

NOISE POLLUTION IN DHAKA: CURRENT SITUATION AND SUGGESTIONS FOR ACTION

--Amit Ranjan Dey

Project Officer, Work For a Better Bangladesh
H # 49, R # 4/A, Dhanmondhi, Dhaka

Abstract

Noise pollution is one of the main causes of environmental pollution in Dhaka, yet much of the noise is unnecessary. The noise levels throughout the city are far above those established as being safe for health and hearing, and people constantly face the aggravation and dangerous health effects of exposure to excess noise.

Work for a Better Bangladesh conducted a survey among 2,500 people, consisting of the general public, students, and drivers. We found that 86% of the general public consider noise pollution as a big problem. People report a variety of problems from noise pollution, with 78% mentioning aggravation, 71% headache, 49% bad temper, and 43% difficulty concentrating and trouble sleeping. More worrisome still is that an astonishing 97% of students say that their study is disrupted by car horns. Further, doctors report that noise pollution not only causes hearing loss, but can dangerously aggravate the condition of heart patients.

Many factors contribute to noise pollution in Dhaka, including the chaotic traffic situations, lack of awareness and education of drivers, and the relaxed attitude of the police and government when people break the existing laws regarding noise pollution. Needed measures include enforcing existing laws on noise pollution, completely banning the use of machines to break bricks, banning the use of miking for elections campaigns, processions, and advertising, banning industrial activity in urban areas, placing and enforcing limits on decibels in urban areas, improving traffic control, and raising awareness among passengers and drivers. With a strong effort by NGOs, the media, and the Government of Bangladesh, we can reduce noise pollution in Dhaka, and improve the situation for ourselves and our children.

INTRODUCTION

Much discussion occurs in the media over the many serious environmental problems that Bangladesh faces. Recently, polythene bags in particular have drawn much attention—so much so that the Government of Bangladesh banned the use of polythene shopping bags. Air pollution is also often discussed, though measures to reduce it have been limited to date. But what about noise pollution? While it is sometimes mentioned, it has not received serious attention. To some Dhaka residents, it may be considered more of a necessary aggravation than a serious problem that can be addressed.

Noise pollution is not only an aggravation, but also a serious health risk. The WHO has established maximum allowable levels of noise, above which people are harmed; it is widely known that in many parts of Dhaka city, those levels are regularly exceeded. Regular exposure to high levels of noise damages hearing. Noise pollution can also increase stress and blood pressure, cause troubles sleeping and concentrating, and lead to bad tempers and fights. Noise pollution can also be reduced, through passage and enforcement of laws, and increasing of public awareness about the problem and ways to reduce it.

This report presents our research findings from two focus groups, a survey of 2,500 people (students, drivers, and the general public), further information about noise pollution, and recommendations to reduce it and help make Dhaka a more livable and healthful city.

METHODOLOGY

Survey

During the months of May and June 2002, Work for a Better Bangladesh (WBB) surveyed a total of 2,500 people—500 drivers, 1,000 students, and 1,000 members of the general public—to understand their opinions about noise pollution, the problems they experience, and what they feel should be done.

The questions were designed by a team of WBB researchers, as a result of extensive discussion of the causes of noise pollution, and potential problems. Field testing led to a refinement and revision of the questions. A one-day workshop was organized to train the survey researchers in data collection methods. The results were then entered into MS Access and analyzed by WBB staff.

Focus group

In order to gain better understanding of people's feelings about noise pollution, WBB held two focus group discussions in May and June 2002. One was a mixed group of office workers, students, and drivers; the second was of bus drivers.

RESULT OF THE RESURSE

Accepted noise limits (in decibels) and current noise situation in Dhaka

Accepted levels for noise are set by the type of neighborhood—quiet, residential, mixed, commercial, and industrial—as well as by time of day (day vs. night). As the table below shows, the range is from 35 to 75 decibels. However, the actual situation in Dhaka city is quite different from the desired one portrayed by the limits.

Table 1. Noise Quality Standards, by Zone and Time of Day

Zone Class	Limits in dBa	
	Daytime (6 a.m. – 9 p.m.)	Nighttime (9 p.m.-6 a.m.)
Silent zone	45	35
Residential zone	50	40
Mixed (residential/ commercial/industrial) zone	60	50
Commercial zone	70	60
Industrial zone	75	70

Source: Unnayan Shamannay, *People's Report on Bangladesh Environment 2001, Volume II, Database* (The University Press Limited, Dhaka, 2001).

Of particular interest is the concept of a silent zone. According to the Ministry of Environment and Forest's Environment Conservation Rules 1997, as cited by Unnayan Shamannay, "Area within 100 metres of hospital or educational institution or government designed/to be designated specific institution/establishment are considered silent zones. Use of motor vehicle horns or other signals and loudspeakers are forbidden in silent zones."

As Table 2 shows, noise levels around some schools and hospitals far exceed what is allowed—by a startling **22 to 38** decibels. A similar situation likely exists as regards most other schools, hospitals and government institutions in Bangladesh.

Table 2. Measured Noise Levels in Some Sensitive Areas of Dhaka

Location (outside the facility)	Measured noise level (dB)	
	Morning	Afternoon
Shaheen school	74	83
Motijheel Govt. high school	79	83
Dhanmondi Govt. boys high school	75	80
Azimpur girls college	78	80
Tejgaon women's college	67	75
P.G. hospital	78	82
Dhaka medical college hospital	69	80
Mitford hospital	73	76
Children hospital	69	72

Source: GOB 1999: GOB 1997 *Bangladesh Compendium of Environment Statistics*, Bangladesh Bureau of Statistics, Dhaka, as cited in Unnayan Shamannay, *People's Report on Bangladesh Environment 2001, Volume II, Database* (The University Press Limited, Dhaka, 2001).

An unpublished 1998 study by the Society for Assistance to Hearing Impaired Children (SAHIC) revealed alarming levels of noise, as shown in Table 3. SAHIC's report shows noise levels in the residential area of Banani of 68 decibels, the residential area of Gulshan at 70 decibels, and in areas such as Farmgate and Bangla Motor of an astonishing 104-106 decibels. The levels—and resultant harm—are likely to be even higher now, given increased population density and vehicle ownership. While some laws exist to limit noise pollution, they are insufficient and are not enforced.

Table 3. Noise Levels in Selected Areas of Dhaka

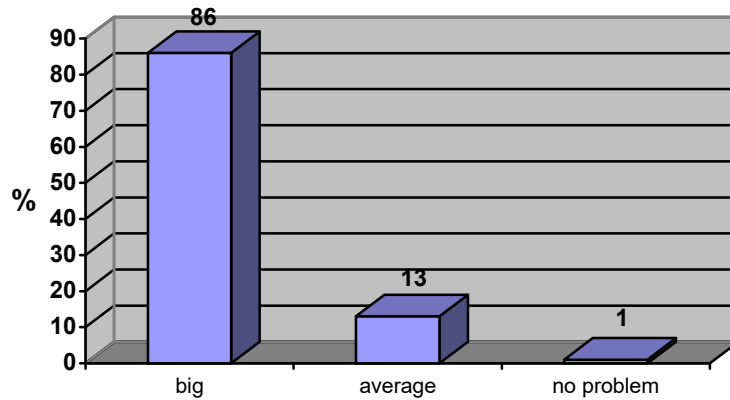
Area	Noise level (decibels)
Sayedabad Bus Terminal	106
Bangla Motor	106
Sonargaon Hotel	104
Farmgate	104
Mohakhali Crossing	103
Maghbazar	103
Mowchak	103
Gabtuli	102
Jatrabari	100
Tejgaon Industrial Area	97
Mirpur-1	97
Kakrail	92
Gulistan	90
Sapla Chattar Motijheel	89
Sadarghat	87
Mirpur-10	86
BIRDEM Hospital	81
Dhanmondi Residential Area	78
Gulshan Residential Area	70
Banani and Baridhara Residential Area	68

Source: Society for Assistance to Hearing Impaired Children (SAHIC)

The rate of noise pollution in Dhaka city is alarming. We the environmental activists consider it a problem, but what do the mass people thinks of it; what type of problems are they facing? What are the problems that the physicians and specialists detect? What is the thought of the people who are creating this pollution? If they think it as a problem, what are their suggestions to control it? What should be the role of the government, non-government organizations and of the individuals? Our research concerning the above issues reveals the following:

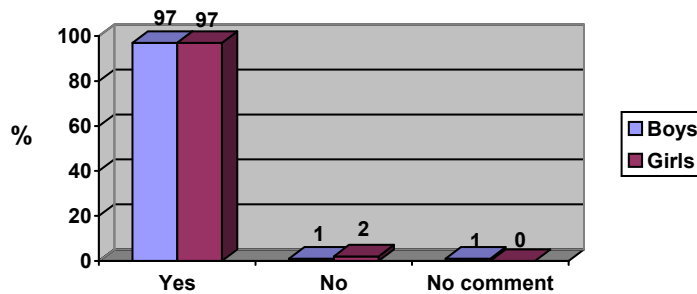
Almost all the general people interviewed felt that noise pollution is a problem, with less than 1% (7 people) saying that noise pollution is not a problem. Among both sexes, on average **86% considered noise pollution a big problem**, and 13% an average problem. More women than men considered noise pollution a big problem (94% vs. 84%), with men more likely to label it an average problem (15% vs. 5%).

Is noise pollution a problem?



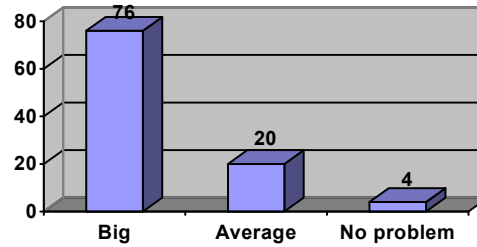
Significantly, among the students interviewed, **almost all—97% of both boys and girls—said that their studying is disturbed by honking.** While this survey could not measure the extent of the disturbance, the finding is certainly troublesome—that the ability of students to concentrate on their studies is regularly affected by noise pollution.

Studying disturbed by horns



Even the drivers who are mostly responsible for noise pollution, detect it as a problem, While overall **76% of drivers felt that noise pollution is a big problem**, 20% an average problem, and 4% that it is not a problem, the educated were far more likely to perceive it as a serious issue.

Is noise pollution a problem?

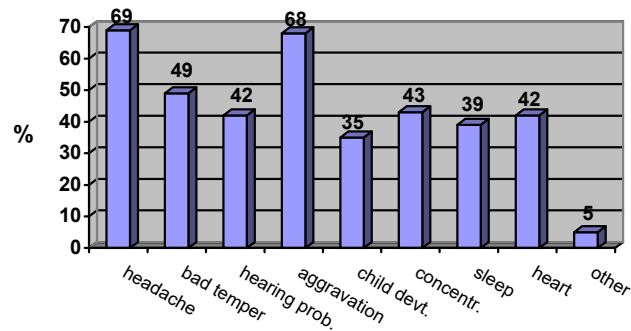


Noise pollution is clearly significant source of annoyance and trouble to students in Dhaka city. This problem is seen not only among the students but most of the dwellers of Dhaka are affected with it.

The major cause of sound pollution of Dhaka city is vehicle horns. The drivers who are responsible for making the sound are also affected by it.

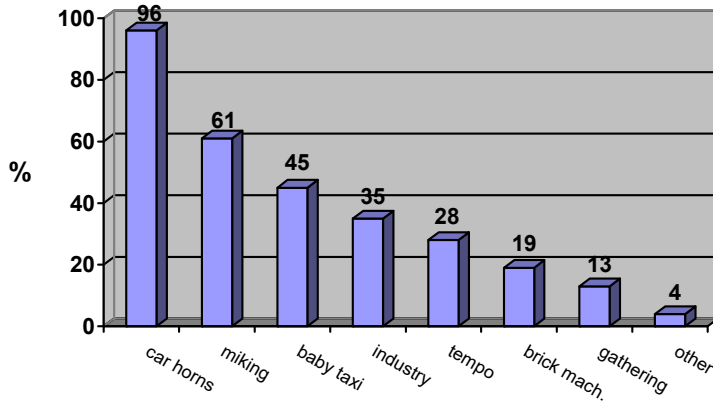
The respondents were fairly knowledgeable about the problems that can result from noise pollution. They were asked to list as many problems as they are aware of, without prompting from the interviewers. The most commonly mentioned problems were headache (mentioned by 69% of the respondents) and aggravation (68%), followed by bad temper (49%), difficulty concentrating (43%), problems hearing (42%), heart problems (42%), trouble sleeping (39%), and problems in child development (35%). Women were more likely to mention headache (75% vs. 68%), and men bad temper (51% vs. 42%).

What problems can result?



When asked to mention the three main causes of noise pollution, men and women gave almost identical responses. The most common cause mentioned was car horns (96%), followed by miking (61%), baby taxis (45%), industry (35%), tempos (28%), brick-breaking machines (19%), and public gatherings (13%).

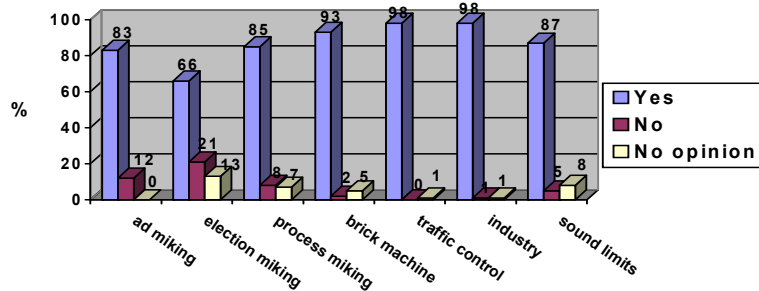
Three main causes of noise pollution



Though the sound pollution in Dhaka city has come to a dangerous stage, It can not be said that the situation is uncontrollable. Things that needed are goodwill, to make people conscious to inspire them to change their habits.

In terms of action that the government should take, 98% of respondents felt that traffic control should be improved and industrial activity banned in urban areas. In addition, 93% felt that brick breaking machines should be banned in urban areas. Other measures also received high levels of support, with 87% feeling that limits should be placed on the decibels allowed, 85% feeling that miking should be banned in processions, 83% feeling that miking should be banned in advertising, and 66% feeling that miking should be banned for election campaigns. Clearly, laws to reduce noise pollution would gain a tremendous amount of public support, and encounter very little opposition.

What should the govt. do?



In addition to car horns is the problem of brick-breaking machines. The machines are not only a public nuisance, creating aggravation. They can also cause an increase in blood pressure, disturb the sleep of babies and children, and

create tension and anger. The people who work with the machines are exposed to such high levels of noise, their temperament and blood pressure are likely to be affected, their hearing may easily be irreversibly harmed. Further, the use of the machines deprives the poorest of the poor from much-needed employment, through the manual (and quiet) breaking of bricks. Can Dhaka really afford the use of machines that cause suffering to so many, and reduce needed employment among the poor? The use of such machines should be stopped at once and forever.

AN ALTERNATIVE TO GENERATORS?

When the power goes out, many shops, hotels, other businesses, and offices rely on diesel generators to supply electricity. The generators are a common sight—and sound—in Dhaka and other cities. But the generators create both noise and air pollution. In addition to wasting fuel and emitting fumes, generators are another of the many unbearable sources of intense noise in Bangladesh.

But an alternative to generators, and the problems they create, exists—one that is affordable, good for the environment, and noiseless. The sun is not only a source of life, but of energy—cheap, clean energy. The Government of Bangladesh is currently promoting solar energy, and systems exist that will provide back-up power in times of current failure.

A 450 watt Japanese generator costs only 18,000 taka, and can provide electricity for four hours. The same amount of energy provided by a generator would require 75 taka of fuel. While a diesel generator can work for 10-15 years at the most, a solar generator can function for 20 years. The ongoing costs of a solar generator—change of water and of batteries—are insignificant compared to the costs of running a diesel generator. Considering the lifespan of each generator and all the ongoing costs, a diesel generator requires 28,575 taka, compared to only 1,898 for a solar generator. Thus while the initial cost of solar power is greater than of diesel, in the end, the savings can be tremendous, and there is the satisfaction of knowing that you are doing something good for the environment. If that is not enough to motivate you, there is the comfort of being free from the smell and noise of a diesel motor.

Not only are solar generators better for the environment, but they are better for our local economy as well. While diesel generators are imported, most of the parts for a solar generator can be produced locally. NGOs should come together to support the Government of Bangladesh in this important effort to promote solar power. As more and more individuals, offices, and businesses use solar, the prices will come down even further, and diesel generators will become less and less acceptable. If we succeed in promoting solar energy in Bangladesh, the economy, the environment, and people's comfort and health will all benefit.

RECOMMENDATIONS AND SUGGESTED ACTIONS

Suggested actions for NGOs, media, and others

- ◆ Make a conscious effort, and/or instruct your own drivers, to honk as little as possible.
- ◆ Work with others in your neighborhood (home and office) to control noise pollution. Post a sign banning honking, and ask those who work outside to help enforce it. If a special source of noise is present—such as a shop selling music, or a brick-breaking machine—approach the owner as a group, and demand that the noise be reduced (or, in the case of the brick-breaking machine, eliminated by removing it).
- ◆ Visit neighborhood schools, and give the teachers and students leaflets about noise pollution and the need to reduce it. Stress that parents should avoid disturbing their children, and thus should themselves avoid honking, and instruct their drivers to do the same.
- ◆ Add noise pollution to your agenda, and look for ways of reducing it. For instance, try to work with driving schools, truck unions, and bus and taxi cab companies to get commitment to educate drivers to honk less. This is partly a traffic safety issue, as frequent honking makes honking ineffective, and thus increases the possibility of accidents. You can also work with shops selling music, and other sources of noise pollution. Remember to focus on the harmful effect of noise pollution to those creating it, as illustrated in this report. People are most likely to change their behavior out of self-interest.
- ◆ Work with media, or personally write a letter or article, about noise pollution. Stress the damages it causes, the need to reduce it through our own actions, and the importance of having strong noise pollution laws, to make Dhaka a more livable city.
- ◆ Try to get a local cinema or cable TV station to air ads for free or minimal cost, on the importance of acting to reduce noise pollution.
- ◆ Work with the Government to enact the measures listed below.
- ◆ Share this report with others.

Suggested actions for the Government

(Note: these actions will not only reduce noise pollution, but will receive strong public support)

- ◆ *Enforce existing laws on noise pollution* (ban on hydraulic horns, etc.). In many cases, laws already exist, but people are unaware of them, and the police do not enforce them. By educating the public about existing laws, enacting strong penalties, and informing the police of their responsibility to enforce them, the noise pollution situation could be improved.
- ◆ *Completely ban the use of machines to break bricks.* The machines are not legal—there are no permits for their use—and yet they are tolerated, even in residential neighborhoods. The machines harm all those in the surroundings

who are exposed to the noise, which disrupts their work and study as well as causing stress, aggravation, and physical symptoms. The machines are also likely to cause permanent hearing damage to those who operate them and work in the construction sites where they are used. The practice of using machines rather than hiring individuals to break bricks also deprives the poorest of the poor of gainful employment, and worsens the economic situation of the poor and their families. If the machines are allowed, it should only be in low-populated areas outside of Dhaka city.

- ◆ *Ban the use of miking for elections campaigns, processions, and advertising.* If the Government is not ready to completely ban the use of miking for elections campaigns, they could strictly limit the hours when it is allowed, widely publicize the schedule, implement strict fines for exceeding those hours, and work actively with the police to enforce the ban. There are many other ways of communicating messages without using loudspeakers, and miking as it is currently practiced is a public nuisance.
- ◆ *Ban industrial activity in urban areas.* This would have a double benefit: reduce both noise and air pollution.
- ◆ *Place larger signs banning honking in quiet zones.* Larger, more visible signs—and preferably with a fine announced—will help reduce honking around schools, hospitals, and government institutions. The current signs are too small to be visible or effective.
- ◆ *Place and enforce limits on decibels in urban areas.* Certain common offenders should be targeted, such as shops that sell music.
- ◆ *Improve traffic control.* This will result not only in reduced noise pollution, but will also help reduce traffic accidents. Specific actions include not allowing buses to pick up passengers anywhere on the road; not allowing people to stop at rotaries; and controlling where vehicles park.

CONCLUSION

Noise pollution is a serious and neglected issue in Dhaka, and throughout Bangladesh. It is time for NGOs, the media, and the Government of Bangladesh to work together to reduce the problem, and increase the quality of life in this country. As many of the sources of noise pollution are unnecessary and could be reduced fairly easily and at little cost, there is no excuse for further delaying on action. Given the magnitude of the problem, and of the human suffering that results, we can no longer afford to neglect the issue of noise pollution. For the health, sanity, and well-being of the population, and for the future of our children, it is time that we all take this problem seriously, and begin implementing solutions. Whether as individuals, NGO staff, or members of the media, we can and must take specific steps to reduce the problem of noise pollution.