



INTERNATIONAL UNION
OF RAILWAYS

12TH UIC WORKSHOP ON RAILWAY NOISE & VIBRATIONS

What's next for SNCF?

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Noise protection measures for existing buildings that are most exposed to railway noise near existing lines

Phase 1 : 2009-2019

SNCF Réseau deployed a nationwide policy led by the French State and its partners to reduce rail noise at the most critical sites (hot spots = "noise black spots")

Impact of the action taken in the last ten years to protect the resident*

dwelling counts	affected population	noise barriers (m)	Budget (M€)
12 000	33 000	12 300	67

*In this specific program only : hot spot processed in project are not included

This first plan will end in 2020

Priority has been given to

- the densely populated areas (Ile-de-France, Lyon, Bordeaux)
- heavily trafficked freight trains (Maurienne valley, Rhône valley)

Noise protection measures for existing buildings that are most exposed to railway noise near existing lines

Phase 2 : 2020-...

A second plan will be set up by SNCF Réseau, the French State and its partners to reduce rail noise at those "noise black spots".

Priority would still be given to

- the densely populated areas : A new funding schemes should be defined : the "LOM" law (Mobility Orientation Law) includes articles for noise decrease funding in the densely populated areas. This law is now under discussion in Parliament
- heavily trafficked noisy freight trains

The recently voted TSI revision will change the PNB labelling

Along quieter routes freight train will be retrofitted : the number of PNB will highly decrease

Noise impact from the most recent HSL opened : **A major dispute by local residents**

In July 2017, 2 new high speed lines were inaugurated :

- 182 km HSL BPL (Bretagne - Pays de la Loire)
- 302 km HSL SEA (South Europe Atlantique)

A lot of nearby residents complained : more than 5000 complaints, lots of resident associations, several litigations, referral to parliament and ministry by elected officials

Their main claims : LAeq is not representative of their trouble,



Ministry actions/decision :

- Order of an independent acoustic measurement campaign by state technical services
400 measurements were done along the 2 HSL : 398 measurements were in accordance with the regulation
- However, compliance with the law was not enough : the french transport ministry entrusted a mediating mission (Senior State officials) to see which improvements could be made :
 - > production of a report about **the possibility to integrate a short event indicator into the regulation**
 - > study to know how and where it's possible to supplement actual mitigation measures, with financial evaluation

ASSESS THE ACOUSTIC PERFORMANCE OF THE GRINDING PROCESS

The rail grinding process may create annoyance through :

- A broadband rail roughness generating rolling noise
- Periodic marks inducing tonal noise



Need to control the acoustic performance of the grinding process

Development of a new assessment procedure for the acoustic quality of rail grinding

Defining acoustic requirements that have to be fulfilled by rail grinding in order to achieve rail surfaces not causing annoying tonal noise

Levels of acoustic requirement

- Level 1 : standard quality
- Level 2 : High quality

For the section of track eligible to rail grinding according to SNCF rules : first tests in 2018

- Limited to Paris and Suburb
- Only 1 grinding train involved
- Potentially : 25% of Level 2 grinding shifts

Implementation in the rail maintenance scheme (conventional rail only)

Selection of the eligible sections of tracks

■ ■ ■ Thank you for your kind attention

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attention.**