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Current Situation of Environmental Noise Monitoring and Researching on Problem Solutions

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Abstract: The development of modern economy has caused some environmental pollution problems，it will have a certain impact on people's daily life and activities.Reasonable control shall be carried out according to the actual situation of environmental noise monitoring,We should seek effective noise pollution control and solutions,to improve the result of environmental noise monitoring and people's quality of life.

Keywords: **Environmental Noise Monitoring; Solutions; Researching**

Introduction

Noise pollution affects people's life,long term exposure to noise pollution goes against to social development.Therefore, it is necessary to strengthen the control and treatment of environmental noise pollution,we should take it as an important part of environmental protection,find out the important causes of environmental noise pollution in time,comprehend the impact of noise, take corresponding measures.Strive to reduce environmental pollution phenomena and problems,achieve harmony between man and nature,create a better living environment for mankind,promote social development.There are many types of environmental pollution, and noise pollution is particularly prominent.

1. Current situation of environmental noise monitoring

There are many influencing factors of environmental noise. In order to solve the environmental noise pollution, a comprehensive analysis needs to be carried out in combination with the actual situation. Generally, the negative influence sound produced in daily life and work is called noise.

In the process of social development, there are many factors affecting environmental pollution.In order to solve the problems of environmental noise pollution better, we need to carry out comprehensive analysis in combination with the actual situation,to understand the problems existing in environmental monitoring and to ensure the development effect.We need to consider the complexity of environmental noise pollution ,understand the place and time of environmental noise and its impact on human beings comprehensively ,this is the only way to help manage environmental noise.At present, the noise generated in China is very rich, the most important environmental noise pollution are urban noise and industrial enterprises noise. We must face it squarely and deal with it.

2. Analysis of environmental noise monitoring problems

2.1 Ignoring the importance of environmental noise monitoring

At present, the monitoring frequency of environmental noise in China is divided into annual monitoring and quarterly monitoring,Traffic noise and regional noise are monitored once a year,the noise monitoring of the functional area are monitored once a quarter.Therefore, generally speaking, the environmental noise monitoring has a low frequency,reflects that relevant parties lack of interest in environmental noise monitoring,and the monitoring cycle setting is very unscientific,at the same time in environmental noise monitoring they lack of understanding of various information .In terms of data, it is difficult to meet the requirements of environmental noise control in different stages.

2.2 The imperfect system of environmental noise monitoring

The main problem of the environmental noise monitoring system is that the relevant departments in China do not pay attention to the pollution of environmental noise,and lack of sufficient understanding of some basic facilities.The informatization level has not been improved too.Traditional environmental noise monitoring concepts and methods cannot guarantee the integrity of monitoring data and information,then the final monitoring results can not provide corresponding basis for environmental noise control.At the same time ,in the development of modern society,some professional equipment used in environmental noise monitoring is not enough, it cannot meet the specific requirements of environmental noise monitoring.

2.3 The effect of environmental noise monitoring data acquisition and processing is insufficient

Although China's relevant departments have actively carried out environmental noise monitoring and achieved certain results in the initial stage,however, the accuracy and scientificity of the monitoring data obtained can not be guaranteed,follow up measures must be taken.The main reason is that the relevant staff are not professional or serious and strict in the process of environmental noise monitoring， causing errors in monitoring data and information,can not meet the objective needs of environmental noise control.In addition, there are some unreasonable places in the design of environmental noise monitoring information data processing software in China.

3. Application status of environmental noise monitoring and Prediction Technology

The study of environmental noise management in Europe began very early,in June 2002, the EU issued <The guidelines for environmental noise assessment and management>,requiring their members stats to combine noise monitoring technology with noise prediction technology in five years.Formulate noise reduction action plans with roads, railways and airports as the main noise sources.Compared with European countries, the research on environmental noise monitoring technology and prediction model in China is still in its infancy.In terms of application and and prediction technology of environmental noise monitoring , there are mainly the following problems:

3.1 Lack of integration of technology and monitoring data

The software and hardware systems involved in environmental noise monitoring are independently developed by professional manufacturers,data structure, data interface, software development interface and software implementation details are completely closed.When a relatively large-scale urban environmental noise monitoring project is implementing,The integration and management of multi-source data becomes very difficult,the depth of data value mining has been greatly weakened.

3.2 The technical implementation is difficult and has along cycle

For relatively large environmental noise prediction projects,Such as urban noise mapping, the implementation cycle is usually one or several years, and human and material resources are very expensive.China is in the great development period of urbanization. The speed of urban construction leads to the contradiction between the timeliness of various data and the long implementation cycle. Therefore, higher requirements are put forward for the system flexibility of environmental noise monitoring system and the iterative response speed of environmental noise prediction model.

4. Technical framework of noise monitoring and prediction

The data-driven noise mapping reference framework uses monitoring data to provide a reference model, which participates in the iterative calculation of noise mapping modification. On this basis, the fusion technology framework of environmental noise monitoring technology and prediction model can be further expanded. The framework is mainly composed of two parts. The first part is to analyze multi-source monitoring data. In view of the different interfaces and data

formats of monitoring equipment, it is necessary to build an integrated central data warehouse for storing multi-source monitoring data, and build corresponding data conversion and data migration services according to data specifications. In addition, a special physical quantity calculation module is needed to calculate various necessary statistical data. It should be pointed out that the system must have strong fault tolerance to deal with the problems of incomplete data caused by unreliable data acquisition and data transmission.

5. Analysis and solve the environmental noise monitoring problems

5.1 Determine the demand for environmental noise monitoring and expand the noise monitoring team

In order to effectively solve the situation of environmental noise pollution, relevant departments need to increase the training of monitoring personnel, continuously improve the professional level and comprehensive technical ability of monitoring personnel, and reasonably arrange their jobs in combination with their own advantages and abilities, so that they can give full play to their advantages and abilities in suitable jobs, Comprehensively improve the quality of environmental noise monitoring. On this basis, attracting more professional monitoring staff and gradually expanding the environmental noise monitoring team can effectively solve the shortage of environmental pollution monitoring personnel.

5.2 The environmental noise monitoring system need to be further improved

In order to improve the actual quality level of environmental noise pollution control in China, it is necessary to establish a relatively perfect environmental noise quality monitoring system to carry out relevant work,only in this way can adapt to the current situation of environmental noise pollution in China.On the other hand, through the construction of environmental noise pollution automatic monitoring station and comprehensively considering the development of various regions， it will make the operation effect of the automatic monitoring station of environmental noise pollution more ideal and ensure the monitoring efficiency.the most important basic condition is to have a perfect monitoring system.

5.3 Improve the technical level of environmental noise monitoring

With the development of society, there is an increasing demand for the application of information technology. The application of information technology can bring many positive effects to the environmental noise monitoring.Firstly, it can promote the improvement of environmental noise monitoring system and make the monitoring work more accurate and effective.At the same time of environmental noise monitoring data,introducing more advanced environmental noise monitoring equipment, arranging experts to learn advanced environmental noise monitoring technology, strengthing environmental noise pollution control,can improve the overall environmental noise pollution control effect ultimately.

Conclusion

The monitoring and control of environmental noise is inseparable from environmental noise management.In particular, environmental noise management is a typical interdisciplinary technology field, including environmental acoustics, measuring instruments, computer and Internet, high-performance computing, geographic information system and other technologies.In the meantime relevant policies and measures and relevant technical standards also directly affect the degree of environmental noise management.Therefore, fully combining the advantages of existing technologies and deep integration at the data level, model level, algorithm level and technical level is an important step to improve the technical level of environmental noise control in the future.This will greatly improve the ability and level of noise environmental monitoring and management in China.

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