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Keep It Down! Euro Noise Assault

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PARIS --The cry is rising across Europe: "Keep it down!" Harnessing the tireless power of computers and collective will, the old continent is embarked on a new fight against a long-overlooked, but oft-overheard, form of pollution -- noise.

At the heart of the program is a Europe-wide drive to map noise levels in cities in 25 nations.

Allowing eyes to see what ears hear, the maps will show Europe as never before. They will be followed with plans to dampen the din and calm public disquiet about the 24-hour aural assault of modern life.

In the same way that X-rays reveal broken bones, completed maps will help show how the rumble of cars, planes and trains sickens cities and, experts fear, their inhabitants.

The program requires noise maps for all European Union cities with more than 250,000 people, as well as around major roads, rail lines and airports, by June 30, 2007 -- including in the 10 eastern European countries joining the union next year.

Paris is leading the way. In a room warmed by computers crunching numbers around the clock, designers are readying the first 3-D maps of noise levels at night in the City in Light.

Daytime maps, with road traffic noise represented in rainbow colors ranging from green for quiet through yellow then red to deep blue for chronic noise, have attracted at least 150,000 visits since Paris City Hall posted them on its Internet site in May.

Paris' traffic-clogged ring road shows up as a dark-blue noose measured at 76 decibels or more, way above the 55 decibels the World Health Organization says can cause "serious annoyance."

Crisscrossing the capital like whip marks are dozens of other noisy boulevards, including the famed Champs-Elysees, also deep blue. Parks and inner courtyards that are a feature of Parisian apartment buildings, in contrast, are soothing havens of green.

Noise has bothered Europeans at least since the poet Juvenal bemoaned the "carts clattering through the winding streets" of ancient Rome. "The sick die here because they can't sleep," he wrote. Some 1,800 years later, French author Marcel Proust lined his room with cork to dull the din of early 1900s Paris.

Industrialization and modern transportation have amplified the problem. EU countries are particularly affected because more than 75 percent of the union's current 376 million people live in urban areas, where noise levels are highest.

Noise is not just a nuisance, it's a health issue. And victims are often least able to afford quieter surrounds.

A WHO report estimated that 40 percent of EU residents -- 150 million people -- are exposed to road traffic noise exceeding 55 decibels and that over 30 percent suffer noise levels at night that disturb sleep.

The health body says prolonged exposure to chronic noise is thought to contribute to hypertension and heart disease, and may impair mental health.

In Paris, noise is "the type of pollution people complain about most," Deputy Mayor Yves Contassot said in an interview.

Yet noise long took a backseat on government agendas, experts say, because it is not as obvious as billowing diesel exhaust or fouled urban waterways.

It is hoped the new noise maps will strengthen public pressure for remedies.

"A lot of people think that noise behaves in an odd way and can't be dealt with scientifically," said Roger Tompsett, whose firm is noise-mapping London. "That's the beauty of the maps. The public as well as the experts will be able to comment more meaningfully on development plans and noise action plans because it will be much clearer to them how noise behaves."

The EU has decreed that member countries, including next year's 10 new adherents, must draft plans by July 2008 to limit

noise. EU officials say existing anti-noise laws also will be reviewed to see whether they need tightening.

Paris already is taking action, covering more sections of the noisy ring road, directing traffic away from residential zones, building a tramway, and replacing City Hall vehicles with quieter models. By year's end, one-quarter of Paris' 416 garbage trucks will run on natural gas, 50 percent quieter than current diesel models, City Hall says.

There are skeptics. Peter Wakeham, director of Britain's Noise Abatement Society, said funds for mapping could be spent soundproofing thin-walled homes.

"Are they going to shut the nightclubs? No," he said. "Are they going to put in better traffic systems? No. Common sense tells you where the noisy places are."

But Brussels has already used its maps to identify people eligible for soundproofing subsidies because of excess traffic noise.

London's map, expected for year-end, is showing that the rumble from major roads can be heard more than a kilometer away -- further than previously thought, said Tompsett.

"The noise spreads until it gets to buildings and the buildings act as barriers," he said. "That's the sort of thing we'll be able to learn from the maps."

Placing microphones on every building in London or Paris to measure noise would be too time-consuming and costly. So instead, data on the amount of traffic carried by roads being mapped is fed into computers, which calculate the noise generated and make the maps accordingly. The result is a model of noise across the city.

Paris took readings with microphones at 100 points in the city to verify the computer calculations and found them to be accurate on average to within 1 decibel.

Tompsett said that 10 to 15 computers, standard PCs with Pentium III or IV chips, are at work on London's map. Eight off-the-shelf PCs with expanded memories took nearly a year to do Paris' daytime maps.

By altering the data given to the computers, officials can use the models for simulations. Paris, for example, has simulated how noise would be cut in the Bois de Boulogne if it closed two roads that slice through the popular park.

The Web-based maps for public consumption are not as sophisticated but, in a nifty touch, allow Parisians to zoom in on noise levels on their streets and even their buildings with just a few mouse-clicks.

"It's been an exceptional success," said Deputy Mayor Contassot. "We could doubtless halve the amount of noise. That, to me, seems to be an entirely realistic goal."