,3%	1,5%
	Freight trains	7,7%	72,7%	no trains	3,3%	6,3%	no trains	37,8%	7,0%
Pressure (Emission)	CO_2eq	-12,2%	-37,6%	-14,5%	-16,2%	-17,3%	-16,1%	-28,0%	-10,6%
	NO_x	-21,2%	-44,1%	-23,3%	24,8%	-25,8%	-24,7%	-35,4%	-19,8%
	PM10	-0,7%	-25,6%	-3,3%	-1,6%	-4,6%	-5,1%	-16,7%	1,3%
State (Concentration)	NO_2	-25,5%	-29,1%	-20,5%	n.a.	-29,8%	-29,1%	-26,8%	-25,8%
	PM10	-1,3%	-15,1%	-7,5%	n.a.	-6,7%	-6,3%	-10,3%	-5,6%
Impact (Noise index - Δ dB(A))	Road	0,0	-1,4	-0,0	-1,2	-0,4	-0,1	-0,9	0,0
	Rail	0,2	2,4	no trains	0,2	0,3	no trains	1,5	0,3
Response (%-points)	Modal Split	0,2%	22,0%	n.a.	0,5%	2,4%	n.a	12,1%	1,2%

low change
good
desired
undesired
not good

Figure 1: Percent numbers give the change of the indicators in the Combined scenario (Modal shift and Technology) compared to the Reference scenario.

iMONITRAF! has already laid the foundations for a common policy mix to accelerate both modal shift and technological change, but additional action to overcome the implementation gap is still necessary. The policy scenarios thus highlight the need for further action and provide insights on elements in the policy mix that need to be strengthened.

2.2 Policy scenarios pave the way towards new iMONITRAF! resolution

The policy scenarios 2030 but also the other outputs and achievements of the iMONITRAF! network indicate the need for a new political statement of iMONITRAF! – a political messages that the cooperation of the most affected transit corridors is more necessary than ever before and that the iMONITRAF! main instrument mix is still valuable. But also, the resolution highlights some finetuning needs and specific highlights for further activities:

- **Toll Plus/Eurovignette Directive and its interaction with other steering instruments:** The resolution 2020 reiterates the core proposals as defined in the iMONITRAF! resolution on Toll Plus in 2016. Considering the insights of the policy scenarios 2030, specific considerations need to be given to modulation of toll rates to incentivise the use of low-carbon vehicles.
- **Fostering innovation in rail and combined transport:** iMONITRAF! activities over the last years have shown that innovations in combined transport (CT) and rail will need additional support to ensure that they can keep up in the innovation race. A common approach on subsidies for CT (services and infrastructures), with a focus on fostering innovation, could be one element for further cooperation.

- **Making use of technological change of road transport:** Even with an ambitious modal shift policy, pressures related to road transport will remain high. However, HGVs with alternative fuels or drivetrains have a considerable potential to reduce negative environmental impacts and intelligent digital tools can optimise the overall freight transport system (road and intermodal transport). It needs to be ensured that these technologies are used to their full potential in the sensitive Alpine environment. Also, potential chances and risks of further automatisation need to be considered.

Recognizng the importance of the common voice of the Alpine regions for an effective transport strategy, iMONITRAF! will further support the implementation process of the above mentioned focus topics and of the iMONITRAF! transport strategy in general.

2.3 Political roundtable 2020

Political discussion reconfirms need for action

Political representatives of the iMONITRAF! regions met for a virtual roundtable to discuss the relevance of the new policy scenarios, the follow-up of the political resolution as well as focus topics for the new cooperation phase. In their discussion, the political representatives confirm the results of the policy scenarios: the combined approach is the right way forward and an ambitious modal shift policy shall remain the focus of iMONITRAF! activities. However, they also discussed that both push and pull measures are necessary. In addition to Toll Plus which ensures a fair pricing approach, financial support measures to make rail transport more competitive are needed. Also, political representatives recognised that political steering instruments should not be forgotten in the discussion. The political discussion pointed to some important windows of opportunity that come along with political constellations in Austria and Switzerland.

Vice-Governor of Tyrol Ingrid Felipe
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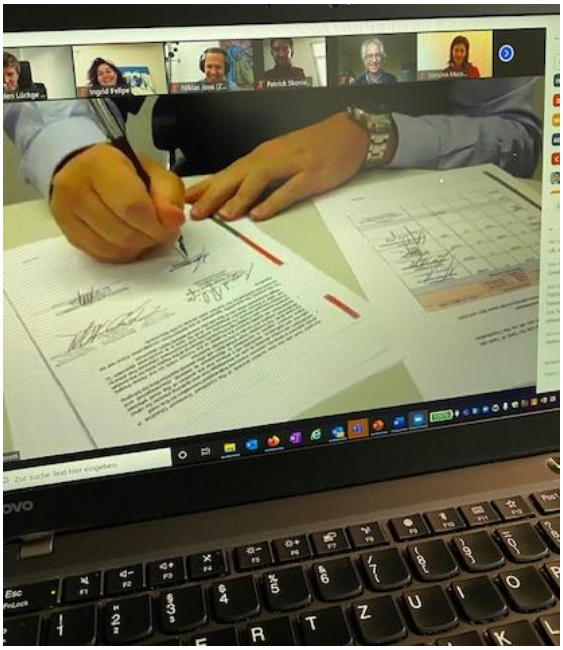

Counsellor for Mobility of Canton Uri Dimitri Moretti
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Figure 2: Discussion during virtual roundtable and signature of new iMONITRAF! resolution 2020

Signing of Political Resolution 2020 and new partnership agreement

As a final milestone of the roundtable, the signing process of the new Resolution 2020 and the partnership agreement was finalised. The partnership agreement continues the cooperation for the next two years 2021-2022 and indicates which activities shall be taken forward:

- iMONITRAF! will continue its ambitious lobbying approach for implementing a Toll Plus system.
- The common monitoring network of iMONITRAF!, as a widely recognised knowledge source, will be further developed. Also, the exchange of Best Practices – as summarised in the Annual Reports - is continued to get insights on developing and optimising common measures.
- The network will strengthen its know-how on support systems for CT, especially regarding incentive systems which foster innovation.
- iMONITRAF! will further develop its role as a knowledge hub and sparring partner for other networks and institutions. Especially will it ensure that the position of the most affected Alpine transport regions is considered in discussions at national, macro-regional and European level. The European Year of Rail 2021 will offer several opportunities for bringing iMONITRAF! insights and results to the broader audience.
- iMONITRAF! will closely analyse the impacts of the Corona crisis on the Alpine freight transport system, also considering the systemic relevance of the Alpine links for the overall European transport network, for the economy, society and the environment. Chances that arise in the wake of Corona recovery programmes shall be used in a coordinated approach to trigger investments which are in line with the overall iMONITRAF! objectives.

3 Toll Plus: finally a step forward – activities in 2020

Developing a common approach towards an ambitious road pricing system remains a key objective of the iMONITRAF! network. Under the title “Toll Plus”, the iMONITRAF! regions developed a common proposal on how to improve and harmonise existing road pricing systems to set ambitious price incentives for modal shift. With their common resolution (2016), the Alpine regions call for a consideration of the over-proportional external costs related to freight transport in the sensitive Alpine environment, more flexibility in using the mark-up factor as well as a cross-financing approach for revenues. Also, the Alpine regions see the need for a differentiated approach to pricing to consider their specific economic situation in the partially remote Alpine region.

Over the last years, iMONITRAF! has lobbied at EU level to ensure that these proposals are reflected in the ongoing revision process of the Eurovignette Directive as the relevant legal framework. After a stand-still, the discussion on the Eurovignette was finally picked up in 2020 and iMONITRAF! joined forces with relevant partners in the Alps to ensure that the specific needs of mountain areas remain a focus in the revision process

Networking in 2020 to strengthen the Alpine voice

After a nearly two-year stand-still of the revision process of the Eurovignette, the discussion finally picked up again in the run-up to the German EU Presidency. A first compromise proposal was already developed for the COREPER meeting (Committee of Permanent Representatives) in mid-June. Some key issues for discussion became obvious during this meeting and compromise proposals were developed during the German Presidency. The major points of discussion are:

- The new Eurovignette includes a new rationale for differentiation of HGV charges. Instead of the current differentiation system on the basis of EURO classes, the differentiation shall be based on CO_2 standards from 2023 onwards to support the decarbonisation of the transport sector. In this respect, discussions focussed on how to define the charging categories for these CO_2 standards and to exemptions for low- and zero-emission HGVs.
- For external costs, it was still debated if external cost charging shall become a mandatory approach (as foreseen by the European Parliament) or if flexibility to apply the charges shall remain.
- Including HGVs < 12t into the Eurovignette was a further point of discussion, especially the time of inclusion of these vehicle classes and possibilities for exemptions.
- Distance vs. time-based tolling was a further heated topic for discussion. At the beginning of the revision process, a complete phase-out of time-based charging had been foreseen but this found opposition from some Member States who wanted to maintain the option of time-based charges for specific parts of their road network.
- As a last point, the mark-up for sensitive regions was an issue for discussion, especially the option to extend the mark-up beyond the current threshold of 25% in a flexible way.

In order to raise awareness at EU level on the Alpine-specific needs in the Eurovignette and to move ahead with the dossier, iMONITRAF! joined forces with CIPRA to develop a common statement on the need for a quick agreement on the Eurovignette. This statement was used for networking by both partners and was also successfully shared in the broader network.

The mark-up factor as a key element for iMONITRAF!

The mark-up factor for sensitive regions (Art. 7f of the Eurovignette Directive) has already been an important issue in the discussion process for the networking activities with the European Parliament in 2018. In its proposal, iMONITRAF! partners have highlighted the need for more flexibility in applying the mark-up and especially in extending the mark-up beyond the current 25% threshold. In 2020, this mark-up indeed became one crucial issue while trying to find a compromise as the positions of some large EU countries differed considerably on this topic. Especially, Italy pointed out the potential negative impacts of a higher mark-up for the Italian economy and that a pragmatic and collaborative approach can't be based on unilateral measures.

During the discussion of the Transport ministers on 8th December 2020, the two main issues of the compromise were again discussed and the diverging positions on the mark-up became obvious.[1] Indeed, the compromise document as prepared for the meeting of the Transport ministers included a new proposal on the mark-up, foreseeing two new pre-conditions for applying a mark-up of up to 50%. These preconditions require that a mark-up beyond 25% can only be implemented if two or more Member States apply the mark-up together and only upon agreement of all Member States which are part of that corridor and neighbouring the Member States in whose territory the section of the corridor to which a mark-up is applied falls.[2]

iMONITRAF! is currently discussing the impacts of this new proposal internally. Also, iMONITRAF! will again have to bring attention to over-proportional external costs in mountain areas.

Outlook on EU process – what will happen in 2021

With the ongoing discussion of the Eurovignette revision at EU level, there will be further need for iMONITRAF! to network and lobby on this topic in 2021. The revision process will soon enter the trilogue discussion process, in which a common position between the Council positions and the position of the European Parliament will be sought. Here, it will be crucial to work closely with Members of the European Parliament (MEPs) from the Alpine region to highlight the need for action.

As soon as the trilogue discussions will be taken up, iMONITRAF! together with its networking partners will develop specific activities – also making use of the new DPSIR scenarios.

[1] The video of the discussion is available online, the statements per country can be viewed separately and give an interesting insight on diverging positions and their background: https://video.consilium.europa.eu/event/en/24276

[2] The position of the EU Council as of 10th Dec 2020 which serves as mandate for negotiations with the Parliament in the triologue discussions can be found here: https://data.consilium.europa.eu/doc/document/ST-13827-2020-INIT/en/pdf

4 Synergies with EUSALP and other networking activities

Synergies with EUSALP AG4

As in previous years, iMONITRAF! has been working closely with the EUSALP Action Group 4 Mobility to bring the activities of iMONITRAF! to the larger Alpine network. In 2020, several activities of AG4 had a special interest for iMONITRAF!, as they either directly build on iMONITRAF! activities or provided new insights for upcoming work:

- Throughout 2020, AG4 has advanced in developing a **political statement** to come to a first political milestone and to achieve a political mandate for the next years of cooperation. This political statement is focusing on freight transport and includes a section on the need for harmonising policy instruments: road pricing, harmonisation of energy taxes and charges as well as incentives for combined transport are part of this proposal and go hand in hand with the new political resolution of iMONITRAF!. It is to be endorsed at the next EUSALP Mobility Conference in 2021.
- The **Assessment methodology for EUSALP AG4 projects** was finalised in 2020 with the help of the dedicated Task Force. In spring 2020, AG4 partners were invited to hand in project proposals that shall be assessed under this labelling approach. During this first call, 29 projects with a remarkable wide variation in terms of project types and geographical distribution were submitted. Their assessment was conducted through external evaluators in summer 2020. Projects that reached 50 out of max. 100 points were selected for obtaining the label "EUSALP transport projects". The evaluation of the projects according to the methodology resulted in a total number of 14 labelled projects, which have received a Letter of Recommendation, signed by the AG4 Co-Leaders EGTC European Region Tyrol-South Tyrol-Trentino and Région Sud Provence-Alpes-Côte d'Azur. This label can be used to communicate the projects' endorsement by the macro-region to decision making authorities who are in the position to promote the implementation of the respective project and/or to provide adequate financial support.[3]
- Also, the new Co-Lead of AG4 focused on an investigation of alternative fuels and propulsion systems in the Alpine Region. The investigation is developed together with an external expert and included a broad data collection and data analysis process on the current status and uptake of different technologies. In the last AG4 workshop in 2020, a SWOT analysis on each of the three alternative fuels under examination (natural gas, H_2 and electricity) was presented. Also, the state of alternative fuels in the EUSALP area has been examined in 2020 and some first recommendations to boost the use of alternative fuels in the Alpine were already identified.

AG4 has also supported the strategic set-up of the new AlpGov 2 framework which provides funding for the EUSALP Action Groups. AlpGov 2 will launch strategic initiatives, both related to specific themes at the core of the Action Groups (Strategic policy as well as cross-sectoral initiatives highlighting the importance of mainstreaming EUSALP in policy dialogue and policies programming). Also, each Action Group will launch strategic sectoral implementation initiatives amongst its core activities. For this strategic sectoral implementation initiative, AG4 will focus on modal shift from road to rail and related policy measures (activity A of its new Work Plan). Additionally, AG4 will contribute to three out of the five Strategic Policy Areas (SPAs):

[3] http://alpine-region.eu/news/labelling-14-projects-macroregional-added-value-fostering-sustainable-mobility-solutions

- SPA 1- Carbon neutral Alpine area: Here AG4 will contribute to the strategic implementation initiative “Green Hydrogen for the Alps”.
- SPA 3 – Smart villages: The contribution of AG4 will focus on “smart mobility” solutions, which is a key element of making villages “smart”. A link to the AG4 Work Plan will be made to activities on cross-border mobility, innovative forms of public transport, mobility and lifestyle and dynamic data collection.
- SPA 4 – Spatial Planning: AG4 will contribute with its work plan activity “Masterplan on secondary networks” with a dedicated strategic implementation initiative.

Alpine Climate Board and new Transport Community

iMONITRAF! has collaborated with the Alpine Climate Board with its main activity to develop implementation pathways for the Alpine Climate Target System 2050 as well as an update of the Climate Action Plan. Regarding freight transport, the implementation pathways as well as the new Climate Action Plan include one pathway focusing on freight transport which has many overlaps with iMONITRAF!: Toll Plus, activities on combined transport as well as steering instruments are also integrated in this approach.

The upcoming activities for implementing the pathways will be conducted by a new Transport Community which brings together all different networks and decision makers at Alpine level (“coordinate the coordinators”). As modal shift will become a focus topic under the new Swiss Presidency of the Alpine Convention, this is a great window-of-opportunity to move ahead in the discussion and to come to a common understanding on some key topics.

Other networking activities

iMONITRAF! closely cooperated with other institutions and stakeholders in the field of transalpine freight transport:

- The Lead Partner of iMONITRAF! also represents the network during the meetings of the Alpine Convention’s Working Group Transport. The WG Transport has recently finalised its mandate and published a comprehensive report on modal shift with many linking points for iMONITRAF!.
- ARGE ALP, the association of 10 states, provinces and cantons of Austria, Germany, Italy, and Switzerland founded in 1972 – and in which iMONITRAF! has its roots – is becoming more active again. The implementation of projects in ecological, cultural, social economic domains with Alpine relevance is at the core of ARGE ALP. In 2021 Tyrol will take over the presidency, foreseeing activities on mobility and transport.
- Several partners of iMONITRAF! are also contributing to the SMARTLOGI project which will be finalised in 2021. Especially the pilot activities as well as the political recommendations of SMARTLOGI are interesting for iMONITRAF! and provide further insights (see chapter 6, Best Practices).

5 Monitoring of iMONITRAF! indicators

As monitoring data for a full calendar year is only published by the different sources throughout the following year, the monitoring data presented in the iMONITRAF! Annual Reports always focuses on the previous year. The Annual Report 2020 thus presents monitoring data for 2019 regarding indicators related to the road traffic volumes, the transported tons and modal split, the concentration of nitrogen dioxide and particulate matter and the exposure to noise.

However, as the impacts of the COVID-19 pandemic are highly interesting for all experts and decision makers, this Annual Report includes a summary of short-term impacts of the first phase of COVID-19 and lockdown measures in spring 2020. These first insights are presented at the end of this chapter as an outlook on the 2020 monitoring chapter.

5.1 Evaluation of monitoring results

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 nitrogen dioxide and particulate matter, the exposure to noise, toll prices and prices of fuel. In addition, two new indicators have been introduced this year: recharging stations with alternative fuels and national pricing components for road transport. To identify the eight transalpine corridors object of the analysis, a consistent colour scale is adopted: yellow = Ventimiglia, orange = Fréjus/Mont Cenis, red = Mont Blanc, blue = Gotthard, light blue = San Bernardino, cyan = Simplon, green = Brenner, violet = Tarvisio/Tauern.

Indicator "Road traffic volumes"

Road traffic volumes can be measured in different ways, according to the measuring stations and the counting systems considered. 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 toll station of Ventimiglia (that is the closest to the FR-IT boundary) has been considered. Regarding the **counting systems**, Brenner and Tarvisio 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 Federal Office of Transport (FOT) has been considered: vehicles belonging to classes 1-3 (passenger cars, motorcycles and light commercial vehicles) are counted as light vehicles; those belonging to classes 4-7 (buses, coaches, HDV trucks, HDV truck trailers and HDV articulated trucks) as heavy vehicles. Finally, vehicles along Italian-French corridors are reckoned according to the system used by the Italian highways: the light vehicle category consists of vehicles belonging to class A (height below 1.3 m), while the heavy vehicle category includes those means belonging to class B (height above 1.3 m) and classes 3, 4, 5 (according to the number of axles).

Figure 3 analyses the **overall annual average daily traffic for all vehicles** in the years 2005-2019. This indicator is the sum of total light and heavy vehicles circulating along the different corridors, divided by 365 (366 in leap years). In 2019, the number of vehicles crossing all iMONITRAF! corridors is about 105,620 per day (with a decrease of 1.1% compared to 2018).

With an average of 32,375 vehicles per day, the Brenner corridor presents the highest traffic flows, followed by Ventimiglia and Gotthard (25,052 and 17,532 vehicles). Tarvisio lies in the

middle with 14,676 vehicles, followed by San Bernardino, which presents a relevant decrease in the numbers of vehicles (about 5,647 vehicles)[4]. Finally, Mont Blanc and Fréjus present the lowest values, with 5,381 and 4,958 vehicles per day.

The analysis since 2005 shows different trends. If we consider the absolute traffic volumes, Brenner presents the highest values and a generalised increase of flows up until 2019 (+25.0%) despite a significant reduction in years 2009-2011 due to the international economic crisis. In the long term (2005-2019), Ventimiglia and Gotthard also show an overall growth of vehicles (respectively +8.9% and +9.1%). In addition, Tarvisio reveals a generalised increase (+16.2%), but for this corridor, data is available only from 2012 onwards. Finally, from 2005 to 2019, Fréjus and Mont Blanc registered a generalised relative increase of more than 10% while absolute values are lower.

In the short term (yearly variation between 2018 and 2019), only Ventimiglia registers an increase of vehicles (+1.6%). The number of vehicles is stable along Brenner (+0.1%), Mont Blanc (+0.4%), Gotthard (-0.2%) and Tarvisio (-0.7%), whereas a decrease is registered at Fréjus (-1.2%)[5] and San Bernardino (but for this corridor, refer to footnote 4).

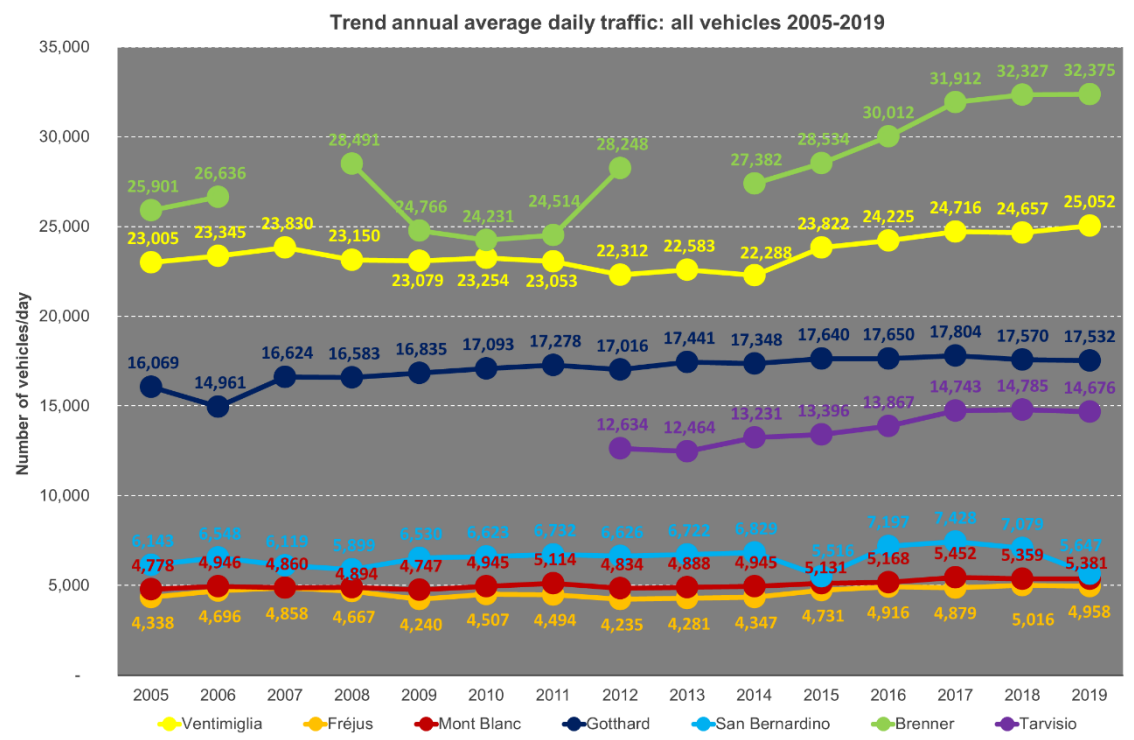

Figure 3: Annual average daily traffic: all vehicles per day

Considering the **annual average daily traffic of heavy vehicles** (Figure 4), the aggregated number of heavy vehicles crossing all iMONITRAF! corridors was at about 23,800 vehicles per day in 2019 (+0.6% compared to 2018). As a reference, the previous yearly variation (2017-2018) was +4.0%.

In 2019, the highest value was registered at Brenner, where an average of 7,377 vehicles per day was counted (+2.4% compared to 2018). Ventimiglia follows with 5,941 vehicles per day (+2.4%).

[4] This relevant decrease is due to a double reason: first, the San Bernardino road tunnel was closed during the nights from 25th August to 1st November 2019; second, data for 2019 was incomplete (data of August and October are missing).
[5] In this report, we always write a decrease with a minus sign, regardless of whether the text refers to a "change", a "trend" or a "decrease".

Along these two corridors, a constant increase has been registered since 2012. The trend is stable at Tarvisio where overall values are in the middle: 3,765 vehicles per day in 2019 (-0.9% compared to 2018). Finally, the values at Gotthard, Fréjus and Mont Blanc were lower, respectively 2,312 (-0,8%), 2,187 (-1.5%) and 1,777 (+1.4%) vehicles per day. Partial data for San Bernardino reveals a further decrease in the number of heavy vehicles, equal to 448 vehicles per day. The restrictive measures and the comparably high toll prices on these four axes (see indicator toll prices) contribute to the explanation of these results.

By analysing the period 2005-2019, several phases can be distinguished: between 2005 and 2007, the flow of heavy vehicles increased at all corridors. This development is followed by a decline until 2009, reflecting the impact of the economic crisis. The year 2010 showed some recovery (except for Brenner), followed by another generalised decrease in 2011-2013. In the last six years, a constant increase has been registered at Brenner and Ventimiglia. Tarvisio, Mont Blanc and Fréjus also showed an increase from 2014 to 2018 and a slight decrease in 2019. A stabilisation is visible along the Swiss corridor of Gotthard. A comparison between values registered in 2005 and in 2019 reveals that only two corridors present a decades-long negative trend: Fréjus (-8.9%) and Gotthard (-14.8%). Brenner and Ventimiglia recovered the effects of the economic crisis (respectively, +16.5% and +18.4%). Mont Blanc also showed an increase (+7.9%). With a growth of +35.6%, Tarvisio registered the highest increase, but in this case comparison is made with 2012 due to a lack of previous data.

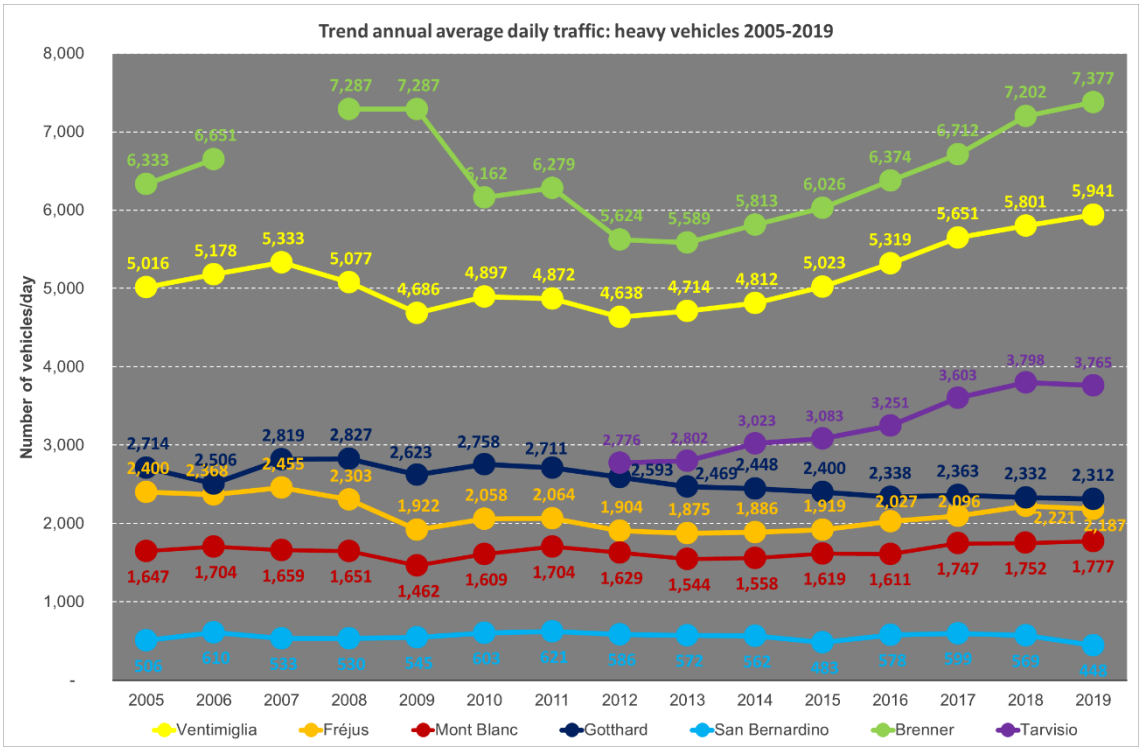

Figure 4: Annual average daily traffic: Heavy vehicles per day

Considering the **annual average daily traffic for light vehicles** (Figure 5), the aggregated number of light vehicles crossing all iMONITRAF! corridors was at about 81,800 per day in 2019 (-1.6% compared to 2018).

The highest values were recorded at Brenner, with 24,998 vehicles per day, followed by Ventimiglia (19,111), Gotthard (15,221), Tarvisio (10,911) and San Bernardino (5,199, but see footnote 4). The number of transits between France and Italy along Mont Blanc and Fréjus was the lowest

(respectively 3,604 and 2,771 vehicles per day). Compared to 2018, except for Ventimiglia (+1.4%), a decrease of less than 1% is visible at all other corridors: Fréjus (-0.9%), Tarvisio (-0.7%), Brenner (-0.5%), Mont Blanc (-0.1%) and Gotthard (-0.1%).

The analysis of the development since 2005 depicts a moderate increase of light vehicles until 2009, followed by a general stabilisation 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 recognised for all corridors in 2014, 2015 (except for San Bernardino, for a temporary closure of the road and for an incomplete dataset), 2016 and 2017. In the last two years, 2018 and 2019 the trend was negative again (overall -1.2% in 2018 and -1.6% in 2019). Comprehensively (years 2005-2019), a generalised increase of flows along all corridors is registered. In relative terms, the highest growth is detected at Fréjus (+43.0%), followed by Brenner (+27.7%), Mont Blanc (+15.1%), and Gotthard (+14.0%). Tarvisio, for which data for 2019 is compared with that of 2012, also reveals an increase (+10.7%).

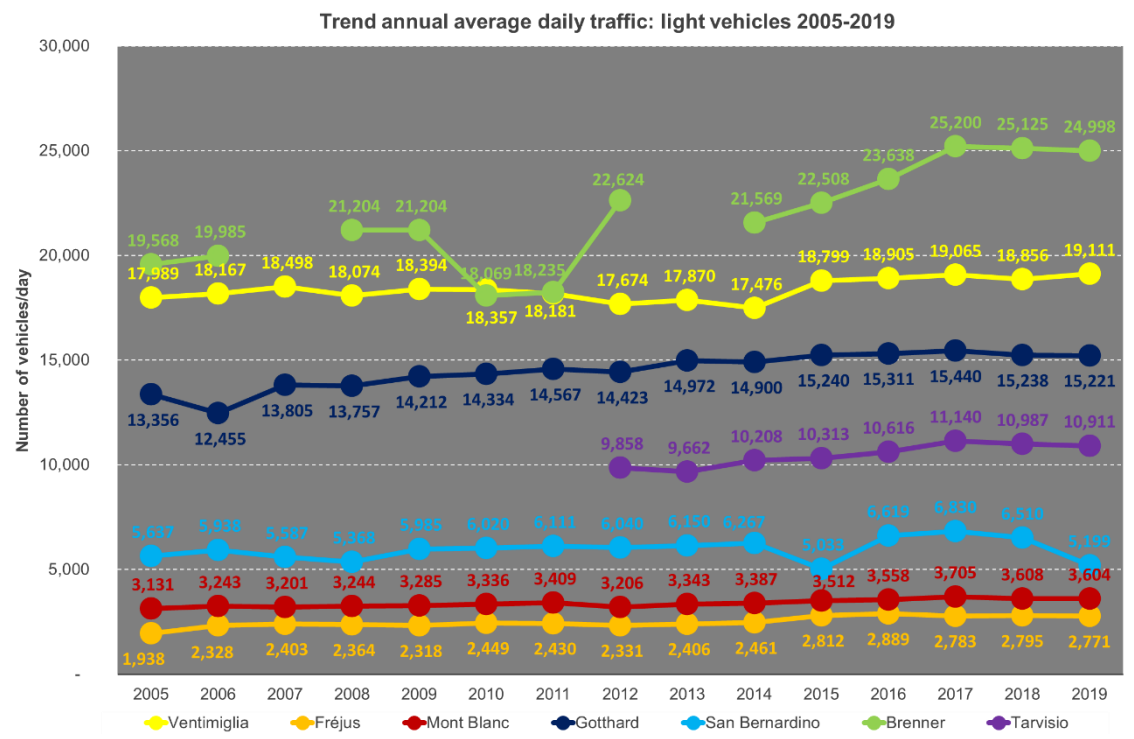

Figure 5: Annual average daily traffic: Light vehicles per day

Indicator transalpine freight transport rail and road

The analysis of the **tons transported per year** is largely affected by the difficulties in finding reliable and consistent data. However, thanks to the information provided by the Swiss Federal Office of Transport (FOT 2020[6]), data for all corridors has been collected until 2019 (Figure 6).

From west to east, 6 corridors of the iMONITRAF! network allow a multimodal (rail/road) connection (Ventimiglia, Mont Cenis/Fréjus, Simplon, Gotthard, Brenner and Tauern), while 2 grant only a road connection (Mont Blanc and San Bernardino). In 2019, 160.3 Mt were carried across the above-mentioned corridors, 108.2 Mt by road (67%) and 52.1 Mt by rail (33%), almost the same

[6] *FOT 2020. Observation and analysis of transalpine freight traffic flows, Key figures 2019*. July 2020. Online at: https://ec.europa.eu/transport/sites/transport/files/2020-alpine-traffic-observatory-key-figures-2019.pdf

amount as in 2018 (-0.3%). Compared to 2018, the goods transported by road increased by 1%, whereas the rail component decreased by about 3%.

Regarding the yearly (2018-2019) variation for single corridors, a constant increase of the overall freight volumes is detected at Brenner (from 52.9 Mt to 53.7 Mt). The increase involves only road transport (passing from 38.8 Mt to 39.9 Mt), while the rail mode decreased from 14.0 Mt to 13.8 Mt. Along Tauern, the other IT-AT corridor, the number of tons transported is less than half of the Brenner and it has decreased by 1.7% in the past year: 23.5 Mt in 2019 against 23.9 Mt in 2018. The decrease affects both road (passing from 15.6 Mt to 15.4 Mt) and rail (from 8.3 Mt to 8.1 Mt). All Swiss corridors register a decrease in transported freight. At Gotthard, the total amount passed from 23.7 Mt to 23.1 Mt (-2.7%): this decrease involves both road (from 8.4 Mt to 8.0 Mt) and rail (from 15.3 Mt to 15.1 Mt). At Simplon, the decrease of volumes was caused by rail (from 12.6 Mt to 11.5 Mt) whereas the road component remained stable at 1.1 Mt. In 2019, at San Bernardino about 1.7 Mt were transferred by road (-9.1% compared to 2018). Different from the Swiss corridors, the total amount of transported tons increased along the French-Italian corridors. However, the percentage of rail transport continued to remain low. In 2019 at Ventimiglia, it counted for about 3% of overall freight transport (0.7 Mt out of 21.7 Mt). In 2018, the percentage was at about 4%. Along Mont Blanc, where no rail connection is available, goods transported by road were similar to the previous year (9.5 Mt). Finally, the incidence of rail transport at Fréjus/Mont Cenis was higher as compared to other French-Italian corridors: it counted for about 20% of the total (2.9 Mt out of 14.5 Mt), +2% compared to 2018.

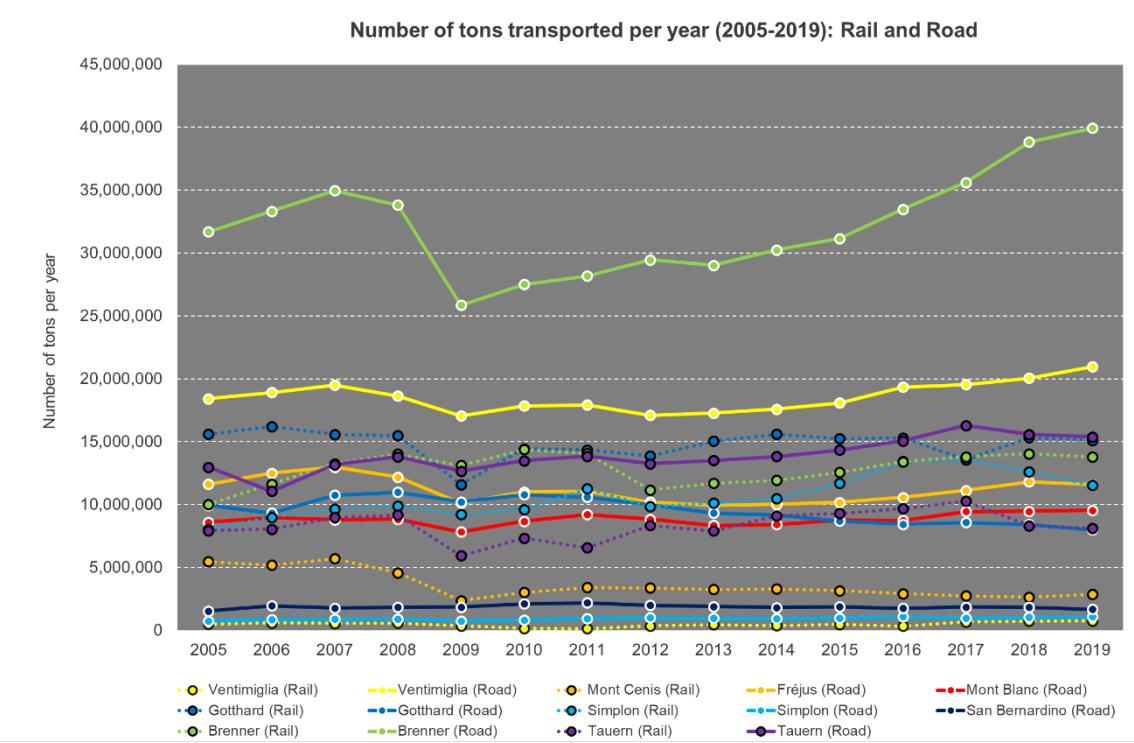

Figure 6: Transported tons per corridor

As far as concerns the **modal split** (Figure 7), the Swiss-Italian corridors of Simplon and Gotthard were the corridors with the highest share of rail and the only ones that exceeded the 50% of goods transported by train. Volumes at Gotthard increased in the period 2009-2014 and remained stable at 64% in the years 2015-2016, decreasing to 61% in 2017 (due to a construction accident of the

Oberrheinstrecke in Rastatt) and again increasing in 2018, reaching 65%, which is the same percentage as in 2019. This percentage is the highest value in the period 2005-2019. Simplon always presented values above 90%, and in 2019, the share was at 91%, which is 1% less than in the previous year. Along Brenner, rail transport had shown a decreasing trend since 2010, ending at 28% in 2014. In 2015 and 2016, a 1% increase was visible (from 28% to 29%), but in 2017, 2018 and 2019 the share decreased again by 1% per year, reaching the values of 2006 (26%). In 2019, the percentage at Tauern was 34% for rail (1% less than in 2018 and constantly decreasing since 2015) and 66% for road. Referring to French-Italian corridors, data referred to 2019 shows an increase of the rail component for Fréjus/Mt. Cenis (20% rail, 80% road). Ventimiglia, in contrast, reveals a decrease (3% rail, 97% road). Finally, Mont Blanc and San Bernardino do not have a transalpine rail connection, therefore 100% of freight is transported across their corridors on road.

When referring to the **railway component** (Figure 8), it is also possible to distinguish the type of service between conventional transport, unaccompanied combined transport (UCT) and accompanied combined transport (ACT). Along the two French-Italian corridors with rail connection (i.e. Ventimiglia and Mont Cenis), UCT and conventional rail transport play the major role. In 2019, along the Ventimiglia line, UCT constituted 42% of rail movements and the remaining 58% were conventional. Along Mont Cenis, UCT counted for about 58% and conventional transport for 41%, while ACT (with the service between Aiton and Orbassano) was limited to 1%. The condition was similar along the two Swiss corridors, with UCT as the main component (67% at Gotthard and 73% at Simplon), followed by conventional transport (33% at Gotthard and 14% at Simplon). At Gotthard, ACT service was suspended in December 2018, while it was still performed at Simplon (13%), mostly thanks to the connection between Freiburg and Novara. Along Brenner, UCT counted for 57% of total freight transport, followed by conventional transport and ACT (connection Wörgl-Brennersee-Trento), with, respectively, 23% and 20% of total volumes. Finally, at Tauern, most of the rail traffic (67%) is conventional, followed by UCT (33%). ACT is negligible (lower than 0.5%).

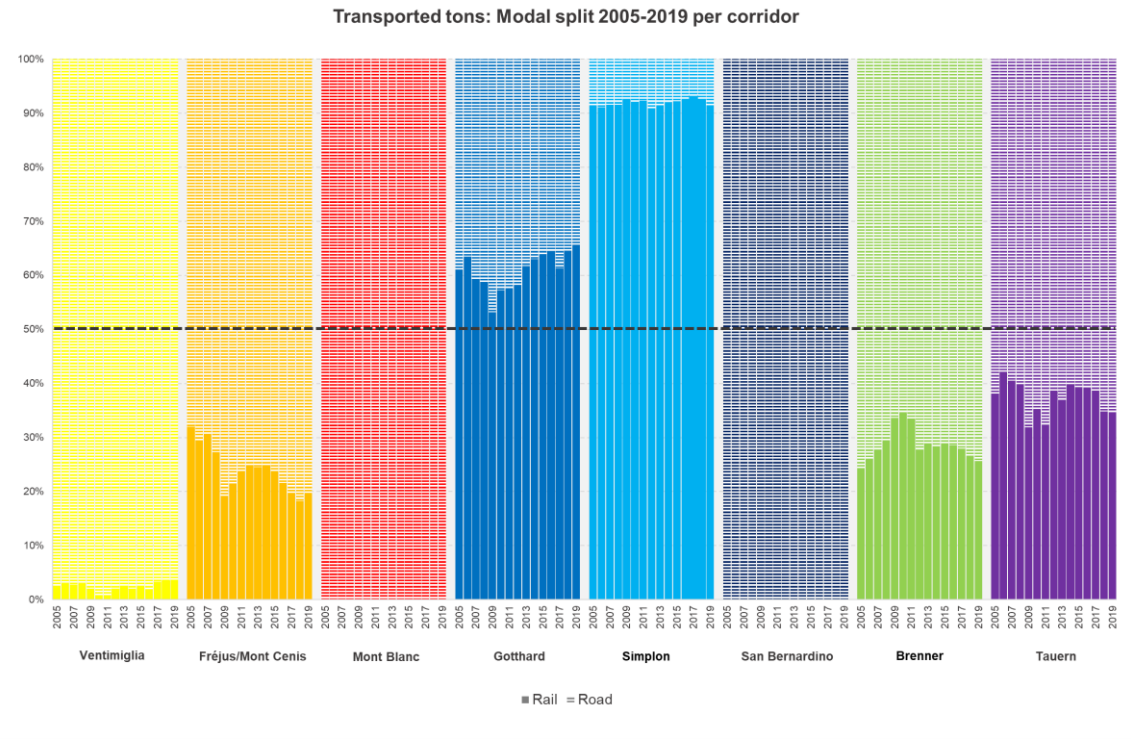

Figure 7: Transported tons, modal split per corridor

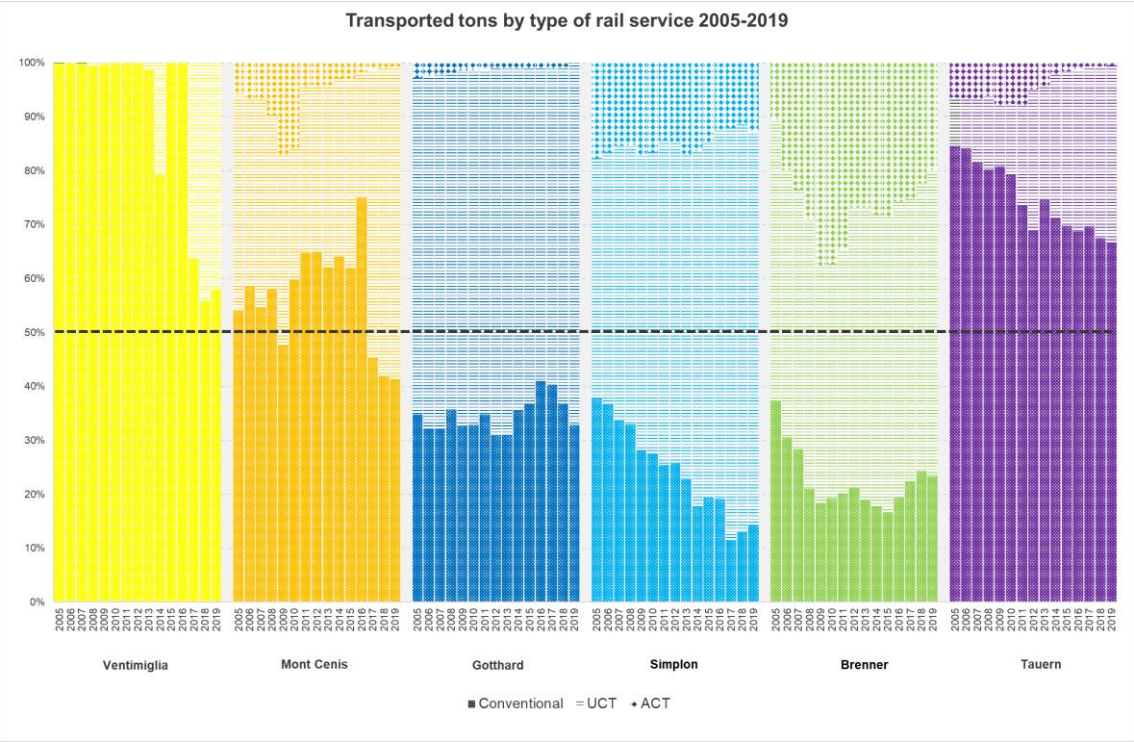

Figure 8: Transported tons by rail, type of services

Indicator air pollution concentrations measured

Figure 9 illustrates the trend in annual average for **nitrogen dioxide (NO_2)** ambient concentrations between 2005 and 2019 near the highways, since NO_2 is mainly related to road transport (and particularly to diesel vehicles). Compared to the past years, two changes in the measurement stations have to be mentioned. First, the South Tyrolean station of Velturno/Feldthurns was deactivated at the end of 2016 and the station of Bressanone sud/Brixen süd (located 1.5 km northward from Velturno/Feldthurns, south of Bressanone/Brixen) has replaced it since 2018. Now that data from 2 years is available, this station has been introduced in the monitoring stations. South Tyrol is thus described by the stations of Velturno/Feldthurns (years 2005-2016), Bressanone sud/Brixen süd (years 2018-2019) and Ora/Auer (years 2005-2019). Second, since NO_2 is not monitored at Tolmezzo for 2019, it is flanked with the station of Ugovizza-Tarvisio. This station was activated at the end of 2014 and data is available from 2015. Finally, data for the station of Vallée de la Maurienne is not available for 2019.

In general terms, in the same line of the previous year, the year 2019 registered a decrease except for Quiliano, which showed a slight increase, and Erstfeld, which revealed the same value as the previous year. The highest concentrations in 2019 were measured along the Brenner (green colour scale), Mont Blanc (red) and Gotthard (blue) corridors, while lower values are visible along Fréjus, Ventimiglia, San Bernardino and Tarvisio (orange, yellow, light blue and violet colours). This result is related to the road traffic volumes presented in Figures 3-5, but it includes other effects, as well: composition of vehicle fleet (share of vehicle categories, share of EURO classes) and meteorology.

In 2019, the annual average values of NO_2 exceeded the EU annual limit value of 40 µg/m^3 for the French station of Chamonix-Bossons (Mont Blanc) and for some monitoring stations of the Brenner corridor: Vomp, Avio and Bressanone sud/Brixen süd. With 54 µg/m^3, this last station also registered the highest values for 2019. Along the Gotthard axis, the stations of Moleno and

Camignolo exceeded the Swiss national annual limit of 30 µg/m³. Values were below the EU limit in Quiliano (Ventimiglia), Entreves (Mont Blanc), Susa (Fréjus), Altdorf (Gotthard), Rothenbrunnen (San Bernardino), Ugovizza-Tarvisio (Tarvisio), Ora/Auer, Mutters and Oberaudorf (Brenner).

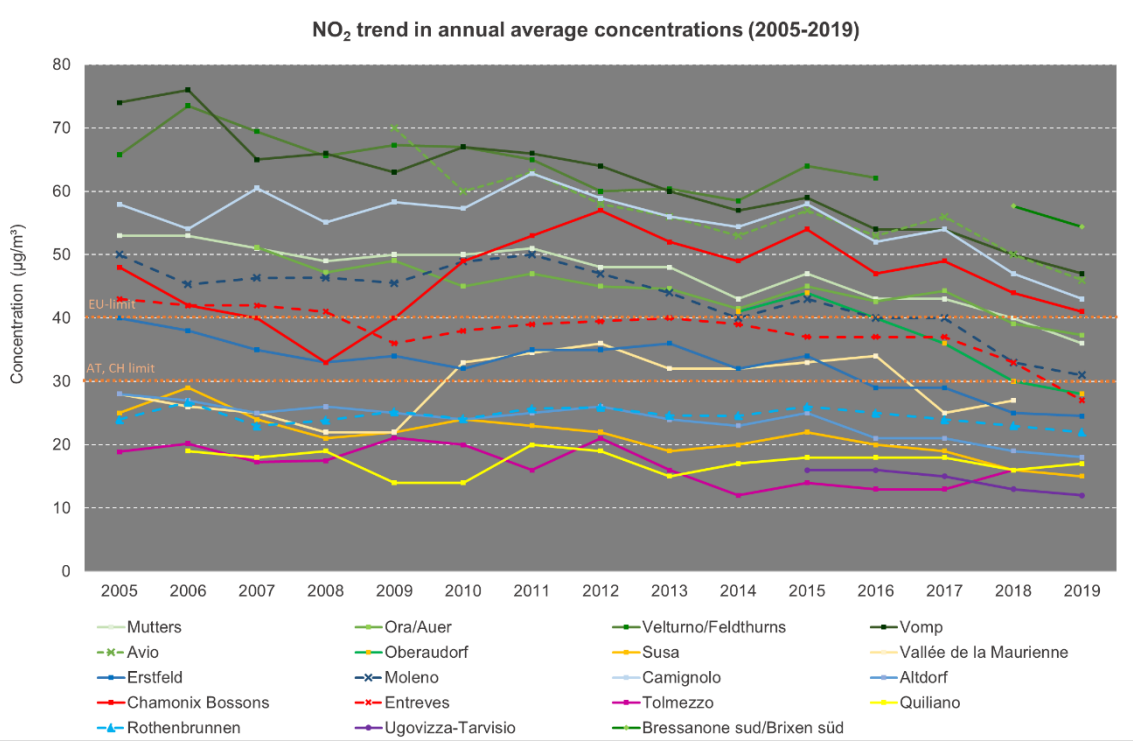

Figure 9: NO_2 trend in annual average concentrations[7]

Similar to the description of NO_2, the analysis of the **particulate matter (PM_{10})** concentration is restricted at the roadside stations (Figure 10). For this indicator, the two new stations of Bressanone sud/Brixen süd and Ugovizza-Travisio are considered, too. Furthermore, data for the stations of Vallée de la Maurienne (Fréjus) and Entreves (Mont Blanc) is not available for 2019.

As compared to 2018, a general reduction of PM_{10} concentrations is visible, except for two stations which had the same value (Chamonix Bossons and Tolmezzo) and for one station (Quiliano), which revealed an increase in the annual average. Quiliano registered the highest values, with 21 µg/m³. On the other hand, the lowest value was measured at Ugovizza-Tarvisio and Erstfeld (10 µg/m³). The limit value for the annual average that has been fixed by the EU (40 µg/m³) was not exceeded at any station and the limit values of Austria and Switzerland (20 µg/m³) were not exceeded at any Austrian or Swiss station.

A time series analysis reveals a fluctuating trend of this indicator. After a general decrease between 2005 and 2014, concentrations started slightly increasing until 2018 and then decreased again in 2019. Peaks in 2006, 2011, 2015, 2017 may have been caused by extremely hot weather periods in the Alps during summer months. A similar feature – but less significant – may also be recognised for NO_2 (see Figure 9). For PM_{10}, the value in 2017 in the Vallée de la Maurienne marks an exception, which has not been explained thus far.

A couple of caveats is necessary: PM_{10} concentrations are (more strongly than NO_2) influenced by sources other than transport such as wood heating installations. Secondary PM_{10}, built from

[7] 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.

gaseous precursor concentrations (NO_x, SO_2, NH_3, VOC), can contribute to half of the PM_{10} concentrations measured. The long-term trends can therefore not only be traced back to the development of PM_{10} emissions of road vehicles.

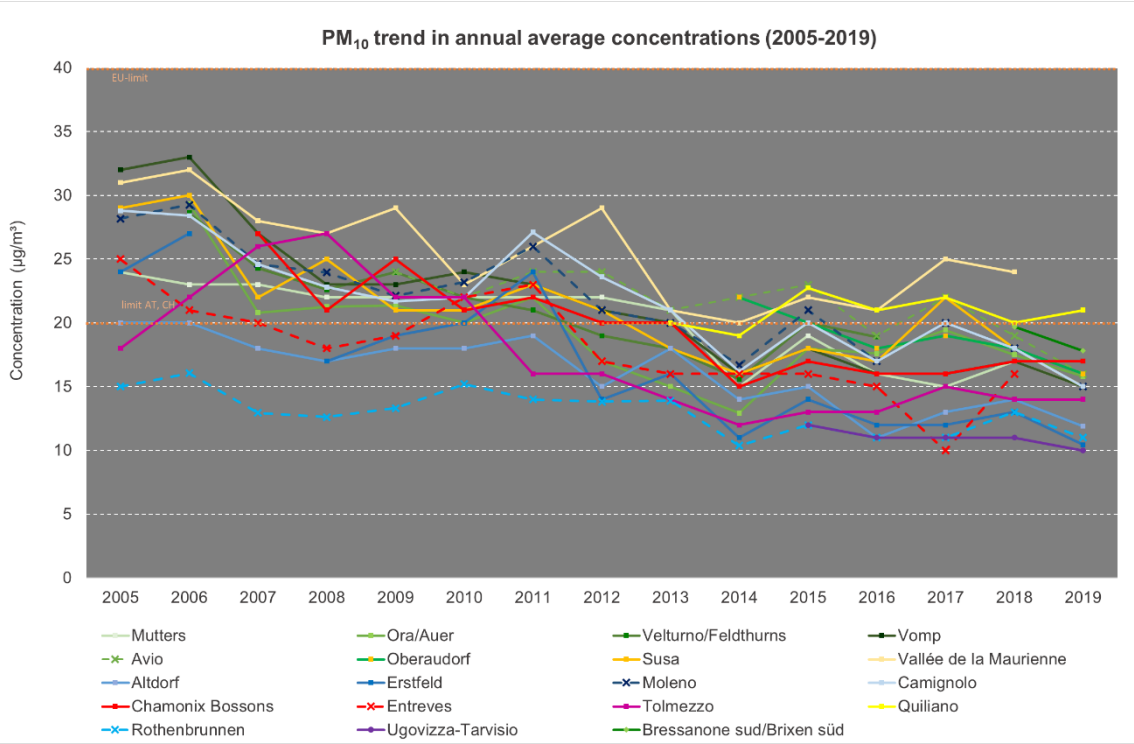

Figure 10: PM_{10} trend in annual average concentrations[8]

Indicator noise

Noise has been measured through the **indicators L_{den} and L_{night}**. The former defines the overall level registered during the day, evening and night and is used to describe the general annoyance caused by noise. The latter is the indicator for sound levels during the night and it is used to describe sleep disturbance. A comparison between the values registered in different corridors may be not appropriate due to different distances between the microphones and the streets. 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 2005-2019 (measuring stations of Camignolo, Reiden and Courmayeur), whereas noise is not monitored along Brenner and Ventimiglia. Only partial data is available along San Bernardino (Rothenbrunnen), Tarvisio (Camporosso), Fréjus (Bardonecchia) and Mont Blanc (Châtillon). Regarding the first station, data collection started in 2012 and is currently ongoing; in Camporosso and Bardonecchia, updated values are not available: the monitoring period was limited to 2011-2017 in the former case and to 2010-2014 in the latter. In Châtillon, data collection is available for 2010-2019.

Figure 11 and Figure 12 show that in 2019, L_{den} lies in the range between the 80.2 dB(A) and 71.4 dB(A), while L_{night} lies between the 72.7 dB(A) and the 63.4 dB(A). As in previous years, the highest value for both cases was registered at Reiden and the lowest at Châtillon.

[8] The value for Vallée de la Maurienne in 2011 represents the average of the years 2010 and 2012.

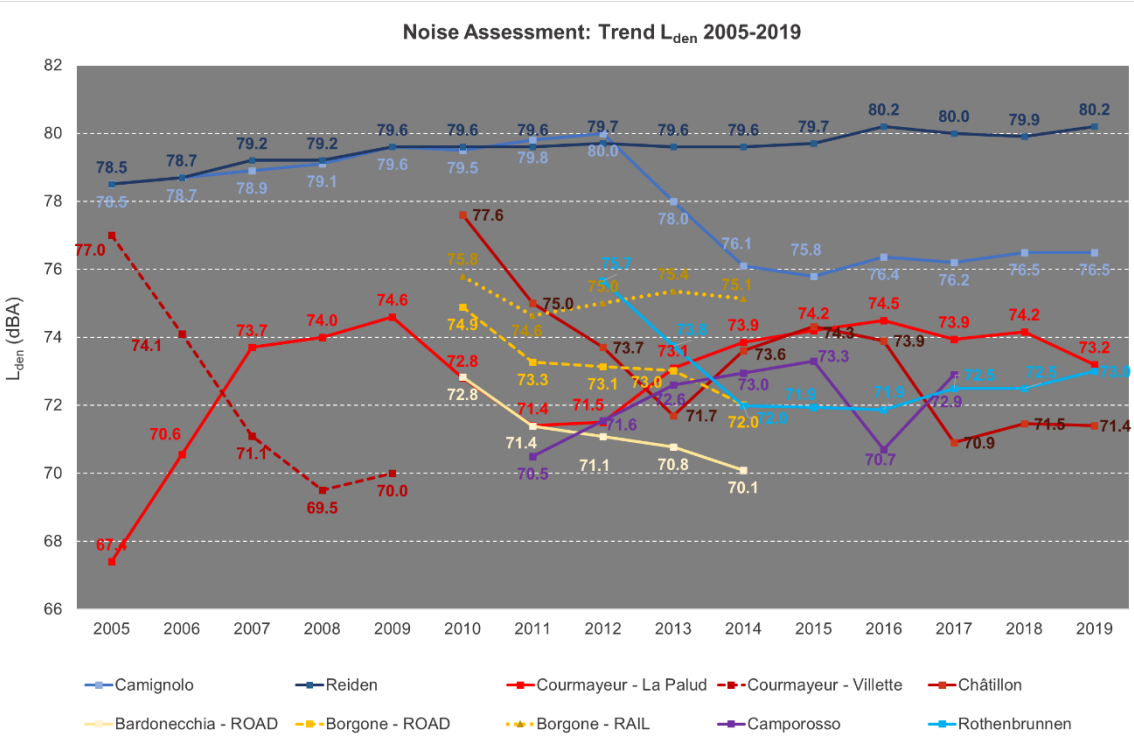

Figure 11: Daily average noise levels L_{den} trend[9]

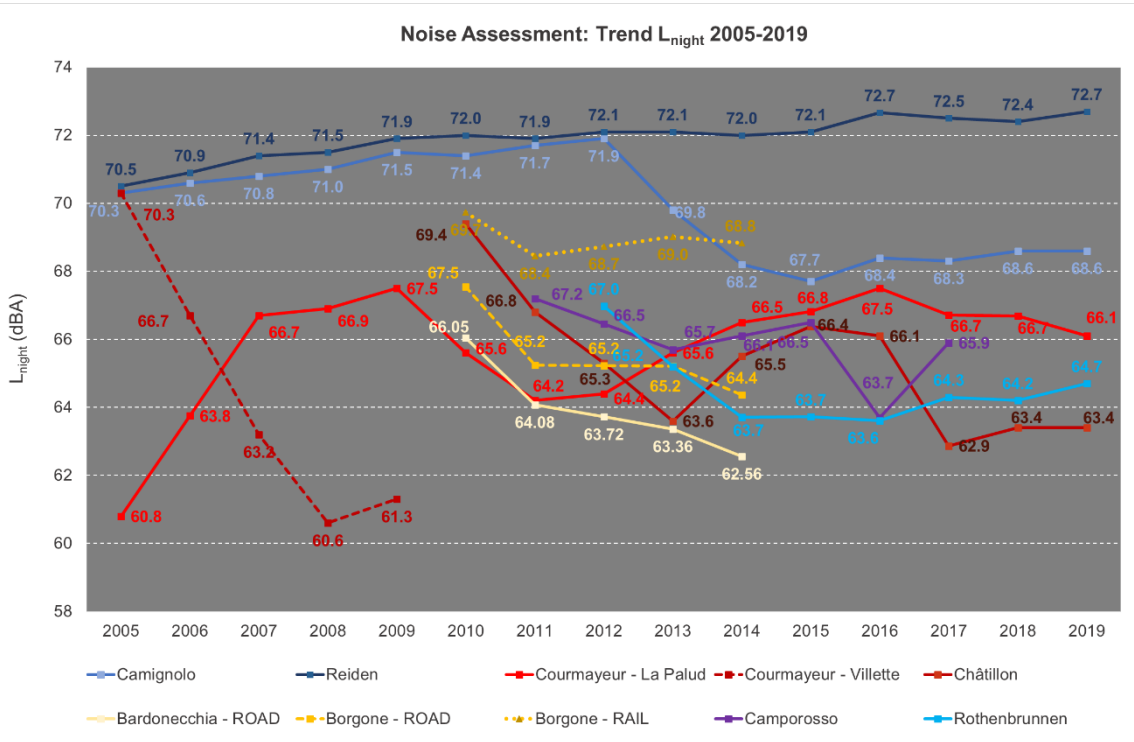

Figure 12: Average noise levels during night L_{night} trend[10]

[9] 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.

[10] 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.

Reiden revealed a slight increase for both L_{den} and L_{night}. Stable noise levels are recognised at Camignolo, with 76.5 dB(A) for L_{den} and 68.6 dB(A) for L_{night} and at Châtillon, with 71.4 dB(A) for L_{den} and 63.4 dB(A) for L_{night}. Along the Mont Blanc, a decrease was registered in Courmayeur-La Palud for both indicators (from 74.2 to 73.2 dB(A) for L_{den} and from 66.7 to 66.1 dB(A) for L_{night}). For Rothenbrunnen, located along San Bernardino, an increase is visible (from 72.5 to 73.0 dB(A) for L_{den} and from 64.2 to 64.7 dB(A) in L_{night}).

Indicator Toll prices

Toll prices are calculated as the distance between the entering and exiting toll stations of localities that are situated along the transalpine axis under evaluation and that are relevant nodes of the infrastructural network. Origins and destinations have been defined as follows:

- Ventimiglia: from Marseille (FR) to Genova (IT) via Ventimiglia (381 km)
- Fréjus: from Lyon (FR) to Torino (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 Basel (CH) to Chiasso (CH) via Gotthard road tunnel (288 km)
- San Bernardino: from Chur (CH) to Chiasso (CH) via San Bernardino road tunnel (169 km)
- Brenner: from Munich (DE) to Verona (IT) via Brenner pass (415 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 a distinction between EURO-classes II, V and VI. The sums for the alpine passages for the year 2020 are visualised in Figure 13. The prices refer to the prices for a single passage (in direction north-south). 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 (passenger cars). For these corridors, return tickets and yearly subscriptions are also available, which would lower the cost for a single passage. For Switzerland, only a yearly ticket is available, meaning that only the first passage costs € 37.36, while all subsequent passages within the same year are free.

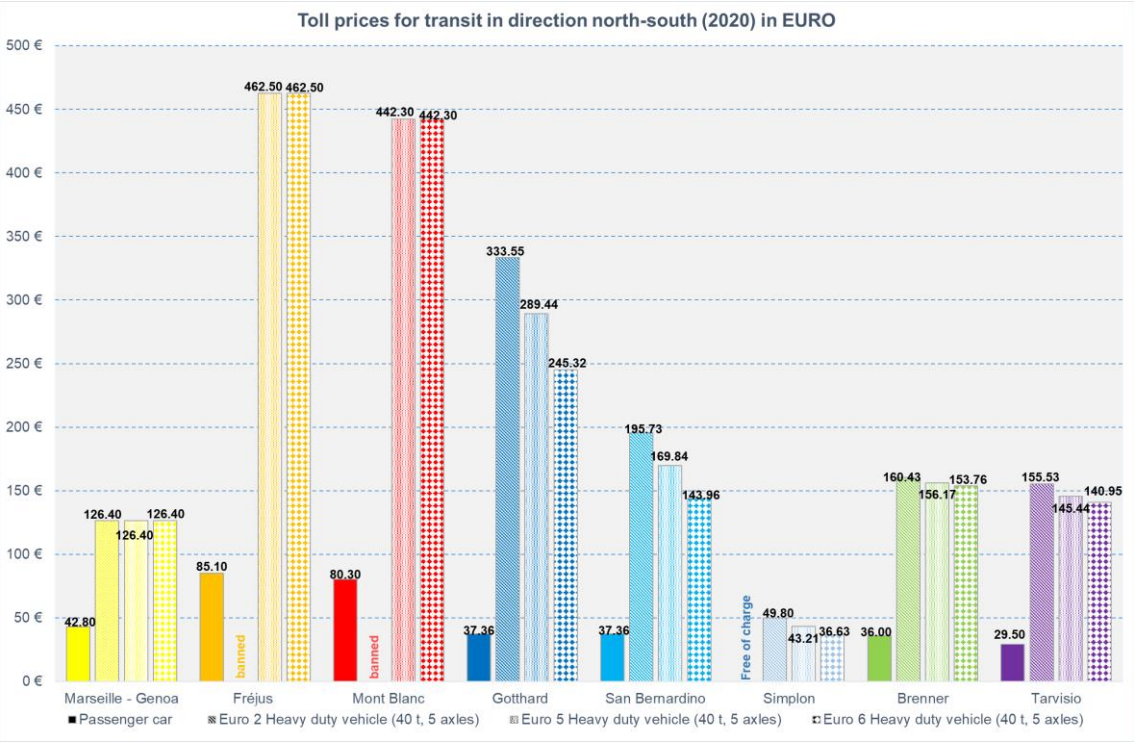

Figure 13: Toll Prices for a single transit on the iMONITRAF! corridors in direction North-South

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 (€ 47.10 instead of € 46.30 for both Fréjus and Mont Blanc). With € 42.80, € 37.36 and € 36.00, the charges for Ventimiglia, the Swiss highways and Brenner are in the midrange of the corridors, while the costs for a passage on Tarvisio are the lowest (€ 29.50). It is relevant to highlight that whereas the charges for the Swiss highways and Brenner have increased from 2019 to 2020 (+3.7% and +2.0% respectively), those for Ventimiglia have decreased (-2.7%). This relates to the exemptions from the payment of tolls introduced along some highway sections in Liguria, which have been introduced because of the disservice caused by the inspection and maintenance works along the network. Referring to Brenner, it has to be mentioned that German highways are free of charge for passenger vehicles, so the toll is derived only from Austrian and Italian components. Finally, also the Simplon corridor is free of charge for passenger cars: indeed, the highway A26 ends in Gravellona Toce, and to reach the national border, a state road (SS 33) is available, and for the Swiss part, the Vignette is not due. Data referred to this corridor has been fine-tuned and is not comparable with previous reports.

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 (of which the distance is considerably shorter than that of the other corridors), Ventimiglia, Tarvisio and Brenner charge the lowest tolls for a passage. Different than for light vehicles, German highways are not free of charge for heavy vehicles, so this component concurs in defining the tolls along the Brenner corridor. As opposed to Switzerland, Germany and Austria, the Italian and French toll systems have not yet applied a distinction of charges between single emission classes. For instance, at Ventimiglia, the toll for EURO II and EURO VI is the same (€ 126.40). In 2020, a slight reduction of prices has been registered

as compared to 2019. This is due to the Italian side and partially derives from the collapse of the Morandi bridge (replaced by the Genova San Giorgio viaduct in August 2020). Moreover, it relates to the exemptions from the payment of tolls introduced along some highway sections in Liguria because of the disservice caused by the inspection and maintenance works carried out along the network (as happened for passenger cars).

The toll of the Italian part of the Brenner corridor (from Brenner to Verona) is € 40.20 for each EURO class. On the contrary, the German and Austrian systems (from Munich to Kufstein and from Kufstein to Brenner) introduce differences to the tolls according to the EURO classes. In Germany, tolls are € 20.50 for EURO II, € 16.24 for EURO V HDVs and € 15.34 for a EURO VI HDV; in Austria, € 99.73 for EURO II and V HDVs, € 98.22 for a EURO VI HDV. This explains the slight difference visible in Figure 13. The biggest difference among EURO classes is visible at Mont Blanc and Fréjus, where EURO II vehicles are not allowed 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 (€ 343.60 compared to € 338.00 for a EURO V or EURO VI truck). Finally, along the Gotthard corridor, a EURO V truck pays € 289.44, about 87% of the charge of a EURO II vehicle (€ 333.55). This percentage further lowers to 74% when EURO VI (€ 245.32) and EURO II trucks are compared.

This analysis shows the absolute costs of selected trips. For freight forwarders, the distance-specific costs – costs per vehicle kilometre – are another important criterion for choosing the most convenient corridor and transport mode. To this aim, Figure 14 shows the specific costs by dividing the absolute costs presented in Figure 13 by the number of kilometres for each corridor, as expressed at the beginning of this section. The order of corridors from highest to lowest costs remains similar to absolute costs: if we consider a heavy vehicle with EURO VI technology and 40 t, specific toll prices are the highest at Fréjus and at Mont Blanc (€ 1.94/veh-km and € 1.55/veh-km), they lie in the middle for Swiss corridors (€ 0.85/veh-km at Gotthard and San Bernardino) and are the lowest at Tarvisio (€ 0.45/veh-km), Simplon and Brenner (€ 0.37/veh-km) and Ventimiglia (€ 0.33/veh-km). Compared to the annual report 2019, these values are slightly higher (between 1 and 3 Eurocents per km) for all corridors apart from Brenner and Ventimiglia, where they are unchanged. Similar slight increases are registered for EURO II class HDVs. This applies to all corridors but Ventimiglia (same value of 2019).

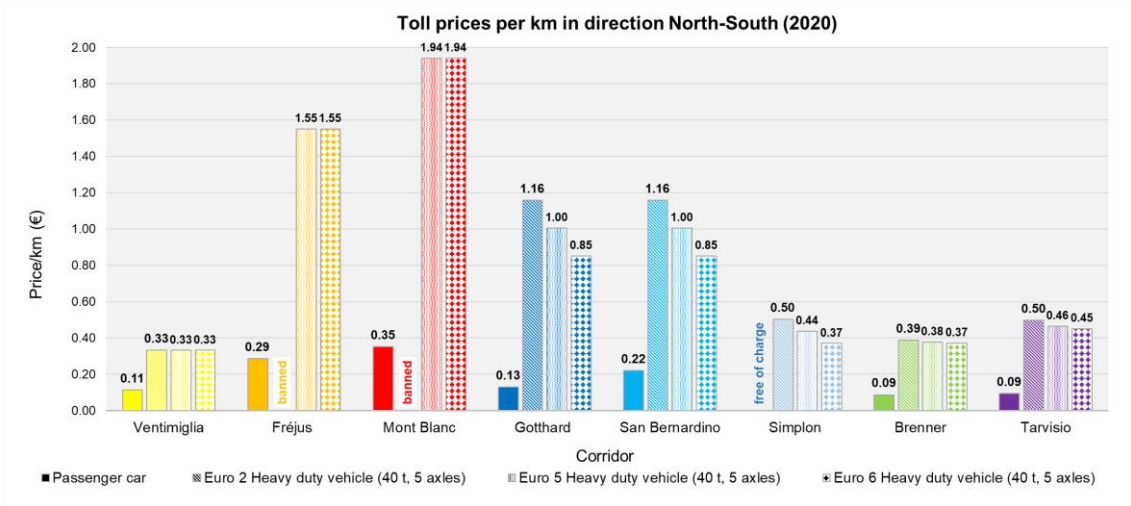

Figure 14: Distance-specific toll prices (€/km) for a transit on the iMONITRAF! corridors (direction North-South)

A general feature of absolute and specific costs is that high tolls correlate with low traffic volumes and vice versa: recalling Figure 3 and Figure 13, Fréjus and 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 (normal petrol) at the national level in Austria, France, Italy, Switzerland and Germany. The values shown in **Figure 15** are the annual averages of the values officially registered in every country on four days in all seasons (15th Jan, May, Jul, Oct). Data is provided by ÖAMTC for Austria, the Federal Statistical Office for Switzerland SFSO, ISTAT for Italy, INSEE for France and ADAC for Germany. Average prices in 2020 were € 1.24 for diesel and € 1.30 for petrol.

In comparison to 2005, an overall increase of prices happened in all countries, but with a significant fluctuation during the economic crisis 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 between 2014 and 2016 for Italy, France and Austria and can be explained by the drastic plunge in prices of crude oil. In Switzerland, the decrease seems less marked (diesel) or even in countertrends (petrol). However, this result must be interpreted by considering the unit of measure 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 Euro and to lower the interest rate. If the costs of petrol and diesel in Switzerland were expressed in CHF, the time series would show the same features as those in the other countries, the value for 2015 would be about 15% lower than in 2014. After four years of decreasing prices, 2017 and 2018 show a general increase, which has led to the levels of the year 2015. For 2019, a slight reduction of prices is recognised except for Switzerland. Again, if the variation of the exchange rate is accounted[11], the trend is the same as in the other countries in this case, too. In 2020, a relevant decrease of prices is registered for all countries as compared to 2019 (about -9% for diesel and -10% for petrol, refer to footnote 5). This is linked to the crisis caused by the COVID-19 pandemic in spring 2020, which has led EU countries to introduce strong travel restrictions. In turn, these restrictions have caused a fall in fuel prices.

Data for 2020 show also three main clusters in terms of fuel price ranges. In the first one, there are the Austrian prices for both diesel (€ 1.05) and petrol (€ 1.09); as well as the German diesel price (€ 1.12). These values are considerably lower than the average values in the iMONITRAF! countries. In the second cluster, there are fuel prices either in line with such average, i.e. German petrol (€ 1.26), French diesel and petrol (€ 1.28 and € 1.38), Italian diesel (€ 1.32) and Swiss petrol (€ 1.35). Finally, to the third cluster belong the highest prices (significantly over the average): Italian petrol (€ 1.43) and Swiss diesel (€ 1.44).

[11] Exchange rate EUR/CHF 2017: 1.111, 2018: 1.155, 2019: 1.112, 2020: 1.078 (https://www.estv.admin.ch/estv/de/home/direkte-bundessteuer/wehrpflichtersatzabgabe/dienstleistungen/jahresmittelkurse.html)

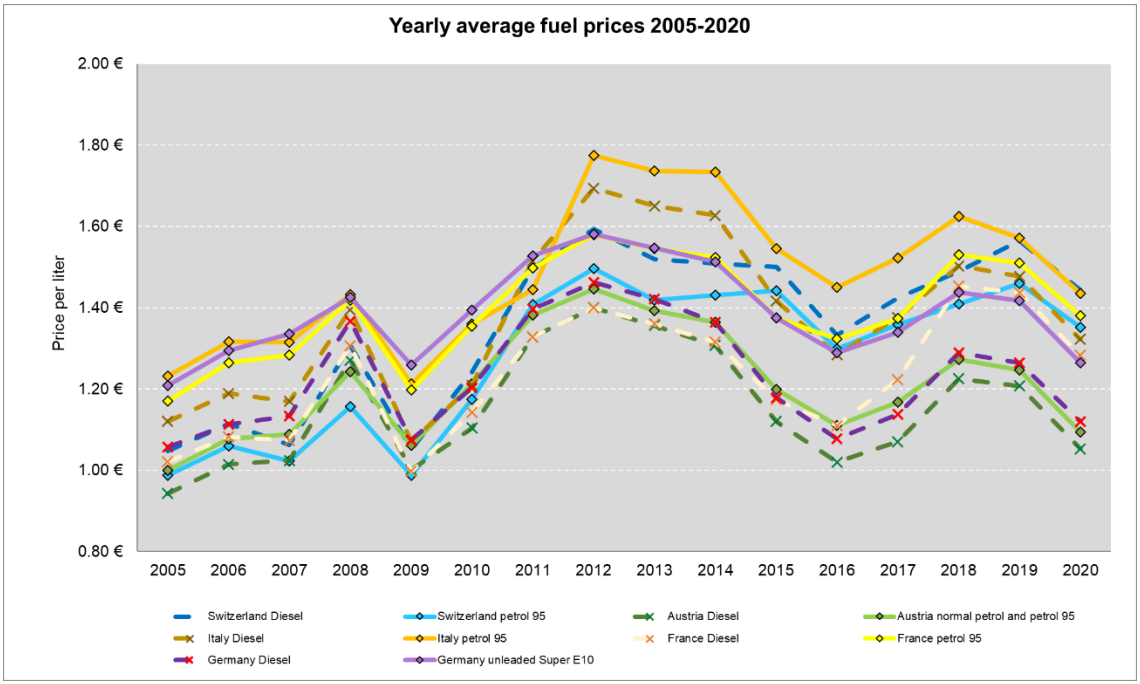

Figure 15: Annual average fuel prices in € per litre.

Indicator Alternative Fuels per corridor

The EU transport sector still heavily relies on fossil fuels. In particular, road transport accounts for the largest share of oil-derived fuels and was responsible for 71% of total EU energy consumption in 2017[12]. In this framework, the diffusion of sustainable fuels and renewable energy sources is highly encouraged by the EU[13]. **Alternative fuels** (AFs), by alleviating the dependence on fossil fuels, have prominent advantages for reducing the emission of greenhouse gases (GHG) and air pollutants. However, their use requires the development of adequate AF charging infrastructures.

The new indicator on AFs aims to highlight the **recharging stations for electric vehicles (EVs)** and the **service stations providing alternative fuels** (hydrogen, LNG, CNG, LPG[14]) along the iMONITRAF! corridors (using the same origins and destinations described in the indicator related to toll prices). For each corridor, the AFs stations located in the service areas and in the parking areas of the toll gates as well as those stations located in the autoports and at the entrance/exit of the road tunnels are identified. The only exception is made for hydrogen: due to its limited diffusion, the stations located close to the road corridors have also been included. The main source for data collection is the European alternative fuel station map[15], which has been integrated in other web-platforms at national and international level.

Figure 16 illustrates the AFs stations per corridor in both directions (North-South and South-North), available in 2020. EV charging stations include different types of charging points of which quantification is beyond the limit of this analysis. With 17 stations, the Brenner corridor reveals

[12] *European Environment Agency, 2020*. Transport, increasing oil consumption and greenhouse gas emissions hamper EU progress towards environment and climate objectives. Online at: https://op.europa.eu/it/publication-detail/-/publication/20388700-577f-11ea-8b81-01aa75ed71a1/language-en/format-PDF

[13] DIRECTIVE 2014/94/EU of the European parliament and of the council of 22 October 2014 on the deployment of alternative fuels infrastructure. Online at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32014L0094

[14] LNG: liquefied natural gas, CNG: compressed natural gas, LPG: liquefied petroleum gas

[15] https://www.eafo.eu/fuel-map

the highest number of EV charging stations, followed by Gotthard. LPG also has filling stations at each corridor. The highest numbers were recorded along the FR-IT corridors of Ventimiglia (15 stations) and Fréjus (10 stations). Concerning the hydrogen fuels stations, only two out of eight corridors offer the possibility of recharging vehicles: Brenner and Fréjus. Regarding LNG fuel stations, only one located at the autoport of Sadobre (Italian side of the Brenner corridor) is available. Finally, existing stations for CNG are mainly located along the Brenner and Gotthard corridors (6 and 4 stations, respectively).

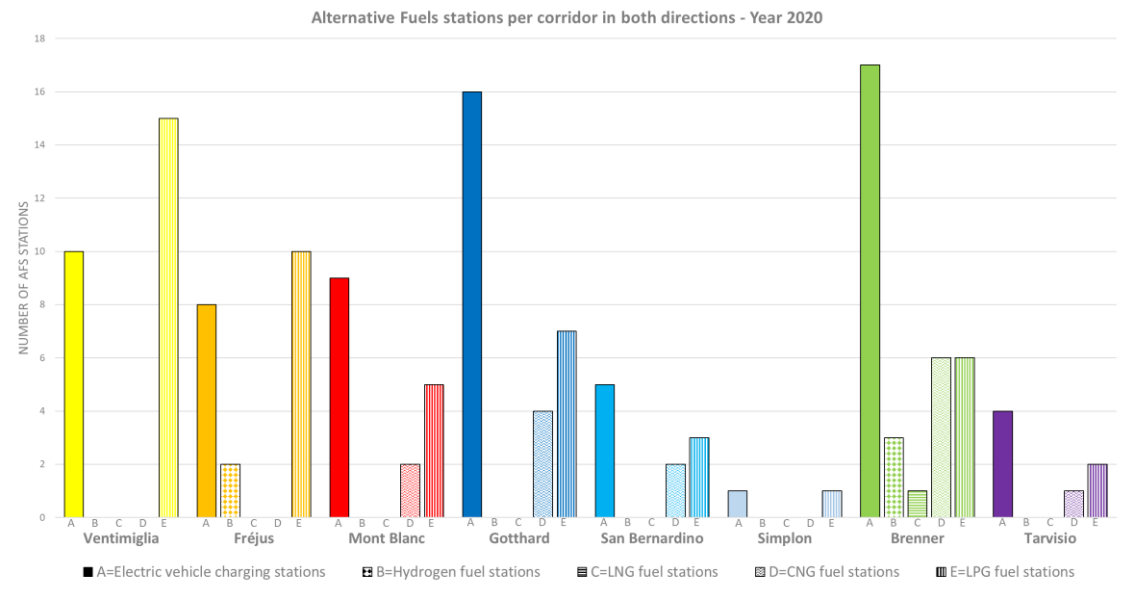

Figure 16: AFs stations per corridor in both directions (North-South and South-North) – year 2020

Indicator Unitary pricing components

This indicator includes taxes to be paid for the purchase and ownership of vehicles[16], which play an important role in influencing the modal and vehicle choices of users (e.g. in purchasing an electric rather than petrol car). Four components are observed for the years 2016-2020 for France[17], Switzerland[18], Italy, Austria and Germany[19]:

1) the *purchase tax*, expressed in % of the one-only purchase cost of vehicle;

2) the *registration tax*, expressed in Euros, to be paid one time only with the purchase of vehicle;

3) the *ownership tax*, expressed in Euros, to be paid yearly;

4) the *insurance tax*, expressed in % of the yearly insurance costs.

In France, Switzerland and Italy, the unitary pricing components vary from region to region. Therefore, sample regions are considered: the department of Oise for France, Ticino for Switzerland, Lombardy for Italy. Additionally, the unitary pricing components depend on the type of vehicle

[16] The main sources used for data concerning the pricing components are the ACEA Tax Guide. See as example the 2020 report: https://www.acea.be/uploads/news_documents/ACEA_Tax_Guide_2020.pdf. Additional sources are used for each country.

[17] Additional sources for France regard the online calculation of the registration tax. Available at: https://www.service-public.fr/simulateur/calcul/cout-certificat-immatriculation

[18] Additional sources for Switzerland regard the online calculation of the registration tax. Available at: https://www4.ti.ch/di/sc/veicoli-e-collaudi/immatricolazioni/immatricolazione-di-un-veicolo-nuovo/

[19] Additional sources for Germany regard the online calculation of the ownership tax. Available at: https://www.bundes-finanzministerium.de/Web/DE/Service/Apps_Rechner/KfzRechner/KfzRechner.html

considered. Therefore, four types of vehicles are observed: petrol Euro 6 car (1030 kg, 1000 ccm, 48 kW and 108g CO_2/km); electric car (1540 kg, 100 kW and 0 g CO_2/km); diesel EURO VI HGV (40 t, 5 axels and 235 kW); electric HGV (40 t, 5 axles and 235 kW).

The **purchase tax** is applied to all vehicle types and amounts to 20% in France, 7.7% in Switzerland, 22% in Italy, 20% in Austria and 19% in Germany (2020). It is totally deducible for commercial vehicles for the transport of goods (except in Switzerland). In Austria, the same tax deduction is applicable for zero-emission passenger cars since 2016. From 2016 to 2020, the tax values have remained almost unchanged. Just one variation can be mentioned: the decrease from 8% to 7.7% in Switzerland between 2017 and 2018.

The **registration tax** is calculated in different ways across countries. In Switzerland, Austria and Germany, a fixed amount is applied to all vehicles. It is equal to about € 120 in Switzerland, € 194 in Austria, and € 26 in Germany. In contrast, in France and Italy the tax changes depending on the type of vehicle. In France, a Euro 6 petrol car has a registration tax of approx. € 139. This depends on the "*puissance fiscal"* (fiscal power) of the vehicle, the regional tax, the CO_2 bonus/malus and the registration supplement. When considering an electric car, the tax drops to approx. € 3 since the only registration supplement is taken into account. As for the HGV, the registration tax amounts to approx. € 754 for a diesel EURO VI HGV and to € 288 for an electric HGV. In Italy, the registration tax differs between petrol and electric cars (€ 341 against € 602), while the amount is the same for diesel and electric HGV (€ 986). The tax is calculated on the basis of a fixed national registration fee; an "*Imposta Provinciale di Trascrizione"* (provincial transcription fee) that varies depending on the type of vehicle and its engine power in kW; and a percentage increase applicable by each province. Over the last five years, the registration tax has slightly changed in France and Austria (Figure 17). In France, due to the increase in the regional component, the tax of a petrol car passed from approx. € 115 in 2018 to € 139 in 2019; for a diesel HGV it increased from approx. € 670 to € 754. In Austria, due to increases applied at national level, the registration tax applied to all vehicles passed from € 188 to € 191 between 2016 and 2017, and from € 191 to € 193 between 2018 and 2019.

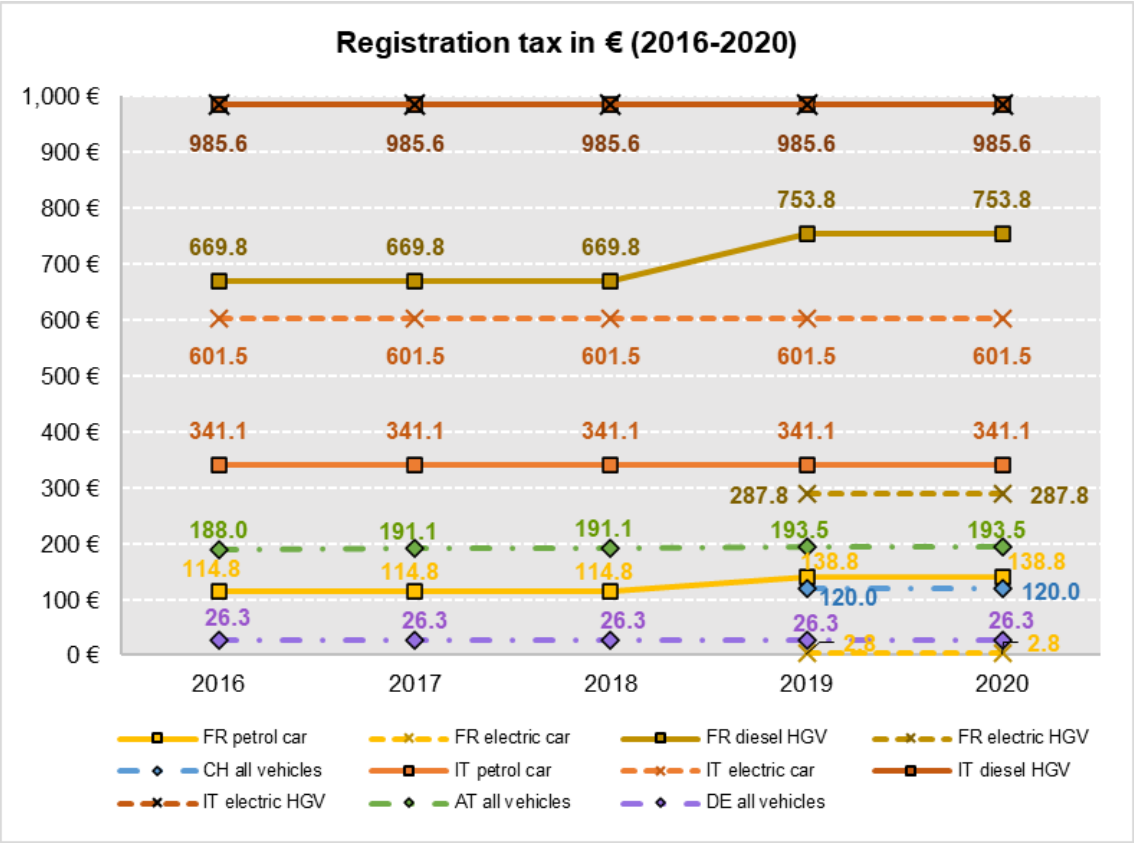

Figure 17: Registration tax to be paid una tantum with the purchase of a vehicle (2016-2020)

The **ownership tax** is calculated with similar approaches across countries. As visible in Figure 18, it significantly differs between passenger cars and HGVs. For a petrol Euro 6 car, it is € 0 in France, € 140 in Switzerland, € 124 in Italy, € 179 in Austria and € 46 in Germany. For a diesel EURO VI HGV it is € 364 in France, € 2,455 in Switzerland, € 674 in Italy, € 912 in Austria and € 556 in Germany. Furthermore, except for France, there are relevant differences between vehicles using fossil and alternative fuels. As for passenger electric cars, the tax is not due in France, Italy, Austria and Germany. In Italy and Germany, this exemption applies respectively to the first five or ten years after vehicle registration. In Switzerland, the tax is lower for electric cars than for petrol ones (€ 103 against € 140). Also for electric HGVs, the ownership tax is not due in Switzerland, Italy and Austria, while amounting to € 278 in Germany (rather than € 556 paid for diesel EURO VI HGVs). Values in each country did not change between 2016 and 2020.

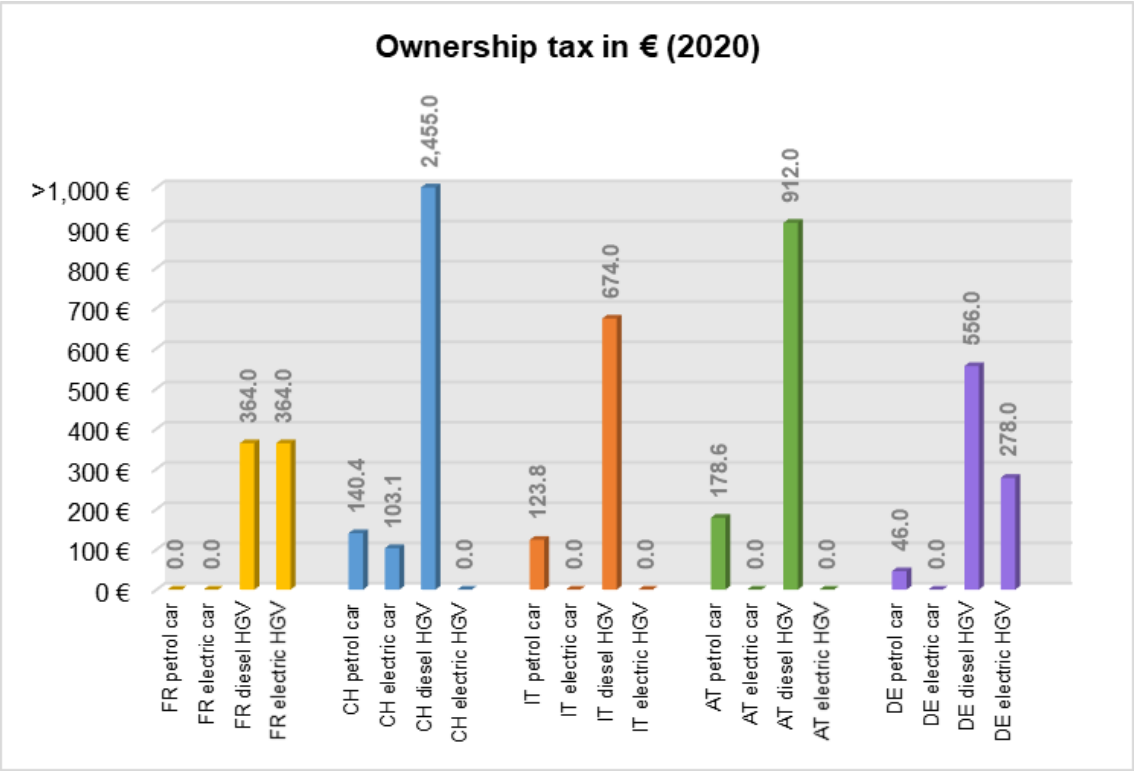

Figure 18: Annual registration tax to be paid for different types of cars and HGVs.

Similarly to the purchase tax, the **insurance tax** is also applied in each country in the same way to all types of vehicles. It is 33% of the insurance cost in France, 7.7% in Switzerland, 29% in Italy, 11% in Austria and 29% in Germany (2020). The only exception concerns France, where a share of 33% is applied to passenger cars while a reduced value of 15% is applied to commercial vehicles with a total permissible laden weight above 3.5t. These values have been unchanged from 2016 onwards.

5.2 Outlook monitoring 2020 – Impacts of the COVID-19 pandemic

The COVID-19 pandemic and the correlating productivity losses in the first half of 2020 left its trace on transalpine freight traffic volumes. On the Swiss corridors, a reduction of 12% for both road and rail transport compared to 2019 could be observed. The modal split of rail remained the same with 71%. Looking at the numbers of HGV on the Brenner, Fréjus, Mont Blanc and Gotthard corridors, the most significant decrease compared to the previous year occurred between March and May 2020. Mont Blanc experienced a 42% reduction of HGV in April 2020 compared to April 2019. Brenner was the corridor with the least significant decrease, and in February 2020 the number of HGV was still 0.8% higher than in February 2019. Looking at the combined months January to May 2020 versus 2019, Brenner accounted for -13.6% HGV, Fréjus -20.6%, Gotthard

-21.4% and Mont Blanc -21.5% (see

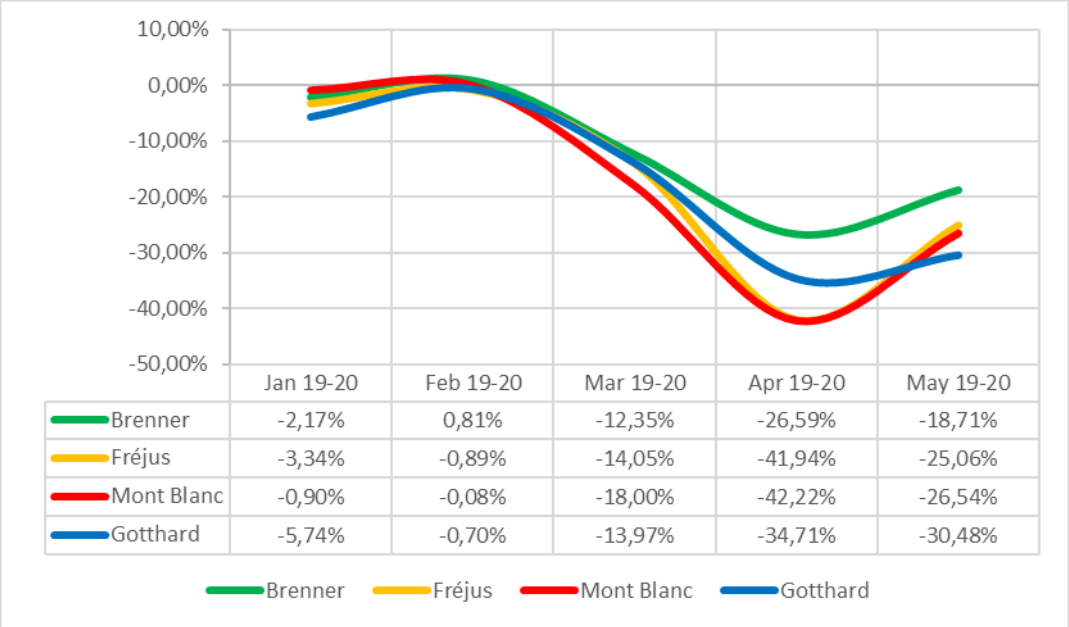

Figure 19).

On the Brenner corridor this trend was slowed over the summer months and even reversed towards the end of 2020, with slight increases in the number of HGV compared to the previous year in September (+0.6%) and November (+0.04%), and a significant increase of 9.2% in December 2020 compared to 2019. The long-term repercussions of the economic crisis and its effects on transalpine traffic volumes will have to be investigated in the coming years.

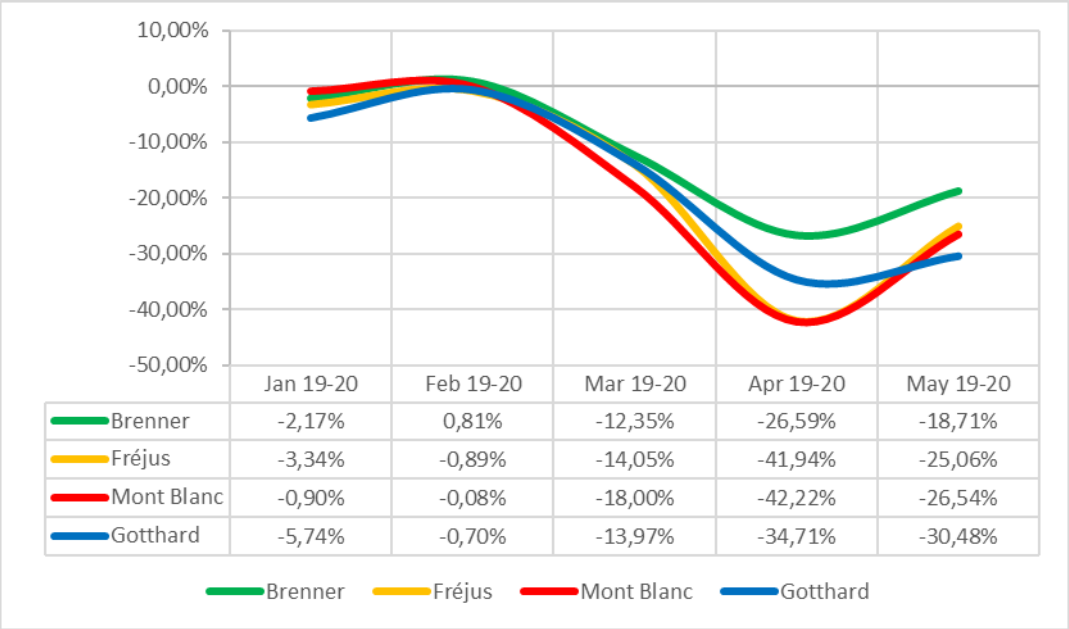

Figure 19: Monthly change in percentage of number of HGV 2020 vs 2019 on selected transalpine corridors

6 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 regions and countries for 2020 in order to update the collection of Best Practices. As in the previous years, developments took place in all five policy pillars (see table below), again with a strong focus on policy pillar 3 with its push and pull measures. Measures in pillar 2, which focuses on regulatory measures to limit negative transport impacts, were limited to further optimising the existing policy mix – partly making use of new traffic information and control measures. With respect to passenger transport (pillar 4), a strong focus on the extension of cross-border public transport infrastructures has been reported as well as a further extension of financing measures to promote alternative fuels for cars, busses and passenger trains. A new approach with the digital corridor strategy has been reported under pillar 5 which focuses on innovative approaches.

OVERVIEW: BEST PRACTICE UPDATE 2020

Policy Pillar	Name of measure	Country/region
Pillar 1: Monitoring, Information & awareness raising	New remote sensing system to detect HGV with malfunctioning or manipulated emission control systems	Central Switzerland
	New integrated information system on traffic disruptions (road and public transport)	Tyrol
	Improvement of traffic data collection	Autonomous Province of Bolzano
Pillar 2: Limiting negative impacts of Alpine transport	Implementation of further tightened Sectoral Driving Ban, inclusion of five new types of goods	Tyrol
	Automatisation of dosing system	Tyrol
	Construction of additional noise barriers along the Brenner railway line and motorway A22	Autonomous Province of Bolzano
	Third test phase under Brenner LEC project	Autonomous Province of Bolzano, Autonomous Province of Trento
Pillar 3: Modal Shift	**Modal shift policy mix and CT**	
	Support measures and subsidy system for CT (continuation of financing 2020)	Autonomous Provinces of Bolzano and Trento
	Adjustment of charging categories in Swiss HGV fee	Switzerland
	Infrastructure	
	Opening of Ceneri Base Tunnel, final element of NEAT	Switzerland
	New agreement to fund additional infrastructure projects on the Gotthard base tunnel line	Switzerland
	Brenner Base Tunnel: milestones	

	Extension of intermodal terminal of Trento	Autonomous Province of Trento
	Agreement on strategic rail infrastructures	Autonomous Province of Trento/RFI
	Brenner Base Tunnel's southern access route: update of the preliminary project of Trento rail by-pass, guidelines on the future mobility of the node of Trento	Autonomous Province of Trento
	Modernisation of Service Center Sadobre	Autonomous Province of Bolzano
Pillar 4: Passenger transport	Increase of funding for PT acquisitions to 75%	Tyrol
	Feasibility study for the double-track expansion of the rail system between Imst and Ötztal	Tyrol
	Letter of intent for public transport in the Rhaetian triangle	Autonomous Province of Bolzano
	Agreement to further develop night trains in a co-ordinated approach	France, Germany, Austria, Switzerland
	Euregio2Plus ticket	
	New mobility app	Autonomous Province of Bolzano
	Development of e-mobility: subsidy system for the purchase of electric cars and charging stations	Autonomous Province of Bolzano
	Fast-charging system for buses	Autonomous Province of Bolzano
	Strategy for cross-border accessibility	Autonomous Province of Bolzano
Pillar 5: Innovative approaches	Digital corridor strategy	A22 motorway, Austrian and German motorway managers, chambers of commerce
	Brenner Green corridor – Hydrogen strategy	Euregio
	SmartLogi – Recommendations for long-term cross border institutional cooperation framework	Eurac Research as project partner; GECT "Euregio Tyrol-South Tyrol-Trentino as associated partner

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

6.1 Overview on revised and new Best Practices

6.1.1 Pillar 1: Information, monitoring, awareness raising

Overall, monitoring campaigns are continued as in previous years and as summarised by the iMONITRAF! monitoring activities (see chapter 5). Additional measures on information and monitoring have been implemented in 2020 in the iMONITRAF! partner regions Central Switzerland and Tyrol.

Already in 2017, it became obvious that not only software systems of diesel passenger cars ("Dieselgate scandal") are manipulated, but also engines and software systems of HGV. This means that these vehicles do not comply with the emission regulations of the Euronorm. In **Central Switzerland**, it was thus decided to test a new **remote sensing detector to measure NO_x emissions** of passing HGV to enable the identification of specific vehicles with either malfunctioning or manipulated emission control systems. Up to now, there is no monitoring or enforcement measure that allows the identification of specific trucks and it shall be tested if the remote sensing detector can fill this gap. A first measuring campaign has been launched within the Swiss monitoring campaign MFM-U (Monitoring flankierende Massnahmen), in cooperation with the Canton of Uri and the HGV control centre in Erstfeld.

In **Tyrol**, a **new traffic information system** has been implemented which combines all information on current traffic situation both for road and public transport. Information on traffic disruptions is registered in the information system with the help of police, public transport providers and ASFiNAG real-time information on the traffic situation in Tyrol are combined in one map.

The **Autonomous Province of Bolzano** has set up new traffic counting points and cameras in sensitive areas and along main roads in order to collect data for further mobility planning. Only a precise picture of the traffic on South Tyrol's provincial and national roads will enable targeted traffic management measures to be implemented. The monitoring project will be further extended in 2021 on the Brenner corridor (territory of Bolzano) and on the main transport axes.

6.1.2 Pillar 2: Limiting impacts of Alpine transport

Pillar 2 of the iMONITRAF! categorisation of measures deals with regulatory measures with the direct objective to limit negative impacts of transalpine freight transport. In 2020, no major new measures have been implemented in the iMONITRAF! regions but several measures have been adjusted dynamically or optimised to keep track of technological developments and to optimise the overall policy-mix.

In **Tyrol**, the **extension of the sectoral driving** ban came into force at the beginning of January 2020. In addition to the eight groups of goods that were already covered by the sectoral driving ban, five additional groups of goods are now no longer allowed to be transported in vehicles of more than 7.5 t on the A12 Lower Inn Valley motorway between Kufstein/Langkampfen and Ampass. The new groups are: 1) crop, 2) paper and cardboard, 3) liquid mineral oil products, 4) cement, limescale, processed plaster stone and 5) tubes and hollow profiles. With the extension of the sectoral driving ban, about 360.000 HGV are affected per year.

To avoid congestion on days with expected traffic peaks, Tyrol is continuing the **dosing system** (block admission system) at the border to Bavaria (in southern direction only). On selected days with expected traffic peaks, a cap of max. 300 HGV per hour is allowed to pass the checkpoint on the A12 motorway in Kufstein-Nord in the direction of Innsbruck. In 2020, the dosing system has been automated to improve its functionality. **Automation measures** include both construction measures (e.g. extension of emergency lane) as well as the set-up of traffic control and information systems.

As illustrated in the previous reports, measures for limiting environmental pressures also include infrastructures for limiting noise impacts. In the **Autonomous Province of Bolzano**, works for the construction of **noise barriers along the Brenner railway line** started in 2019. In 2020, two projects could be concluded: noise barriers in the municipalities of Chiusa/Klausen (barrier length: 586 m, height: 3-4 m) and Colle Isarco/Gossensass (barrier length: 918 m, height: 4-5,5 m). On the Brenner **motorway**, noise barriers are further extended, too. In the Autonomous Province of Bolzano, the Brenner motorway A22 covers approx. 110 km of road in both directions. On the north carriageway, there exist 16 noise barriers and on the south carriageway 41 noise barriers as of today, covering a total of about 19 km of the motorway. In November 2020, an important contract for the construction of six additional noise barriers with a total length of 5 km in the municipality of Bressanone/Brixen has been awarded. The new sound-absorbing structures are capable of significantly reducing both noise and air pollution. The works of this € 13 mio. investment will be completed in March 2022.

Also the **Brenner LEC project** (Brenner Lower-emissions corridor has been continued (see Annual Report 2018 for further information). The 3rd test phase was started in 2020 and results collected until now show that reducing maximum speed to 100 km/h brings many advantages: less air pollutants, less congestion, lower fuel consumption, shorter travel times, and more safety on the road.

6.1.3 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 illustrated in the Annual Reports 2018 and 2019, the **Autonomous Province of Bolzano** and the **autonomous Province of Trento** implemented a **subsidy system for combined transport** so that financial incentives are extended beyond the existing system on the Tyrolean part of the Brenner corridor. In the year 2020, the measures were continued by providing financial aid to multimodal transport operators and railway companies located in the EU and offering freight rail services. In the Autonomous Province of Bolzano, already now, continuation for 2021 was confirmed with € 3 mio. of financial support per year. Aid is provided for the section Brenner-Salorno/Salorno-Brenner of the railway for Accompanied Combined Transport (ACT) or Unaccompanied Combined Transport (UCT). The prolongation has also been confirmed by the European Commission.

In **Switzerland**, the Federal Council wants to set additional financial incentives for modal shift and has thus agreed on an **adjustment of the HGV fee (LSVA)** for July 2021. HGV belonging to EURO classes IV und V which up to now belong to the medium price category are downgraded to the most expensive LSVA category (affecting about 10-20% of the Swiss freight transport volume that is covered by the LSVA). Also, it was agreed to abolish the 10% discount for HGV of EURO classes II and III with an additional particle filter (about 2% of transport volume).

Infrastructure measures and services

In **Switzerland**, the **Ceneri base tunnel** as the final element of the New Railway Link through the Alps (NRLA) has been opened in September 2020. With the Ceneri base tunnel, the 4m corridor

from Rotterdam to Genoa has been completed and travel times have, again, been considerably reduced. In addition, the Ceneri base tunnel enables faster and more direct connections on public transport in Ticino, linking the cities in the triangle of Bellinzona-Lugano-Locarno. To further develop the Gotthard base tunnel line, the Swiss Federal Council has agreed on an implementation act with the Swiss railway company SBB in November 2020. Additional measures with a financial volume of CHF 55 mio. focus on the southern access to the Ceneri base tunnel in order to allow for a higher capacity for long trains on the Gotthard corridor (a new railway control centre in Melide, new track switches, adjustments of the security system).

For the **Brenner base tunnel**, too, two significant milestones have been reached in 2020. In July, the breakthrough of the exploratory tunnel has been realised and in August, the tender for the southern access route Ponte Gardena-Fortezza/Waidbruck-Franzensfeste has been published in the Bulletin of the EU. Works of the access route will start in 2021 and will be completed at the same time as the tunnel itself. . Currently, the construction works on the Austrian side are on stand-by as the main construction lot had to be re-awarded after discrepancies with the construction consortium.

To complement the “push” measures implemented in **Tyrol**, especially the sectoral driving ban, **services of the rolling motorway** have been further extended on the Brenner corridor between Wörgl and the Brenner pass. After a test run at the end of 2019, services were extended to 21 RoLa trains per day and direction at the beginning of 2020 and from April onwards to 24 trains in each direction (with a capacity of transporting 840 trucks per day).

In Trento, the **improvement of the intermodal terminal of Trento** has been agreed on between the Province of Trento and the Italian railway manager RFI with the definition of a work plan. Further resources are expected by the Italian Government (about € 4.3 mio. co-financing out of the € 11,3 mio. total investment). The intervention is expected to be concluded by 2022.

In addition, a framework agreement between the autonomous Province of Trento and the Italian railway manager RFI on future strategic rail infrastructures was signed in April 2020. This agreement has the objective to further study and analyze the **future main strategic rail infrastructures in the Province of Trento**: electrification of the Valsugana railway, Primolano-Feltre railway as part of the “ring of the Dolomites”, Rovereto-Riva del Garda railway, improvement of the intermodal terminal of Trento, upgrade of the station of Rovereto, realisation of noise barriers, etc.

Regarding the **by-pass of the city of Trento, a part of the Brenner Base Tunnel’s southern access route**, the activities foreseen in the Agreement signed among Province of Trento, Municipality of Trento and RFI have been concluded. The following documents are now available: update of the preliminary project of Trento rail bypass, guidelines on the future mobility of the node of Trento, guidelines on the future opportunities for the requalification of the city centre of Trento.

To improve traffic safety and traffic management, in the **Autonomous Province of Bolzano** in October 2020 the Brenner motorway company A22 concluded major modernisation works with a € 3 mio. investment at the Sadobre rest&parking area (26.5 hectares) in Vipiteno/Sterzing. The area with its 250 parking spots for HGV has been transformed in a high-level service centre including full service for HGV drivers and charging infrastructures for alternative fuels. Thanks to its strategic position, HGV can directly access the area. Sadobre represents an important reference point in managing the flows of heavy vehicles and avoiding queues on the motorway toll gate of Vipiteno/Sterzing, the last one before the Brenner border to Austria.

6.1.4 Pillar 4: Passenger transport

Public transport – Frameworks, infrastructures and services

In **Tyrol**, **the general funding for public transport services was increased** in 2020. The co-funding rate for acquisition of public transport vehicles has been increased from 33% to maximum 75%. Also, the co-funding was extended to public transport stations, to car sharing services focusing on electric mobility as well as cargo bike services. The main goal of the extended funding is to improve the connection of smaller municipalities to the public transport network.

Within the **EU project Connect2CE**, Eurac Research has developed a **regional strategy for the improvement of cross-border accessibility in theAutonomous Province of Bolzano**. The strategy focuses on three points. First, measures to increase of the competitiveness of links between South Tyrol and foreign nodes as Innsbruck, Vienna, Zurich and Munich. Second, connectivity and ticketing measures to increase the transport cooperation between South Tyrol and Tyrol. Third, an app to compare cross-border tariffs and find out the most convenient combination of tickets/subscriptions for cross-border commuting. A support letter for the strategy was signed by the Provincial Councilor for transport and the provincial mobility company STA.

Also, specific funding measures for public transport to compensate for financial losses were implemented. In **Switzerland**, the Federal Council agreed on a support package of CHF 700 mio. to support income gaps of regional public transport operators but also of rail freight operators and the Fund for financing.

Furthermore, several improvements of transport infrastructures and/or services have been agreed upon throughout 2020:

- **Tyrol:** the commissioning of a feasibility study for the **double-track expansion** of the rail system between **Imst-Imsterberg and Ötztal-Roppen** has been agreed on. The Regional Express trains are supposed to run every half an hour with an increased speed, saving 8 minutes, during rush hours.
- **Autonomous Province of Bolzano**: Works for the electrification of the Venosta valley railway line have proceeded in 2020. In view of the doubling of transport capacity thanks to more frequent connections and the use of longer electric trains (compared to the current diesel trains), the train maintenance depot of Malles Venosta/Mals has been extended by 80m and adapted with the necessary technical equipment. It is assumed that the electrified line will become operational in 2022.
- **Public transport in Rhaetian triangle:** In 2020, regional representatives of the regions of South Tyrol, Tyrol, Grisons and Lombardy have signed a letter of intent for the future development of cross-border transport in the so-called area of the “Rhaetian triangle”. This letter of intent stresses the importance of developing better rail connections in this cross-border area (currently not crossed by any railway) and to establish an attractive railway node to be connected with the international transport network.
- **Night trains** have been an issue for discussion over the past years, as they are a good solution for many travellers to cover long-distance travel by train. Demand has been growing. In December 2020, **ministers of Germany, France, Austria and Switzerland thus agreed to further develop night trains in a coordinated approach**.

Information & Ticketing:

In August 2020, a new daily cross-border ticket called “**Euregio2Plus ticket**” was introduced. This ticket is the result of the fruitful cooperation between the three member provinces of the

EGTC Euregio (Tyrol-South Tyrol-Trentino) and allows passengers to use public transport (buses and trains) in the whole EGTC area. Tyrol, South Tyrol and Trentino collectively introduced a public transport ticket for 39 €. The ticket is valid for two adults and up to three children (<15 years old), for the duration of one whole day in all three regions

During summer 2020, the renewed mobility app and web portal of South Tyrolean public transport was launched. The app includes all the bus and train connections of South Tyrol and provides door-to-door information. Thanks to the last upgrade, customers will be able to check real-time information about the departure and arrival of buses and trains at different stations. Furthermore, in the next period, further functions such as the online purchase of tickets and information on the available services of car and bike sharing could be integrated.

Transition towards alternative fuels

As in previous years, the transition towards alternative fuels was further supported through specific measures in the iMONITRAF! regions. In South Tyrol, the subsidy system for the purchase of electric cars and charging stations was continued. In 2020, the **Autonomous Province of Bolzano** extended the contributions to two-, three- or four-wheeled electric mopeds and motorbikes as well as to cargo bicycles with a minimum total load of 150 kg. Private citizens, companies, public bodies, and associations can benefit from the incentive. Also, a rapid charging station for electric buses in Bolzano was commissioned. The charging station with a charging capacity of 300 kW is positioned at a strategic point so that it can be used in regular operation.

6.1.5 Pillar 5: Innovative approaches

The **motorway company A22** is promoting a common effort together with the **Austrian and German motorway managers, the Provinces and the Chambers of Commerce along the Brenner corridor** to establish a **concept of digital corridor**. The partners are sharing best practices and ideas on digitalisation, traffic data sharing, crisis situation management, environmental issues, digital solutions for traffic management, etc. A future opportunity could be a European call for funding.

In the frame of the **Euregio Tyrol-South Tyrol-Trentino**, the regions along the Brenner have adopted a joint **Hydrogen Strategy** committing itself to the reduction of greenhouse gas emissions by 40% by 2030 and to zero by 2050. As a priority, the Brenner corridor shall be converted into a "green corridor", i.e. an environmentally friendly transport route with hydrogen filling stations along the entire route. In the Autonomous Province of Bolzano, the local government presented in detail the ambitious masterplan for the energy and transport sector and new projects to promote decarbonisation and the use of hydrogen. This includes the conversion of buses for local passenger transport to environmentally friendly propulsion systems. South Tyrol (Bolzano) disposes of an own H_2 Production Plant with a H_2 filling station. In the autonomous Province of Trento, too, first measures have been launched: within the COVID Recovery Plan, a project proposal to realise a H_2 production station in Rovereto, a refuelling station in Trento and to acquire 15 hybrid H_2 trains has been submitted.

The Euregio Tyrol-South Tyrol-Trentino also acts as an observer to the **SMARTLOGI project** co-funded by the Interreg Italy-Austria Programme with the main objective to enhance cooperation on sustainable multimodal freight transport promoting innovative approaches. Based on different pilot activities, the SMARTLOGI project provided recommendations for establishing a long-term

cross-border institutional cooperation framework. These recommendations were specifically developed for AG4 but also provide interesting insights for iMONITRAF!. Four key messages with respect to EUSALP are formulated: 1) Fostering integrated governance and data sharing as a fundamental basis for an improved dialogue involving all stakeholders , 2) developing innovative and resource-efficient solution fostering sustainable transport (soft measures, organisational and innovative ICT solutions) → iMONITRAF! Best Practices provide insights , 3) “team working” as a key driver for intermodality by linking nodes and multimodal transport networks, and 4) improving sustainable accessibility to the entire area.

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

The Best Practice Update again highlights the high relevance of the topic of transalpine transport and the need to adjust the instrument mix dynamically to overall developments. Improving infrastructures for rail and combined transport has remained one focus in 2020, but measures targeted at the take-up of alternative fuels also take up a more and more prominent role.

Regarding the implementation of the iMONITRAF! strategy of 2012, the following highlights of the Best Practice update 2020 can be summarised:

- Pillar 1: With respect to air quality, monitoring systems are adjusted to the technical development of vehicles: overall emissions factors of HGV are decreasing but there are still some old vehicles or vehicles with defective or manipulated exhaust-related components crossing the Alps. Following the objective of having a clean vehicle fleet on the sensitive mountain corridors, these vehicles need to be identified, as it is done with a new monitoring approach with remote sensing in Central Switzerland.
- Pillar 2: The regulatory measures still have potential for optimisation. In 2020 the regions have been making use of information technologies to improve automation of the relevant control measures. Also, noise barriers have been further extended to improve noise protection.
- Pillar 3: With respect to modal shift policies, no major new developments were reported for 2020. However, existing measures are further developed in a dynamic way – taking into account technological improvements. Several milestones, were seen with respect to modal shift infrastructures, especially with the opening of the Ceneri base tunnel in Switzerland and the completion of the 4m corridor. On the Gotthard, the positive impacts of the 4m corridor can now be evaluated and lessons learned can be shared with decision makers at the Brenner.
- Pillars 4:With respect to passenger transport, the collection of Best Practices shows more visibly than before 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 motorised passenger transport will remain, requiring the need for low-emission solutions to reduce impacts on air quality and climate change.
- Pillar 5: In the field of innovative approaches, several digital solutions were explored throughout 2020 and a common H_2 strategy for the Brenner corridor has been studies. These examples show that coordinated approaches are also necessary in the field of innovative approaches to enable their effective implementation.

7 Trends for transport and environmental policies at EU level

At EU level, a lot of energy and capacities have also been absorbed by the COVID-19 pandemic and by designing relevant rescue and recovery packages. Overall, the recovery package "Next Generation EU" is closely linked to the Green Deal initiative and has the major objective to invest in a green, digital and resilient Europe. This recovery package offers many stepping stones for decarbonisation measures in the transport sector. The Recovery and Resilience Facility which is at the heart of the Next Generation EU package, offers € 672.5 bio. additional funding to address economic impacts of the pandemic but at the same time putting EU countries on the track towards the green and digital transition. In order to receive support from the Recovery and Resilience Facility, Member States must prepare national recovery and resilience plans setting out their reform and investment agendas until 2026.

Update on the Revision of the Eurovignette Directive

The revision process of the Eurovignette finally moved ahead in 2020 in the approach to the German EU presidency. After intense discussions, a compromise proposal could finally be put together and was agreed by Transport ministers on 8th December 2020. Even as some topics could not find full support from all ministers, they found a compromise solution to finally move ahead with the dossier. For detailed information please refer to chapter 3.

Sustainable and Smart Mobility Strategy

In order to specify the objectives of the EU Green Deal for the transport sector, the Commission on 9th Dec 2020 presented its proposal for a "Sustainable and Smart Mobility Strategy and Action Plan". This strategy will guide all activities at EU level for the next four years. This strategy lays the foundation for how the EU transport system can achieve its green and digital transformation and become more resilient to future crises. As outlined in the European Green Deal, the result will be a 90% cut in emissions by 2050, delivered by a smart, competitive, safe, accessible and affordable transport system. With respect to sustainable transport, the strategy includes the following objectives:

- Boosting the uptake of zero-emission vehicles, vessels & aeroplanes, renewable & low-carbon fuels and related infrastructure, e.g. by installing 3 mio. public charging points by 2030.
- Creating zero-emission airports and ports – for instance through new initiatives to promote sustainable aviation and maritime fuels.
- Making interurban and urban mobility healthy and sustainable – for instance by doubling high-speed rail traffic and developing extra cycling infrastructure over the next 10 years.
- Greening freight transport – for instance by doubling rail freight traffic by 2050.
- Pricing carbon and providing better incentives for users – for instance by pursuing a comprehensive set of measures to deliver fair and efficient pricing across all transport.

These objectives are fully in-line with the activities of iMONITRAF! and offer new opportunities to networking and for creating awareness to support iMONITRAF's objectives.

TEN-T progress report, Update of TEN-T work plans and review of TEN-T regulation

In August 2020, The Commission has published a progress report on the work done to implement the trans-European transport network (TEN-T). It concludes that significant progress was made

during 2016 and 2017 (the reporting period), both with regard to technical compliance and financial investments. More than € 91 bn. have been invested in the TEN-T network in the course of 2016 and 2017. The highest share of this investment (€ 80 bn.), including EU co-funding, has been invested in the core network, with most going to TEN-T railways (including ERTMS), where funds are helping to close compliance gaps.

The progress report feeds into the review of the TEN-T regulation which has been launched in autumn 2019. In the course of 2020, a targeted stakeholder consultation addressed the broad range of stakeholders directly concerned by the shaping and implementing of TEN-T policy as well as by the use of TEN-T infrastructure. The scope of this consultation is more tailored to issues of importance to such stakeholder communities and complements an open public consultation from autumn 2019. Several key topics of this review process are interesting for iMONITRAF!, especially the functioning of TEN-T corridors, TEN-T as an enabler of a future-oriented mobility system, digitalisation in the framework of TEN-T and also how to make TEN-T more resilient to climate change.

Also, the work plans for the TEN-T corridors (as part of the core network) were updated in 2020. For the Scan-Med corridor, the Brenner Base Tunnel is, of course, highlighted again as core element for the whole corridor. An interesting information relates to the implementation of ERTMS on the corridor: by 2030 a full coverage with ERTMS is foreseen.

Evaluation of Transport White Paper

The progress of implementing the objectives of the Transport White Paper of 2011 was evaluated in 2020. Overall, the Commission has acted on almost all of the policy initiatives planned in the White Paper. The results from the modelling exercise undertaken for this evaluation show that for the EU-27, thanks to the White Paper initiatives, overall CO_2 emissions from transport would be 16% lower relative to the Baseline in 2030 and 39% lower in 2050. However, the White Paper had assumed a reduction goal of 60% up to 2050 for the transport sector whereas the European Green Deal now foresees a 90% reduction. This means that additional initiatives are still needed. The White Paper also quantifies targets for the optimisation of multimodal logistic chains across the EU. However the modal shift targets of 30% of road freight over 300 km shifting to rail or waterborne by 2030, and more than 50% by 2050, remain far from being reached. The data on modal split and the trend over the last years (Chapter 5, figure 5) demonstrate the challenges of achieving the modal shift targets on all but the Swiss transalpine corridors. Also, the evaluation has a look on the current Energy Taxation Directive. The evaluation concludes that overlaps, gaps and inconsistencies significantly hamper EU objectives in the field of energy, environment, climate change and transport. With respect to improving harmonisation, a review of the Energy Taxation Directive will be highly relevant for iMONITRAF!.

New Multiannual financial framework 2021-2027, CEF, Alpine Space Programme

Also throughout 2020, the new multi-annual financial framework has stayed in the centre of discussion and has obtained a new topic with the recovery package “Next Generation EU”.

The regulation provides a long-term EU budget of € 1,074.3 bn. for the EU-27, including the integration of the European Development Fund. Together with the Next Generation EU recovery instrument of € 750 bn., it will allow the EU to provide an unprecedented € 1.8 tn. of funding over the coming years to support recovery from the COVID-19 pandemic and the EU's long-term priorities across different policy areas. Most of the sectoral EU funding programmes are expected to be adopted in early 2021 and will apply retroactively from the beginning of 2021.

Regarding the **CEF 2021-2027** as instrument for TEN-T funding a general agreement between the Council and European Parliament was already reached in March 2019, which provides for the continuation of the CEF programme focusing on cross-border links and missing links with increased emphasis on decarbonisation and digitalisation as well as a new military mobility component. Together with the overall MFF framework and in reaction to the COVID-19 pandemic, the new CEF budget was still under discussion in 2020 . In May 2020, a revised budget was proposed for the CEF which foresees an increase for CEF Transport financing with a total € 12.9 bn. available in the period 2021-2027. The Commission specifies that the increase in the transport envelope should be used to finance high-performance transport infrastructure to facilitate cross-border connections.

The INTERREG Alpine Space Programme as an interesting financing programme for transnational cooperation in the Alps is currently still finalising its Operational Programme for 2021-2027. Two consultations have been conducted in 2020 and it becomes obvious that, overall, the Programme will put a stronger focus on “green” topics and digitalisation. Climate neutrality will be a key topic in the new programme, which might offer interesting opportunities for iMONITRAF! and its networking partners.

8 Outlook 2021 and beyond

The activities of 2020 provided some new milestones for the iMONITRAF! cooperation. With the Policy Scenarios 2030, the network has extended its decision support framework to the next decade – building on a state-of-the-art assessment of the modal shift infrastructures that will be available at this point of time as well as an updated trend of alternative fuels and powertrain systems' uptake. The scenarios highlight the further need for action of iMONITRAF!. In particular, the network has to ensure that modal shift remains a key policy rationale, even if policy priorities are shifting towards decarbonisation and economic recovery in the midst of the COVID-19 crisis. The scenarios illustrate that the uptake of low-emission road vehicles alone will not be sufficient to reach ambitious CO_2 reduction targets but that it needs to be supported by a strong modal shift policy. During a strategy meeting in December 2020, iMONITRAF! partners have discussed focus topics for the new cooperation period 2021-22 that pick up the insights of the new scenarios.

Common measures: Toll Plus, support for CT and steering instruments

The revision of the Eurovignette Directive has moved one step ahead in 2020 but during the upcoming trilogue discussions the iMONITRAF! position on Toll Plus again needs to be brought to the attention of EU decision makers. Especially, the mark-up factor as well as the need to consider over-proportional external costs in mountain areas will be in the focus of upcoming iMONITRAF! activities, joining forces with its network partners were possible.

The political discussions during the iMONITRAF! roundtable in November, as well as the strategy meeting of December 2020, again highlighted the needs for better coordinating support measures for combined transport, especially with a view to incentivize the uptake of innovative solutions in the frame of CT services. The new EU Smart Mobility Strategy provides several opportunities for iMONITRAF! to shape the future framework also at EU level. In addition, the network wants to put a stronger focus again on steering instrument, also taking into account innovative incentive systems to strengthen combined transport or to reduce CO_2 emissions.

European Year of Rail 2021 – A window of opportunity for raising awareness

To support the implementation of the EU Green Deal, the European Commission, the EP and the Council have agreed to dedicate 2021 to rail transport. Throughout 2021, the European Commission initiative will highlight the benefits of rail as a sustainable, smart and safe means of transport. A variety of activities will put rail in the spotlight throughout 2021 across the continent, to encourage the use of rail by both citizens and businesses and to contribute to the European Green Deal goal of becoming climate-neutral by 2050.

Already at the end of 2020, interested stakeholders could propose events and activities that could be linked to the EU Year of Rail. iMONITRAF! handed in a proposal for a dedicated event focusing on the Alpine-specific challenges and needs to further develop rail transport, but specific activities still need to be coordinated with networking partners.

iMONITRAF! 2021-2022 – overcoming the implementation gap

The recent activities of iMONITRAF! with respect to Toll Plus provided a showcase on how in-depth investigations and intensive networking can pay off: the claims of the network were effectively heard at EU level and taken up in the revision process of the Eurovignette Directive. These insights can be used by iMONITRAF! in developing next steps for relevant key topics and in developing effective networking activities together with the Alpine alliance:

- Outreach to a broader Alpine perimeter: With support of EUSALP AG4, iMONITRAF! can reach out to decision makers beyond the “core” Alpine transit regions: information and insights on Toll Plus but also all other specific policy instruments will be shared with EUSALP AG4 to ensure synergies and to develop proposals that are acceptable at a more comprehensive level. Especially, the political statement as currently developed by AG4 serves as a window of opportunity as it will reach out to political decision makers in the whole EUSALP perimeter.
- Coordinate the coordinators: the new Transport Community of the Alpine Climate Board which has the objective to bring together the coordinators of all transport-related working groups in the Alps and which is supported by the incoming Swiss Presidency of the Alpine Convention offers new opportunities for strengthening the common voice beyond iMONITRAF!.
- Positioning iMONITRAF! as a knowledge hub: iMONITRAF!’s networking activities also reach out to other scientific projects and new insights and information can be integrated into the Alpine Platform of Knowledge for Mobility and Transport which also includes the graphical representation of the iMONITRAF! indicators.
- Ensure new funding sources: together with its network partners, iMONITRAF! aims at identifying new funding sources related to recovery programmes as well as new funding options under the new EU programmes to improve financing support for modal shift infrastructures and services.