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Economics

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Beyond Annoyance: The Environmental and Health Costs of Noise Pollution

When people think of environmental pollution, they usually think of contaminated oceans from water pollution or littered beaches from plastic pollution. There is another type of pollution, however, that often gets overlooked: noise. Noise pollution is defined as any harmful sound that disrupts normal activities or well-being. It typically originates from sources such as traffic, construction, and industrial activities and can harm both people and animals. So living near highways, construction sites, and even airports will expose you to noise. Even though loud noise is just thought of as “annoying”, research shows its detrimental health effects. While others may argue that it is insignificant compared to other types of pollution, noise pollution is a major environmental problem that affects child development, adult health, and ecosystems. It needs to be taken more seriously by governments and communities.

One way noise pollution harms people is by affecting children during their developmental stages. Gupta et al. write that “indoor and outdoor environmental noise pollution have been documented as a serious health hazard with increasing adverse effects on fetuses, infants, children, adolescents, and adults.” These findings are significant because children can’t protect themselves from harmful environments. If a family lives next to a freeway, the child will be exposed to these sounds every day. The inability to mitigate noise pollution makes its effects on children highly unfair. It also shows that noise isn’t just bothersome but poses a health threat. The article also explains that pregnant women and young children are especially vulnerable, and constant noise exposure can lead to long-term disabilities, hearing loss, and sleep problems (Gupta et al.). When children are exposed to noise at such early stages of life, their development

is at significant risk, and that can affect their health for several years. Over time, these disadvantages add up and create cycles of health struggles that affect families and communities as a whole. These points make it clear that ignoring noise pollution endangers vulnerable groups, and society shouldn't overlook this, as responsibility lies with society, not with children.

In addition, noise pollution threatens adult health, especially heart health. According to Munzel et al., “transportation noise increases the risk of cardiovascular morbidity and mortality, with high-quality evidence for ischaemic heart disease.” This means that daily exposure to traffic or aircraft noise may cause disease. It demonstrates the physical effects that noise has and how it can shorten people's lives. The article also points out that nighttime traffic noise fragments sleep, increases stress, and damages blood vessels, which leads to hypertension and higher risks of heart disease (Munzel et al.). This evidence is significant because it explains how noise pollution is often overlooked. By the time they realize the toll that noise has taken upon their bodies, it's too late. Just like how people don't take notice of their poor diet or lack of exercise until their bodies are punished, they won't notice the punishment that noise can cause. Unlike air or water pollution, which can be visible, noise pollution quietly harms the body through stress and sleep loss; therefore, people must recognize that it's equally dangerous and urge governments and communities to take action. They must protect adults who live in crowded cities or work in noisy environments so that their stress levels don't increase too high.

Noise pollution isn't only capable of harming humans, but it's also dangerous for wildlife, especially in the oceans. Kunc et al. state that “anthropogenic noise is one of the most hazardous forms of anthropogenically driven environmental change and is recognized as a major global pollutant.” This shows that noise is not just a local problem in cities but a global environmental issue. It highlights that human-made sounds can negatively affect species worldwide. Their review found evidence that noise ultimately harms development, physiology, and behavior in both invertebrates and vertebrates (Kunc et al.). This is important because when animals can't eat, reproduce, or avoid predators, their populations will decrease. It also means that the ecosystems humans may depend on will be weakened, which in turn

negatively impacts humans. These disruptions are especially concerning since ecosystems rely on sound for survival, and just because humans don't notice these struggles doesn't make them any less real.

Some may contest that noise pollution isn't as essential as air or water pollution, since it doesn't leave behind visible damage. This perspective suggests that resources should be focused on the more obvious problems, such as cleaning the oceans or reducing air pollution. However, ignoring noise pollution because it is not immediately noticeable overlooks its serious long-term effects on health and ecosystems. Studies show that constant noise exposure can lead to cardiovascular disease, developmental issues in children, and ecological disruptions in wildlife (Gupta et al., Munzel et al.; Kunc et al.). Because these problems are more challenging to recognize, they are more dangerous, as they are often ignored until the issue is clear. It would, however, be too late, and the harm would be permanent. Because noise pollution isn't apparent, it's very easy for people to underestimate it. While it's true that noise pollution isn't as visible as other types of pollution, it deserves the same amount of attention.

While noise pollution is often overlooked, its effects are severe and widespread. It harms children, causes diseases in adults, and threatens the stability of ecosystems. While it might not leave behind trash, it is just as dangerous in the world. Therefore, communities and governments should enforce stricter laws on noise pollution and isolate loud activities from nearby wildlife and neighborhoods, to prevent them from affecting humans and animals. Moreover, individuals should assume the same responsibility and make changes themselves, such as lowering the volume on their radios and supporting community efforts to design quieter neighborhoods. Even though one person's actions may seem unimportant, the combined effort of the millions of people who live on this earth can actually make a big difference. Addressing noise pollution requires teamwork from both lawmakers and citizens. If society doesn't address noise pollution, the health of people and the survival of many species will remain at significant risk. At the end of the day, ignoring noise pollution means ignoring the health of both people and the planet. This isn't merely a minor issue that can be dismissed; if communities and governments truly value healthy communities, then taking immediate action must be part of the plan. Every day that people don't do

anything only makes the problem harder to solve. If we can treat noise pollution seriously today, we can ensure that future generations have a better chance of living in safer environments.

Works Cited:

- Gupta, A., et al. “Noise Pollution and Impact on Children's Health.” *Indian Journal of Pediatrics*, vol. 85, no. 4, 2018, pp. 300–306. Springer, doi:10.1007/s12098-017-2579-7.
- Kunc, Hansjoerg P et al. “Aquatic Noise Pollution: Implications for Individuals, Populations, and Ecosystems.” *Proceedings of the Royal Society B: Biological Sciences*, vol. 283, no. 1830, 2016, Article 20160839. The Royal Society, doi:10.1098/rspb.. 2016.0839.
- Münzel, Thomas et al. “Transportation Noise Pollution and Cardiovascular Disease.” *Nature Reviews Cardiology*, vol. 18, 2021, pp. 619–636. Nature, doi:10.1038/s41569-021-00532-5.
- Basner, Mathias, et al. “Auditory and Non-Auditory Effects of Noise on Health.” *The Lancet*, vol. 383, no. 9925, 2014, pp. 1325–1332. Elsevier, doi:10.1016/S0140-6736(13)61613-X.
- World Health Organization. *Environmental Noise Guidelines for the European Region*. WHO Regional Office for Europe, 2018, pp. 1–126. World Health Organization, www.euro.who.int/en/publications/abstracts/environmental-noise-guidelines-for-the-european-region-2018.