

The Francilophone

Newsletter of Bruitparif, the noise
observatory in Ile-de-France

N° 8
Sept. 2009

Editorial

Now that we are all back to work, your newsletter, the Francilophone, gets a complete overhaul. With a layout in the colours of Bruitparif's new visual identity, we are also offering you a renovated and enriched content

In every release, a current topic will be the subject of a detailed report. This time, the results of the measurement and awareness campaign organised in 20 Ile-de-France high schools have the place of honour. Young people are likely to be the population most exposed to hearing risks. MP3 players always in their ears, volume at the maximum... awareness actions are a necessity, even an emergency. The results show it. The acoustic quality of the premises is also very important to provide the best learning conditions possible.

In all the issues, you will also be informed of the new sessions of the recently created Forum of the Ile-de-France Entities and of the development of the permanent measuring network of the sound environment, RUMEUR.

To better help you, you will always find an article written as a Q&A related to a concrete need that some of you will have expressed.

You will also find: some quick news, the decoding of a regulation or a document that impacts your activities, a few reading suggestions and an agenda.

I wish you an excellent return to work and a good reading.

Pascal Marotte

President of Bruitparif



Report: p. 2-4

Awareness campaign towards Ile-de-France high school students

- Also in this issue
- Measurements • p.5
- News of the RUMEUR network • p.6
- Support to public policies • p.7
- Live news • p.6 and p.8
- Decoding • p.8
- Recommendations • p.8
- Agenda • p.8



Noise awareness campaign

in 20 Ile-de-France high schools

Because quality of the premises, noise levels and sound atmosphere are key elements for a good knowledge acquisition, the Ile-de-France Region decided to lead a pilot noise awareness campaign within 20 Ile-de-France high schools. After a call for tender, Bruitparif and its partners were selected to organise a complete approach combining assessment and awareness actions. Explanation and results.

Carried out during the first half of 2009, the campaign, coordinated by Bruitparif in partnership with CIDB, O1dB, RIF and CNAM, mobilised around 30 people: engineers, acousticians, environment psychologists, hearing-aid specialists, artists...

The goal: make the students as well as the staff aware of topics such as hearing, acoustics, the effects of noise on health, the risks related to amplified music and the fundamental role of hearing in the intellectual and social development of individuals.

To do so, the Ile-de-France Regional council chose 20 high schools spread in the 3 school districts of Créteil, Paris and Versailles, with most of them part of the planned renovation programme voted by the Region.

Two aspects were organised, one dedicated to the assessment of the sound environment of the school and the other to the awareness actions.

Make the students as well as the staff aware of topics such as hearing and acoustics, the effects of noise on health

Reverberation time measurement



Measurement and perception

In order to obtain assessment elements for the sound atmospheres in which the students and the staff of the high schools spend time every day, the teams made:

- **An acoustic pre-diagnosis** of the premises.
- **Individual noise exposure measurements.**
- **A perception survey** to know amplified music practices and risk knowledge, feelings on the sound atmospheres in the school and effects on school activities and health. Carried out by CIDB on the basis of 2500 questionnaires, it will be published in the next issue of the Francilophone.

On the awareness side

- **A conference with three experts** (an acoustician, a hearing-aid student and a psychologist).
- **An exhibition dedicated to the hearing risks** encountered when listening to or playing amplified music.
- **An MP3 player workshop** where the students were invited to test the sound level of their own walkman.
- **Audiograms (hearing tests)** carried out by the school nurse for voluntary students.
- **An educational concert, "Peace and Love,"** for a class of first-years in each high school.

Educational concert "Peace and Love"



Take action = an emergency

For the first time, a survey of this scale was carried out in Ile-de-France high schools. The results show a need to tackle noise management in an overall way:

- **Improve the acoustic comfort** on the teaching premises.
- **Make people realise the necessity to reduce urban sound levels**, as they are not without consequence for health.

- **Make young people aware of the hearing risks encountered when listening to MP3 players too long and too loudly.**

This initiative therefore needs to be repeated, especially since 87% of the high school students involved are satisfied with this campaign.

FOCUS

MP3 players: 54% of the students listen to music too loudly

As teenagers love listening to and playing amplified music, the teams organised an MP3 player workshop aimed at assessing their listening level.

The results, on the basis of 418 tests, show that about 54% of the students listen to their MP3 player at levels superior to 85 dB(A).

7% listen to their MP3 player at more than 100 dB(A), which corresponds to the noise emitted by a pneumatic drill, a level that should theoretically not be exceeded in view of the European regulations in force.

The students who listen to very loud music are usually aware of it, but that does not stop them from using devices bought outside the European Union or unlocked.

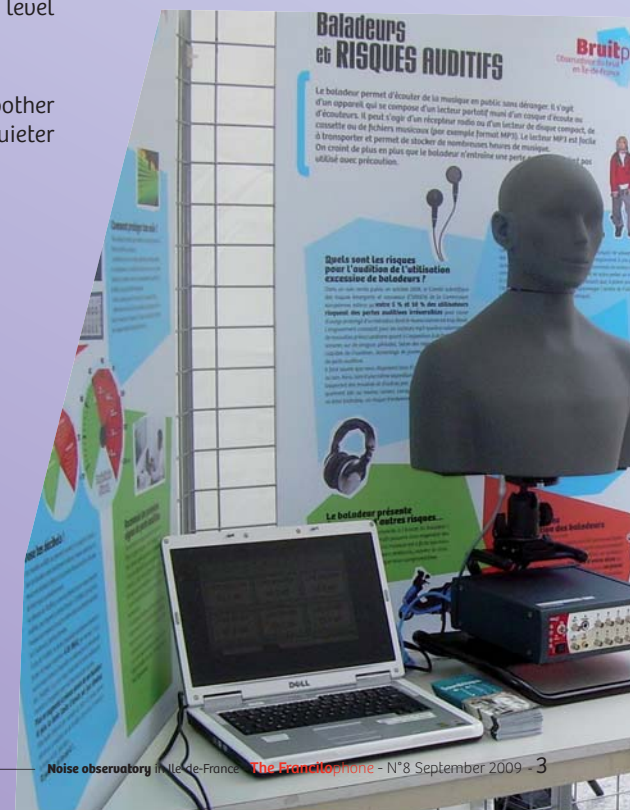
There is also a strong disparity between the listening practices of the various high schools: the more time the students spend in a noisy environment (dense urban area with heavy concentrations of transportation infrastructures, vocational or technical high schools with workshops), the louder they listen to their MP3 player.

This can easily be explained: to be able to properly listen to music, you need a 12 dB differential between the listening level and the residual background noise.

A volume they do not necessarily bother to decrease once they reach quieter atmospheres.

7% listen to their MP3 player at more than 100 dB(A), which corresponds to the noise emitted by a pneumatic drill

54% of the students listen to their MP3 player at levels superior to 85 dB(A)



Focus

Acoustic measurements: 20 high schools documented

Carried out in the locations most frequented by the students (halls, covered playgrounds, school restaurants, study and teaching premises, sports rooms, circulation areas, libraries...), these measurements provided the sound maps of every high school.

To complete this system, a sample of students and staff were equipped with individual dosimeters in order to determine their sound exposure (dose of noise received) during a typical day.

In total for all the schools, 226 reverberation time (time needed for a 60 dB decrease once the sound source used for the measurement has stopped emitting) and background noise measurements on empty premises, 167 ambient noise measurements on occupied premises and 184 noise dose measurements were carried out.

The analyses of these results confirm that circulation areas and sports rooms are the premises with the worst acoustic conditions.

60% of the reverberation time values measured on teaching premises and in

1 student out of 2 is exposed, during a day at school, to average noise levels over 80 dB(A)

school restaurants are close to or exceed the thresholds set by the 1995 decree regarding the acoustic characteristics of schools built after 1995.

Moreover, the average ambient noise values are around 73 decibels (that is, more than the sound level of a street with heavy traffic) in school restaurants, in sports rooms and between classes.

In total, one student out of two and almost one adult in the school community out of three are exposed, during a day at school, to cumulative average noise levels over 80 dB(A).

More than 20% of the students are even exposed to cumulative average noise levels over 85 dB(A) (equivalent to the noise level emitted by a lawn mower) during a day at school.



Sound levels in schools: the regulations

Teaching premises

Goal: intelligibility

Norm:

$0,4 \leq RT^* \leq 0,8$ for a room $\leq 250 \text{ m}^3$
 $0,6 \leq RT \leq 1,2$ for a room $> 250 \text{ m}^3$

School restaurants

Goal: controlled sound level

Norm:

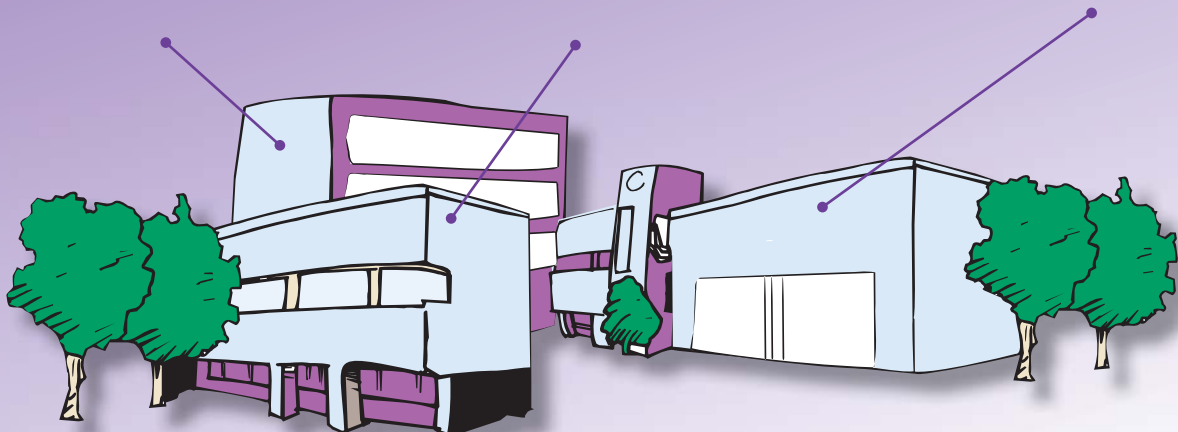
$0,8 \leq RT \leq 1,2$ for a room $> 250 \text{ m}^3$

Sports rooms

Goal: comfort and intelligibility

Norm:

ordinance regarding noise limitation in leisure and sports buildings



*RT = Reverberation Time

Note that the regulation applies to schools built after 1995 (decree n°95-20 of January 9th, 1995)



In order to control the environmental impact of the Paris-Issy-les-Moulineaux heliport, the State, the towns, the local resident associations, the heliport users and ADP (Aéroports de Paris) signed a charter in October 2007. Involved in this project, Bruitparif was assigned the mission of deploying a permanent measurement system in order to monitor the monthly and yearly evolution of noise nuisances under the flight paths along the Seine valley and around the heliport.

Goal: reduce noise nuisances

The permanent measurement system for helicopter noise will include 7 stations in the end, deployed in the towns most affected by helicopter overflights: Issy-les-Moulineaux, Paris, Meudon and Sèvres.

Installed on the CNRS terrace in Meudon, the 1st station aims at analysing the impact of overflights for the local residents of the Meudon hill.

The 2nd one, in the departmental park of the Saint-Germain Island in Issy-les-Moulineaux, follows the traffic along the Seine corridor.

Set in the Brimbordon park in Sèvres, the 3rd one monitors the noise of the helicopters coming from/going to roads: Rocquencourt

(A13 - Saint-Cloud Bridge - Seine banks), Satory-South Versailles and Villacoublay (RN118 - Sèvres Bridge - Seine banks).



Finally, a 4th station is located in the 15th district of Paris, on the terrace of the

Pullman hotel (near the heliport) in partnership with LCPP (Central Laboratory of the Police Prefecture).

A 5th station should also be deployed in the 14th district in the Montrouge cemetery.

To complete this system, two other measurement stations belonging to Aéroports de Paris (ADP) are installed within the heliport platform, on either side of the main taking off/landing directions.

Some encouraging results

During the Environment Consultative Commission of last June 22nd, the Bruitparif teams presented the results of a measurement campaign organised before and after the increase in overflight altitudes (from 450 meters to 600 meters) between the Gentilly Gate and Meudon.

These very encouraging first results revealed an obvious acoustic gain. For the Sèvres station in particular, the comparison between the measurements showed a 2 dB(A) average decrease in noise nuisances. A gap that is still liable to increase once the instruction is perfectly respec-

ted. In addition, the proportion of overflights generating sound levels superior to 70 dB(A) was clearly reduced after the increase in altitudes (36% on the weekend of April 11th - 12th versus 7% on the weekend of May 2nd - 3rd). On the 2nd weekend, no event over 75 dB(A) was measured whereas 5% of the overflights showed superior or equal values beforehand.

After these positive results, the teams are going to continue the analyses and especially study the impact of the retirement of the Alouette III, a helicopter known for being very noisy.

Last minute

The State is announcing new measures. Dominique Bussereau, Secretary of State for Transport, has announced the actions already launched and the ones to come in order to reduce the noise nuisances affecting around 200,000 people living in close proximity to the heliport.

The overflight altitudes between the Gentilly Gate and Meudon were increased from 450 m to 600 m. New landing and taking off procedures should also be implemented. The access to the heliport should be gradually reduced for old helicopters (which are noisier).

Finally, with the Greater Paris development projects, the traffic will be spread to other sites that should be operational by Summer 2011.

FOCUS

The charter and its main commitments

By signing the charter, the State, the towns, the local resident associations, the heliport users and ADP commit to:

- **Make the traffic conditions evolve** (12,000 movements maximum a year, a decrease in the transit traffic, limitations on Saturdays, Sundays and holidays, an increase in flight altitudes, new low-noise landing and taking off procedures...).
- **Set up incentive measures** aiming at modernising the fleet regarding acoustic characteristics.
- **Ensure information transparency.**



Launch of the health-environment study SURVOL around 3 Ile-de-France airports

Officially launched by the Regional Prefect last July 9th, the SURVOL project aims at studying the environmental impact of the air traffic from the Paris-Charles de Gaulle, Paris-Orly and Paris-Le Bourget airports.

Included in the Health-Environment Regional Plan and programmed over 4 years (2009-2012), this project offers the people living in close proximity to these airports (near 2.3 million inhabitants) a permanent monitoring of their exposure to noise and to air pollution.

Led under the aegis of the Regional Prefecture and the department prefectures through the DRASSIF, the DDASS's and the Institute of Health Watch, the SURVOL project, in relation with AirParif and Bruitparif, must meet the expectations of all the entities involved with the airports by making the data available to everybody on the Internet as of 2011.

In order to prepare the deployment of permanent measurement stations and to refine the methodology to generate event indicators (events emerging from the background noise), the Bruitparif teams are currently carrying out a wide preliminary study campaign. In total, 102 measurements that will last 24 hours will be made on 68 sites from July to October 2009.

Publication of a synthesis note on the sound impacts of a Formula 1 circuit

While the debate is at its height to choose the location of the future circuit of the French Formula 1 Grand Prix, Bruitparif, at the request of the Ile-de-France Region, has published a synthesis on the sound impacts of circuits, in order to provide understanding keys on this issue.

To do so, Bruitparif relied on the experience of the Azimut Monitoring company, which intervenes on several French circuits of various geographical situations, sites and vocations.

To download the note, go to www.bruitparif.fr, in the "Nos Publications" category.

News

of the RUMEUR network

A deployment that is accelerating!

The Urban Network of Measurement of the sound Environment of Regional Use (RUMEUR, Réseau Urbain de Mesure de l'Environnement sonore d'Utilité Régionale) aims at completing the noise maps made to implement the 2002/EC/49 European Noise Directive at the scale of the Ile-de-France territory. Launched in 2008 by Bruitparif in partnership with the towns, RUMEUR will include near 30 stations by the end of 2009.

By providing precise and dynamic information on the emergences (noise peaks related to horns, motorbikes, airplanes or trains...), the data coming from RUMEUR are much closer to the nuisances perceived by local residents than the noise maps made through modelling will ever be.

A non-negligible advantage that the first partner towns have well understood.

A decision-making tool

For the towns, RUMEUR is a tool to understand phenomena, to diagnose issues and to assess actions against noise.

Short-term measurements (from a few days to a few weeks) can be carried out on some sites in order to complete the information provided by the noise maps, to bring understanding elements and to identify possible action ideas.

Moreover, with measurement stations in areas where evolutions are planned in terms of big projects, urban development or modifications of traffic

conditions or infrastructures, follow-up indicators of the acoustic impact can then be made available. The stations meeting these goals are deployed for durations compatible with the events to study (from a few months to a few years).

Finally, stations can also be deployed in areas that have been defined as quiet in order to follow the evolution of the sound environment in these areas and to preserve them.



Focus

Interest of measurements as a complement to noise maps

Florian Venant

Head of the Environment and sustainable development mission, Val de Seine Agglomeration community

You have been one of the first entities to sign a partnership with Bruitparif to deploy measurement stations on your territory. What were your goals?

FV: "If we want to complete the sound diagnosis that we are establishing with the noise maps, setting up measurement stations is very interesting. Indeed, the modelled maps give a static vision of the average noise level that does not always correspond to the reality perceived by the inhabitants. The RUMEUR network represents for us a very flexible system: we can obtain measurements in various locations, we can make the stations evolve in time and geographically as well."

What do you expect from these stations?

FV: "It is a decision-making tool. Knowing that the noise is louder at the exit of a tunnel or at a crossroads helps us invest appropriately in the treatment of road axes and in road surfaces. In the end, it is a tool that costs very little (3500€ by town or agglomeration community, ed.) and that gives us a very precise reading of the noise on the territory. It is important for the towns."



In order to make the biggest number benefit from its expertise, to centralise and spread knowledge and to stimulate exchanges, Bruitparif created an information and experience-sharing space: the Forum of the Ile-de-France Entities for a better management of the sound environment.

A physical space where working groups, seminars and conferences are held, this forum will also take the form of a dematerialised space, resource place and exchange centre on the Bruitparif website, which is currently being revamped.

4 information and training sessions have already gathered about 120 elected representatives and members of the technical services. On the agenda, a very concrete content in relation with the expressed needs: "How to go from the strategic noise maps to the territorial diagnosis?" Regulatory reminders, methodological proposals to feed the creation of an action plan and practical works were given to the participants.

However, even if the first meetings were focused on the implementation of the 2002/EC/49 European Noise Directive, the field of action will be much wider. Organising and animating this forum, regardless of the regulatory deadlines, is a long-term commitment.

You want to know the dates of the next sessions or simply register for one, contact **Méline Bossat** at Bruitparif by phone at +33 (0)1 75 00 04 28 or by email: melaine.bossat@bruitparif.fr

For more information:

<http://www.bruitparif.fr>, in the "Ouverture de la base documentaire du Forum des acteurs" category.

Implement an action plan

At most 1 year after the publication of the noise maps, the 2002/EC/49 European Noise Directive and its transposition into French law require every authority in charge of noise to publish a new document: the action plan. Who is affected and what are the goals of the action plan? What must it contain? And are there any aids to carry it out?

David Guérin, Project Manager at Bruitparif, gives us the main answers.

What are the stakes related to the setting up of action plans?

David Guérin - The action plan has a **triple goal**: prevent noise nuisances, reduce noise levels if necessary and preserve quiet areas. This strategic document, non-opposable, gathers all the action, information and awareness proposals at the scale of a territory or an infrastructure. The action plan project must be put to everybody's disposal for two months before being decided and sent to the Prefect. It is therefore a tool for long-term strategy, for assessment of the efficiency of the actions and for consultation, that will have to be re-examined every 5 years.

What elements must an action plan contain?

David Guérin - The action plan is made up of at least:

- a **presentation report**;
- if need be, the determination criteria and the location of **quiet areas**, as well as the preservation goals regarding these areas;
- the **noise reduction goals** in the areas exceeding the limit values;
- the **measures aiming at preventing or reducing noise** decided over the last 10 years and planned for the next 5 years;
- if they are available, **the financing and the deadlines** planned for the implementation of these measures as well as the texts they are based on;
- the **motives that have entailed the choice of these measures** and, if it has been done, the analysis of the expected costs and advantages;
- an **assessment of the decrease in the number of people** exposed to noise at the end of the implementation of these measures;
- a **non-technical summary** of the plan.

Is it possible to obtain financial aids to carry out the action plan?

David Guérin - Indeed, the Regional council considers that the actions against noise represent a major environmental stake and has decided to adopt a **specific system to support the creation of the action plans**. The towns and the agglomeration communities in charge of noise can obtain subsidies, up to 40% of the budget (with a €10,000 limit) to carry out preliminary studies, and up to 20% of the budget (with a €4,000 limit) to create an action plan. In addition, the Regional council encourages the setting up of pilot operations by allocating a €240,000 budget to support at most 4 innovative projects.

For more information:

- "Base documentaire du Forum des acteurs" on <http://www.bruitparif.fr>
- "Guide pour l'élaboration des Plans de prévention du bruit dans l'environnement," ADEME

Contact:

- "Support to public policies and awareness actions" department at Bruitparif
Phone: +33 (0)1 75 00 04 00 - Email: contact@bruitparif.fr



Sound management of the Unighted party at the Stadium of France

At the request of the Stadium of France Consortium, a new member of Bruitparif, the teams have installed two measurement stations near the stadium for the Unighted party last July 4th. The goal: document the sound impact of the event for local residents and reduce, thanks to a monitoring system in real time, the annoyance related to the event. A successful operation, as the levels have decreased in comparison with the 2008 version.

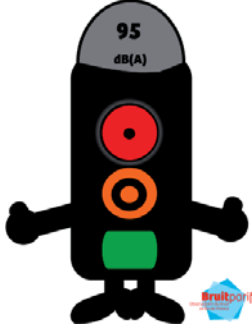
Techno Parade 2009: take no risk!

TECHNO PARADE: TAKE NO RISK

ROUGE: S'ÉLOIGNER DES ENCEINTES

ORANGE: PORTER DES BOUCHONS D'OREILLES

VERT: C'EST OK!



For the third year in a row, Bruitparif gets involved to make Techno Parade a party without any hearing risks. 4 measurement stations coupled with displays will be installed along the way. The DJs will thus be able to know the measurement of the generated noise in real time in order not to subject the

audience to levels over 105 dB(A). As for the participants, they will be informed of the risks and made aware of the necessity to wear earplugs.

In parallel, earplugs and prevention flyers will be widely distributed. Finally, for advice, the volunteers of the France Acouphènes association will be especially mobilised for the event at **+33 (0)820 222 213 (€0.09 a minute within France)**.

See you on Saturday, September 19th!



The Francophone

Newsletter of Bruitparif

Director of publication: Pascal Marotte

Writing: Cathy Lazare, Fanny Miellicki

Translation: Méloine Bossat

Design and layout: Diagraphie - diagraphie.fr

Bruitparif: 9, impasse Milord - 75018 Paris - France

Phone: +33 (0)1 75 00 04 00 - Fax: +33 (0)1 75 00 04 01

Email: contact@bruitparif.fr - <http://www.bruitparif.fr>

Decoding

The State launches the second Health-Environment Plan

Created by the Ministry of Health and the Office of the Secretary of State for the Environment, the 2009-2013 Plan is an extension of the commitments of the Grenelle of the Environment. Among the 63 concrete measures, all coming with a budget and result indicators, the fight against noise nuisances holds a good place.

63 concrete measures, a budget and result indicators

In particular, the plan notes that "if the impact of high sound levels (superior to 85 dB(A)) on the hearing organ does not need to be proven any

more, exposures to lesser levels, especially at night, prove to have repercussions on sleep quality. These disturbances not only lead to tiredness, drowsiness, loss of vigilance... but also contribute to an increase in the risk level of cardiovascular pathologies, as well as to a possible modification in the level of immune defences."

For this reason, the report concludes that it is advisable "to ensure a mobilisation worthy of the stakes on this topic."

The main measures to decrease the impact of noise on health

- **Incorporate the fight against noise in an overall approach**, in particular continue the studies aiming at taking into account the cumulative impacts of road, rail and air noise.
- **Reduce the nuisances related to transportation noise**, in particular make noise black spots disappear in 5 years by implementing the "Noise plan" financed by the ADEME and limit noise at the source.
- **Promote the installation of noise monitoring networks** in civil airports in order to improve the knowledge on local residents' exposure.
- **Reinforce the fight against hearing risks** and acute noise traumata related to amplified music.
- **Obtain tools** to better understand the health impact of noise, especially by developing noise observatories in big agglomerations by 2012.

Recommendations

"National repository for the creation and the definition of quiet areas"

In order to help the towns identify the quiet areas to preserve, the State commissioned the Research Centre on Space, Transportation, Environment and Local Institutions (C.R.E.T.E.I.L) of the Paris Institute of Town Planning - Paris XII University to create a repository.

To download this methodological tool, go to "Base documentaire du Forum des acteurs" on www.bruitparif.fr



"Bruitparif progress report"

Development of the permanent measurement network RUMEUR, support to public policies regarding the implementation of the European Directive on environmental noise (maps and action plans), awareness actions...

Discover all our 2008 activities in this new yearly report available for download on www.bruitparif.fr or as a paper version on demand.



"Neighbourhood noise: a guide dedicated to mayors"

The Ministry of Health and CIDB drew up a guide that gathers in less than 20 pages the basic tools and practical information to know for a balanced policy of neighbourhood noise management.

To download this document or order a paper version, go to www.bruitparif.fr



Agenda

> September 19th, 2009

Bruitparif will be present for the **European mobility day at Boulogne-Billancourt**. Meet us as of 10am, on boulevard Jean-Jaurès, to discover the results of the 2 permanent measurement stations installed in the town.

> From September 7th to October 15th

"**Je me déplace, je m'exprime!**" This is the name of the wide **consultation campaign aimed at the general public** launched by the STIF for the revision of the Plan of Urban Movements in Ile-de-France (PDUIF). From September 7th to October 15th, go to www.pduif.fr and give your opinion on movements in Ile-de-France. Every week, a mode of transportation has the place of honour and prizes can be won!

