INTRODUCTION
The International Institute of Noise Control Engineering (I-INCE) is a worldwide consortium of societies concerned with noise control and acoustics. I-INCE currently has 46 Member Societies in 39 countries. I-INCE is chartered in Zurich, Switzerland, and is the sponsor of the INTER-NOISE Series of International Congresses on Noise Control Engineering. The I-INCE General Assembly is composed of representatives of the Member Societies, members of the Board of Directors, and Organizational representatives.

Recognizing the need for technical initiatives to address noise issues of international interest, at INTER-NOISE 91 in Sydney, Australia, the I-INCE Boards took the first steps to enlarge the scope of the activities of the General Assembly. The following year at INTER-NOISE 92 in Toronto, Canada, the General Assembly establishes technical work on two topics, upper limits for noise in the workplace and noise emission of road vehicles. Technical work is established by the General Assembly at INTER-NOISE 94 in Yokohama, Japan, on two additional topics, effectiveness of noise walls and community noise. Formal guidelines for carrying out the technical work of the Institute were drafted, and, following several revisions, were adopted by the General Assembly at its meeting in Christchurch, New Zealand, on 1998 November 15. At the 1999 General Assembly in Fort Lauderdale, USA, four new technical initiatives were approved, noise from outdoor recreational activities, noise labels for products, noise policies and regulations, and noise control for schoolrooms. A fifth initiative was added by the General Assembly in Nice, France, on the topic, noise as a global policy issue.

I-INCE TECHNICAL WORK
To fulfill the Institute’s objective of promoting international cooperation in the engineering control of noise and vibration, the Institute undertakes technical work to foster the exchange of technical information. To accomplish this, the General Assembly conducts studies of technical issues related to the Institute’s field of interest, develops position statements on these issues, cooperates with the major scientific and professional organizations in the field, and disseminates independent advice to policy makers as well as leaders in industry and government through a series on initiatives on specific topics within the field of interest. These initiatives involve the appointment of Technical Study Groups (TSG) and tasking the experts comprising these groups to prepare draft reports by
consensus for review within the Institute. The drafts are subsequently subjected to international review before final release.

The studies undertaken as part of the Institute’s initiatives program are focused on noise issues of international interest. While these issues usually involve important policy matters, they all have a significant technological content. I-INCE Technical Work may result in the preparation of documents in a variety of formats, such as:

- studies
- strategies
- policy statements
- technical (state-of-the-art) assessments
- reports
- bulletins

Other non-periodical documents may be published by the Institute, as appropriate.

The Institute does not develop standards. International standards in acoustics, noise, and vibration are developed and published by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

Appropriate subjects for I-INCE Technical Work include the following:

- long-range policy goals for control of noise and vibration
- initiatives that describe practical means for achieving policy goals
- assessment of on-going research related to control of noise and vibration
- results of completed research
- identification of areas where further research or information is needed
- identification of new technology areas

The General Assembly is responsible for carrying out the technical work of the Institute. Technical Study Groups are established and dissolved by the Board of Directors on the recommendation of the General Assembly. A Technical Study Group is disbanded upon completion of its assigned task.

A proposal for new technical work may be submitted by a Member Society, a member of the Board of Directors, or an organization that is in liaison with the Institute. Each proposal is expected to contain the following information:

- name of the proposer
- title for the technical study group (TSG)
- scope of work
- program of work
- schedule for completion of milestones
- technical justification
- priority of proposed work and resources needed
- willingness to supply a Convenor or TSG member
- any liaison necessary or desirable
To date, the following reports have been published in Noise/News International:

- Publ. 94-1 **Draft Report**, "Technical assessment of upper limits on noise in the workplace"
- Publ. 95-1 **Draft Report**, "Technical assessment of the effects of regulations on road vehicle noise"
- Publ. 97-1 **Final Report**, "Technical assessment of upper limits on noise in the workplace"
- Publ. 98-1 **Draft Report**, "Technical assessment of the effectiveness of noise walls"
- Publ. 98-1 **Final Report**, "Technical assessment of the effectiveness of noise walls"

**FIVE NEW TECHNICAL STUDY GROUPS**

In 1999, the General Assembly established four new Technical Study Groups and in 2000, a fifth Technical Study Group was added.

**TSG #1 Noise of recreational activities in outdoor areas.** This I-INCE technical initiative deals with the noise of recreational activities in outdoor areas. Recreational activities can be defined as those pursuits outside one’s regular occupation that are usually indulged in for purposes of relaxation, or leisure-time activity after work. Noise is associated with many recreational activities. While the providers of such activities may be uninterested, unwilling, or unable to control the noise, non-participating bystanders (humans as well as animals) are sometimes exposed to relatively high levels of noise. For example, the maintaining of natural quiet in national parks and wilderness areas is considered by many to be paramount to the survival of our natural environment. But the incursion of recreational activities involving air-, land-, and watercraft in many of these reservations has greatly changed the natural environment. There are many other examples where the incursions of outdoor recreational noise create friction between the purveyors of the noise, and the bystanders who are not involved in the recreational activities - the noise of amusement and theme parks, the noise of speedways and other motor sports, the noise of small airfields, and the sounds of outdoor concerts.

This I-INCE technical initiative will be concerned with the noise associated with many different kinds of recreational activities that are undertaken outdoors. Excluded will be those recreational activities and performances that are undertaken indoors with sound leakage from a building to the outdoor areas surrounding the building. In some countries, there has been much progress in limiting outdoor recreational noise, but in others a lack of knowledge and initiative has hampered progress, not to mention the opposition by many business interests to effective measures for the control of noise.

The technical report resulting from this proposed initiative is intended to study the problems posed by outdoor recreational noise on a world-wide basis, and, in particular:

- to assess what has been achieved globally to limit outdoor recreational noise,
- to compile national and international noise policies relating to outdoor recreational noise,
- to discover what regulations have been drafted or promulgated,
• to determine what methods have proven effective, and what have not, and
• to ascertain what measurement methods have been prescribed.

**TSG #2 Noise labels for consumer and industrial products.** This I-INCE technical initiative deals with noise labeling for consumer and industrial products. Consumer goods are sold at retail to ultimate customers for personal or household use, indoors or outdoors. Industrial products are sold to commercial firms for a wide variety of purposes. In many parts of the world, consumer and industrial goods are sold without any noise limitations, and frequently no indication to the purchaser how noisy the products will be when installed, either to those who operate the products or to those in the vicinity. There is much work in progress to develop international and national standards for measuring the noise characteristics of consumer and industrial products, and there are testing organizations in many countries that carry out appropriate evaluations. However, the noise data available to the typical customer is frequently limited, even in those countries where there is great concern for noise at the workplace, in the home, and in the neighborhood.

This I-INCE initiative will involve a study of the labeling and other forms of product information dealing with noise emissions that are furnished to the purchaser of consumer and industrial products. To provide this information, the testing laboratory follows a prescribed procedure. Hence, the technical aspects of measuring and evaluating the noise of consumer and industrial products are a part of this study. One or more I-INCE Technical Study Groups (TSG) will be constituted to carry out this study. The TSG will assemble information from the countries whose representatives are participating in the study on noise labeling methodologies. Such methodologies are intended to provide effective means for specifying the noise properties of consumer and industrial products to make it possible for the purchasers to select low-noise products. The intent is to provide information that will benefit the users of these products, and their neighbors. The ultimate goal is to make the low noise of products an important competitive factor in the sale of such products. An important aspect of this study is to develop recommendations on how and in what form labeling can be implemented to bring about people’s awareness of the effects of excessive noise, and the need to reduce noise immission levels to preserve health and provide an acceptable environment.

This I-INCE initiative will survey current methods for labeling and otherwise characterizing the noise emissions of consumer and industrial products. The measurement methods used by testing authorities will be included in the survey. The methodologies will be compared, and an assessment will be made of their relative effectiveness. The study of noise labeling is part of an educational program to advise on how and in what form such labeling should be implemented.

**TSG #3 Assessing the effectiveness of noise policies and regulations.** This I-INCE technical initiative deals with the effectiveness of noise policies and regulations around the world. During the last half of the 20th century, many countries have recognized noise as an environmental and occupational problem, and have been working to develop noise exposure policies and noise control technologies. Considerable time and effort are devoted each year throughout the world to developing noise exposure policies for places where people work, for places where people live, and for outdoor environments devoted
to leisure activities. Little is known about how effective various noise policies and regulations have been in controlling the noise exposure (noise immission) of the individuals and populations which they are intended to protect.

This I-INCE initiative will involve a study of existing noise exposure policies and regulations in all countries which have recognized noise as a problem involving public health and welfare. The first phase will involve the collection and cataloging of as many noise exposure policy statements and related regulations as possible. The second phase will involve developing a baseline of noise exposure estimates for each participating country. The third phase will entail determination of the long-term effectiveness of these policies and regulations in controlling noise exposure by examining the changes in various noise exposure parameters over time.

This I-INCE initiative will involve the compilation of existing noise exposure policies and the noise regulations enacted to implement these policies, estimating noise exposure in various sample community and occupational situations, and assessing the relative effectiveness of these policies in controlling noise exposure.

TSG #4 noise and reverberation control for schoolrooms. This I-INCE technical initiative deals with the control of noise and reverberation in learning spaces, particularly schoolrooms. Good acoustics is central to verbal learning in classrooms and other learning spaces in schools, and is therefore vital in every knowledge-based society. Many countries, including Great Britain, Italy, Portugal and Sweden have taken steps to establish standards or guidelines for schoolroom acoustics. A study aimed at evaluating the methods employed in countries throughout the world to optimize acoustic environments in schoolrooms would provide helpful support to those countries for which such standards or guidelines do not exist. There are strong incentives to employ such standards or guidelines in all countries, especially in those countries where the population of school-age native or immigrant children is growing rapidly, and new or refurbished educational facilities are being constructed or planned. Regional differences in noise control requirements associated with differences in proximity of outdoor noise sources or outdoor air temperatures need to be identified as well as differences in the most cost-effective noise and reverberation control technologies and associated materials. The result of the proposed study would be of substantial benefit to societies which need to improve the acoustic environment in their schoolrooms and help to remove acoustic barriers to learning that prevent students of all ages from reaching their full potential.

This I-INCE technical initiative will survey the major architectural expressions of different types of learning spaces, particularly schoolrooms, in participating countries; will identify the needs of such spaces for acoustical design and noise control technology; and will include site planning, methods for ventilation, heating and cooling, and their interactions with acoustics. The survey will respect cultural differences and diversities, and regional economic facts. A set of recommendations for schoolroom acoustical criteria, including practical knowledge of the costs and benefits of noise and reverberation control, will be developed. These recommendations will provide acoustical and noise control guidance to educational space designers and builders, and to those who influence national codes for schoolroom design.

This I-INCE technical initiative will be concerned with those technical aspects of the acoustics of schoolrooms and other learning spaces in schools that provide
opportunities for the cost-effective application of noise and reverberation control technologies to promote improved verbal learning in knowledge-based societies.

**TSG #5 noise as a global policy issue.** This I-INCE technical initiative deals with noise as a global issue versus noise as a local issue. There is a tendency in some of the advanced countries of the world to consider noise, from the policy standpoint, as a local issue, i.e., an issue that should be handled at the lowest level by a municipality rather than as a federal matter to be handled at an international level. There are several reasons for this attitude. Noise propagates through the air over short distances (rarely more than 10 km), and it is non-persistent. In the physical sense, it could be considered a local phenomenon.

This I-INCE technical initiative will consider the arguments for and against consideration of noise as a global policy issue, and will develop a strong case for considering noise at the international level. It will be demonstrated why noise may become an important non-tariff trade barrier issue.

This I-INCE technical initiative will make the case that noise must be considered as a global policy issue, and any treatment of the subject on a smaller scale will be counter-productive.

**CONCLUSION**

The I-INCE technical work fulfills the Institute’s objective of promoting international cooperation in the engineering control of noise and vibration. The I-INCE technical work is an important forward looking initiative of the Institute. The General Assembly is responsible for carrying out the technical work of the Institute.