Schweizerische Eidgenossenschaft
Confédération suisse
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Federal Department of the Environment,
Transport, Energy and Communications DETEC

Federal Office for the Environment FOEN
Noise and NIR Division
http://www.bafu.admin.ch/laerm/index.html?lang=en

The European Soundscape Award

Campaign for better tyres (Contribution FOEN)

Introduction

Noise exposure is a serious limiting factor for people's quality of life (annoyance) and a potential threat for good health (sleep disturbance, cardiovascular disease), impaired sleep also effects on work efficiency and learning efficiency at schools. The report on the burden of diseases from noise (WHO Europe) indicates that one in three people in the western countries of WHO European region experiences annoyance from noise during daytime and one in five has difficulties sleeping because of noise. In Switzerland, one in six people suffers noise *exceeding* legal noise limits, with road traffic as the main source of disturbance (Noise Pollution in Switzerland, FOEN 2009). External costs are estimated to 1.2 billion CHF/y (≈ 1 billion EUR/y, ARE 2012).

Due to population growth (Switzerland approx. 1%/year) and a general trend towards more motorized individual traffic, the number of people suffering from noise could, despite 30 years of noise abatement, not be significantly reduced in Switzerland. Apart from conventional measures against traffic noise (e.g. noise barriers), additional actions need to be taken in order to substantially reduce the number of people suffering traffic noise. The best solution to reduce noise in general is obviously to take measures directly at the source with numerous advantages like: overall and non-directional impact, less/no need for conventional measures, vast potential of savings costs for further conventional measures that may become obsolete. This finally results in an overall health benefit of the population leading to less health spending in general. Measures at the source are even more powerful considering the fact, that a vast majority of people suffering noise usually live in urban areas (85% in Switzerland), where conventional measures are often not possible or ineffective.

Measures at the source

There exist several possibilities to reduce road traffic noise at the source: stricter noise emission limits, reducing legal speed limits, low-noise asphalt and the use of low-noise tyres. Unfortunately, there are some severe drawbacks for many of the possible measures:

- Reducing road traffic noise at the source can be done by the implementation of stricter noise emission limits for vehicles. Following the current discussion, it can easily be seen that the implementation of stricter limit values is a rather difficult and a very political task. The last tightening for light passenger cars has taken place in 1992, despite enormous technical progress in vehicle build, there were no changes regarding stricter noise limits ever since.

- Reducing traffic speed would be an excellent measure, not only very pricey and instantly effective; there is additionally a strong reduction of accidents causing heavy injuries or even fatalities. Still, a general lowering of speed limits is often not an option of choice, neither for car drivers, nor for political stakeholders. No matter if urban or highway road, there is usually very strong opposition against a lowering of legal speed limits in wide areas.

- The road-tyre noise of a regular passenger car driving at constant velocity becomes relevant at a speed of already 35 km/h (heavy trucks 55 km/h). The higher the vehicle speed, the more dominant becomes the road-tyre noise, at highway speed, propulsion noise is irrelevant. Lowering the tyre-road noise hence is a powerful measure in order to reduce road traffic noise in general. The most effective measure to reduce road-tyre noise is the use of low-noise asphalt, where spectacular results can be achieved. However, to assure a significant reduction of people suffering road traffic, wide ranges of urban road surfaces needed to be replaced. Low noise asphalts are clearly more expensive than regular products and despite improved products, there are still some doubts concerning the mechanical and acoustical performance in the long run.

- As seen, the road-tyre noise can be reduced using low-noise asphalts, however and as pointed out, some critical limitations come along with these surfaces. The remaining and often forgotten option is to attack the road-tyre-noise with low noise tyres. The data collection presented in the "fact sheet tyre noise" (2009) exemplified these enormous differences in emission levels between different products within the same tyre class (e.g. class C1d: 10 dB). To benefit from quieter tyres, it is therefore not even necessary do develop entirely new products, but simply to pick one of the

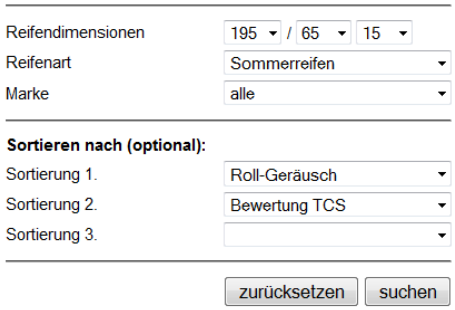
already available quite tyres on the market. As pointed out by the FEHRL report (Vol. 1 / Vol. 2), quite tyres show no obvious trade-offs in other areas (e.g. braking capacity). Additionally, the life-cycle of ordinary car tires is rather short. A market shift towards quieter tyres could be done within few years. This is very short compared to the other possible measures at the source (stricter noise limits, low-noise asphalt). Finally, a low-noise tyre is not more expensive than a "regular" quality tyre.

Starting position

Considering all the benefits, the Federal Office for the Environment (FOEN) decided to take measures in order to promote the use of quieter tyres in Switzerland. At the beginning, customer behavior in the context of buying car-tyres had to be understood. Results clearly showed that a vast majority of people (> 90 %) buy tyres at their common car repair shop after they were told that the mounted tyres were worn out. The client then usually asks, if there were some "good tyres in stock that fit", whereupon the shop usually offers some kind of "special deal" (tyres that need to be sold, tyres with the best margin, tyres the shop owner wants to be promoted, old tyres…). Car repair shops, tyre industry and mobility clubs confirmed, that for car owners, the tyre usually isn't a topic, even though it is one of the key products of a car and its performance. Strangely, today's clients are used to get all information on the web and visit various information platforms to compare products of interest prior to the purchase, in terms of tyres; this mechanism doesn't exist at all!

Tyre list

With this knowledge it became obvious that in the first place, a neutral instrument that is able to inform the car owner about tyres and their (acoustical) performances, needed to be established. In the following, the FOEN developed in collaboration with the TCS the tyre-list. The tyre-list is a unique data based tool that allows easy queries on tyres, the results can also be sorted after different parameters (noise, rolling resistance, wet grip, TCS-tyre test). The database is constantly maintained and updates by the TCS and includes thousands of products (feed by the label values). With the functioning of the tyre-list it was assured, that interested people could easily compare parameters of tyres and hopefully choose a quieter tyre.



Tyres can be searched after dimensions or brands and then be sorted after the label parameters (noise, rolling resistance and wet grip) and the TCS Tyre-test.

Marke	Modell	Dimension	Saison	Treibstoff-Effizienz	Roll-Geräusch	Nass-Haftung	Bewertung TCS	
DUNLOP	SP SPORT FASTRESPONSE	195/65 R15 91H	SR	C	67 dB	C	-	Details
FULDA	ECOCONTROL	195/65 R15 91T	SR	E	68 dB	E	-	Details
FULDA	ECOCONTROL HP	195/65 R15 91H	SR	C	68 dB	B	-	Details
FULDA	ECOCONTROL HP	195/65 R15 91V	SR	C	68 dB	B	-	Details
FULDA	ECOCONTROL HP	195/65 R15 95H	SR	C	68 dB	C	-	Details
DUNLOP	SP SPORT FASTRESPONSE	195/65 R15 91H[A]	SR	C	68 dB	C	★★★★	Details
DUNLOP	SP SPORT FASTRESPONSE	195/65 R15 95H[A]	SR	C	68 dB	C	★★★★	Details
Vredestein	SPORTTRAC 3	195/65 R15 91V	SR	E	68 dB	C	★★★★	Details
Vredestein	TTS	195/65 R15 91T	SR	F	68 dB	E	-	Details
FULDA	ECOCONTROL	195/65 R15 91T	SR	E	68 dB	C	-	Details
GOODYEAR	EFFICIENTGRIP COMPACT	195/65 R15 91T	SR	C	68 dB	B	-	Details
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
Bridgestone	B250	195/65 R15 91H	SR	E	73 dB	B	-	Details
Bridgestone	B250	195/65 R15 91T	SR	F	73 dB	C	-	Details

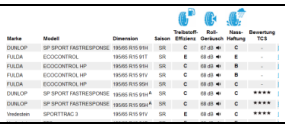
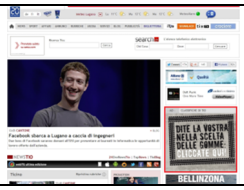
Example of the search result, on top the quietest tyres, at the bottom the loudest, note the difference of 6dB within the same class!

Information Campaign

After the tyre list was established, the tyre needed to become a product of interest for the car owners in the following: the tyre had to become a topic after all! During the planning phase of the tyre-list and of the campaign it became clear, that the EU also recognized the environmental potential of vehicle tyres and decided to introduce a tyre label (EC Regulation 1222/2009). The tyre label however would not only include noise, but also rolling resistance (fuel consumption) and wet grip (safety parameter). It was then decided to focus the campaign, analog to the tyre label, not on the noise aspect exclusively, but to execute a general information campaign promoting "better tyres". Better tyres are *quiet*, *fuel saving* AND *save*! As a benefit, noise interested people would see the fuel saving aspect of tyres and, more importantly, vice versa. With the including of the safety aspect at last the campaign had no credibility issues and became also insusceptible to critics (trade of noise against safety!). This decision towards a more open campaign additionally opened the door for many more potential partners, several additional public and private partners from the industry became involved in the campaign, namely the Federal Office for Roads (FEDRO), the Federal office for Energy (SFOE), the Swiss Touring Club (TCS), the Swiss Car Industry Union (AGVS), the Swiss Purchase Union of the Motor Vehicle Industry (ESA) and Swiss Tyre Union (RVS), all together strongly increasing the coverage, the credibility and therewith the general impact of the campaign. Finally, it was also decided to not

only focus on the client side, but also targeting the sales person in the car repair shops. On one hand, the sales people were pre-informed (and instructed); on the other hand, the participation of the car repair shop significantly boosted the credibility of the entire campaign. The chosen concept of making the tyre a topic was easily adaptable. For the client, the message was: "*choose better tyres*"; whereas for the sale, the same line could be changed into "*recommend better tyres*".

With the benefit of hindsight it can be concluded, that the following of the two general principles were very useful for the campaign: a.) all 3 label parameters were treated equally; b.) both sides, sales and clients, were treated equally. With this neutral approach it was possible to convince and motivate all involved partners. In the following, a brief list of the campaign measures, all carried out by marketing specialists, is given:

Measure	Content	Aim
Landing Page of campaign http://www.reifenetikette.ch http://www.etiquette-pneus.ch/ http://www.etichetta-pneumatici.ch/		• Sensitizing people (Tyre = Noise) • Informing people • Helping people getting quieter tyres (via Tyre list!) • Lottery based on a "knowledge test", prize: quality tyres sponsored by the industry
Tyre List		• Informing people • Influence clients towards purchase of quieter tyres
TV Spot Main TV spot (21s) TV spot reminder (7s)		• Sensitizing people (Tyre = Noise) • Getting people to the landing page / tyre list • Hint to the lottery
Online-Ads Most visited Online Newspaper (20min / Blick / Newsnet)		• Getting people to the landing page • Sensitizing people (Tyre = Noise)
Twitter Tweets from involved Federal Offices		• Sensitizing people (Tyre = Noise) • Getting people to the landing page / tyre list • Access to another community / target audience
Billboard poster At highway roads (DIN F12, 2685 x 1280mm)		• Sensitizing People (Tyre = Noise)
Info poster Pre-information for car repair shops (DIN A2, 594 x 420mm)		• Sensitizing and instruction of sales employees in advance to the campaign
Info-Flyer Give away at the car repair shops (folded, 12 pages, each 210 x 74mm)		• Sensitizing people (Tyre = Noise) • Informing people • Getting people to the landing page / tyre list • Credibility for the campaign
Lottery Prize: 21 quality tyres sponsored by the private partners		• Sensitizing people (Tyre = Noise) • Informing /educating / motivating people • Community co-operation • Getting people to the landing page / tyre list • Access to another community / target audience
Counter teaser Mounted (foldable) on car repair shop counter, filled with lottery participation cards		• Sensitizing sales persons & clients in the shops • Getting people to the landing page / tyre list • Credibility for the campaign via car repair shops

Partnerships		
Public Partnes		**Objective**
Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra	Federal Office for the Environment (FOEN)	• Ensure noise aspect of the campaign
	Swiss Federal Office of Energy (SFOE)	• Ensure energy saving aspect of the campaign
	Federal roads office (FEDRO)	• Ensure safety aspect of the campaign • Credibility for the campaign
Private Partners		**Contribution**
Swiss Touring Club		• Tyre Know-how, technical support • Development / maintenance tyre-list • Ads in several magazines • Ad on homepage • Credibility for the campaign
Swiss Car Industry Union	AGVS | UPSA Auto Gewerbe Verband Schweiz Union professionnelle suisse de l'automobile Unione professionale svizzera dell'automobile	• Mailings to 3'800 car repair shops (members) • Distribution of the info-flyer / counter-teaser • Ad on homepage • Credibility for the campaign
Swiss Tyre Union	RUSASP	• 21 Quality tyres as prizes for the lottery • Mailing to members • Credibility for the campaign
Swiss Purchase Union of the Motor Vehicle Industry	meine ESA+	• Distribution of the Tyres to the lottery winners • Ad on homepage • Credibility for the campaign

Benefit

Today differences between quite and loud tyres are about 6dB (see tyre list). Even though the true potential of noise reduction due to low-noise tyres in daily traffic is less (today, there is a mix of loud and quite tyres on the road, the true reduction is +/- 2-3 dB), following numbers demonstrate the vast potential. Referring to the data from the Federal Noise Pollution report, a general road noise reduction of already 1dB would lead to a reduction of Swiss people suffering emission values above legal limits of 24% (2 dB = 39%, 3 dB = 51 %). And keep in mind: the benefit of low-noise tyres is immediate, non directional, effective on every road, the life cycle is short and the additional costs are negligible! The total public cost of the campaign, including production of all measures and broadcasting costs (TV-Spots, Billboard poster, Online-ad), is summarized to about 600'000CHF (740'000EUR). Of course, it is not evident to proof how many people purchased (or will do so in future) quieter tyres only because of the campaign. The campaign was performed in two phases so far: the first one was conducted when the label was introduced in autumn 2012 (winter tyres), the second phase in the following spring 2013 (summer tyres), the campaign will continue in autumn 2013.Nonetheless, some numbers after the FIRST phase of the campaign:

Telephone survey	• 20% knew there exists a tyre-label (without reminder, note: the tyre is NOT obligatory in Switzerland), • 34% were aware there exists a tyre-label (with reminder), • 19% knew that noise is part of the tyre-label.
Others	• The TV-spots had a coverage of >60% in the target audience (people with car and older than 30y), • 9.2 million cars/week passed the Highway billboard Posters, • 20 times more traffic on the FOEN tyre-site, • 15 times more tyre-list queries during the campaign.
Additionally	• Very positive oral feedback from all private partners (there were not enough counter teaser or lottery participation cards available), they were surprised how many shop owners participated (counter teaser, info-flyer, lottery participation) and how motivated they were throughout the campaign.

Key points for interested parties

- Campaign exists, all presented measures can be reused,
- campaign is already available in three languages (German, French, Italian),
- Tyre list is functional and accessible to everyone,
- preferred measures (target audience) can be picked,
- campaign is easy adjustable to a given budget,
- neutral communication (same relevance of all label parameters, customer and sale) allows many partnerships (private and public),
- noise benefits from more "popular" energy/climate/fuel saving parameter,
- Online-Ad as efficient measure to bring people to the campaign-page / tyre list (no media transition necessary).