

## **Declaration of Sustainable Development**

The Permanent Committee approved the following declaration at its meeting of June 21, 1996, in Copenhagen, Denmark:

IABSE pledges to further the aims of sustainable development as defined by the United Nations World Commission on Environment and Development: "Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs." IABSE recognises the interdependence of the planet's diverse ecosystems and their finite capacity to assimilate changes due to human activities. IABSE urges its members to identify and act to minimise potentially damaging environmental impact stemming from their work. In their professional activities, IABSE desires that its members promote:

- the full understanding of the interdisciplinary actions required to sustain and optimise the natural, built and socio-economic environment
- the increased use of renewable and recycled non-renewable materials in the construction and operation of structures
- the conscientious assessment of the environmental impact of projects, basing recommendations on environmental soundness.
- IABSE members will urge the incorporation of environmental objectives into design, planning, construction and operational criteria. IABSE members will continue to educate themselves and their students on issues relating to sustainable development, and to freely transfer this knowledge to society. Finally, IABSE strongly encourages its members to decline association with engineering activities, in developed and in developing countries, that are contrary to sustainable development.

## **Declaration on the Reduction of Poverty**

At the Closing Session, Mr S S Chakraborty Chair of the Conference in New Delhi 2005, promulgated the Declarations which had been established by a selected group of IABSE members actively involved in the Conference.

### **Preamble**

IABSE, in its New Delhi Conference held in February 2005, deliberated extensively on the significant Role of Structural Engineers towards Reduction of poverty. Structural Engineers are responsible for planning, design, construction and maintenance of shelter and infrastructure, which encompasses connectivity of all types, energy, irrigation, water and sanitation. Structural Engineers are also handling the tasks of disaster mitigation and rehabilitation with a holistic approach. It was emphasized that Structural Engineers are conscious of their societal responsibilities in utilising indigenous resources, ensuring sustainability by optimising their use, minimising waste and protecting environment.

### **Declaration**

1. Structural Engineers recognise that development of shelter and infrastructure calls for high investment that benefits society in twin ways by improving facilities and generating local employment.
2. Structural Engineers are also concerned about the need for continuing education and upgrading knowledge and skill of manpower thus providing work and dignity.
3. There is an urgent need for substantially more infrastructure on one side and existence of an immensely large pool of unemployed persons on the other seeking gainful involvement. It is, therefore, imperative that appropriate proactive step is initiated by the decision makers, together with Structural Engineers.

## **Declaration on Mitigation of the Effects of Natural Disasters**

## **Preamble**

### **General Background**

Natural disasters such as earthquakes, landslides, floods, hurricanes and tsunamis continue to represent a serious threat to life, livelihood, property and infrastructure in societies, being one of the greatest challenges to decision makers, and also to structural engineers. Natural disasters are set to become more severe with climate change.

According to United Nations Reports, in the last decade, more than 3 million people have been affected by Natural Disasters. According to the International Red Cross Report on Natural Disasters, in the same decade, they represent losses of more than 50 billion US dollars (40 billion euros) a year.

United Nations proclaimed the decade 1990-2000 the decade of international cooperation on the reduction of the effects of natural disasters (IDNDR) and in 2005 it organised, in Kobe (Japan), a World Conference on Disasters Reduction. From this conference resulted the Hyogo Declaration 2005, which includes a Framework for Action 2005-2015. The mitigation of the effects of natural disasters is also under the objectives of the UN Millennium Development Goals.

Natural disasters can seriously undermine the results of development investments in a very short time, and therefore remain a major impediment to sustainable development and poverty reduction. Such disasters are of course of concern to structural engineers. It is also known that development investments, that fail to appropriately consider disaster risks, could increase vulnerability. Coping with and reducing natural disasters so as to enable and strengthen sustainable development in all nations is, therefore, one of the most critical challenges facing the international community.

Thus, it is imperative to reduce the losses due to natural disasters of lives and other social, economic and environmental assets worldwide, mindful of the importance of international cooperation, solidarity and partnership, as well as good governance at all levels.

### **Natural Disasters and Structural Engineers**

Being natural does not mean that the effects of these disasters cannot be mitigated. They can always be reduced, and eliminated in many situations. It is a question of resources and knowledge. Structural Engineers have a decisive role concerning this issue.

In societies, Structural Engineers are among those who have the pertinent knowledge. This knowledge still has to be improved, but they are educated and trained to provide the measures for the protection of the habitats in order to reduce their vulnerability. Structural Engineers are professionals with the confidence of the public.

It can be said that Structural Engineers do not have the power to take the decisions on how to allocate the resources. It may be true, but, as they know the problem, they have the responsibility to capture the attention of the public in order to influence and work with the decision makers. It is also a question of ethics. Most professional engineering institutions specify the obligation 'To use their knowledge and skill for the enhancement of human welfare'.

In this regard IABSE organised in 2005, in Lisbon, as a remembrance of the 250 years of the 1755 Lisbon earthquake and tsunami, an International Symposium devoted to 'Structures and Extreme Events', mostly focused on natural disasters. As a result, IABSE recognises the need for a Declaration on 'Mitigation of the Effects of Natural Disasters', like the IABSE 'Declaration on Sustainable Development', approved in 1999, in Rio de Janeiro, or, the IABSE 'Declaration on Reduction of Poverty' approved in 2005, in New Delhi.

IABSE and Structural Engineers want to make their voices heard concerning this issue. Effects like those of the earthquake and tsunami in Southeast Asia, on December 26, 2004, the hurricane Katrina in the South of the United States, in August 2005, or the North Pakistan earthquake of October 8, 2005, are tragedies of a size unacceptable to society in the 21st century. However, with crisis comes opportunity. Such extreme

events offer opportunities which may lead to changes for good on this issue all around the world.

It is expected that this Declaration will encourage Structural Engineers to give more thought to these problems, and provide information and guidance on how to deal with them. And more: to influence the decision makers to take appropriate and essential steps for the reduction of the vulnerability of our society to natural disasters.

### **Declaration**

1. Structural Engineers recognise the need for more attention from society and from authorities with regard to natural disasters.
2. Structural Engineers recognize that not all possible profit offered by the existing technical knowledge has been taken to minimise the effects of natural disasters.
3. Structural Engineers urge the need for increasing the adoption of preventive measures (structural robustness, spatial planning, monitoring and warning systems, etc) to mitigate the effects of natural disasters.
4. Structural Engineers request the adoption of adequate safety levels to new, as well as existing, infrastructure and refuges, in order to make them resistant to natural disasters, thus maximising the benefit for society.

### **References**

- Report of the World Conference on Disasters Reduction. Kobe, Hyogo, Japan, 2005 United Nations, A/CONF.206/6
- Hyogo Declaration 2005.
- Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (extract of the Report of the World Conference on Disasters Reduction)
- International Strategy for Disaster Reduction. United Nations, A/C.2/60/L.46, 2005 Reducing Disaster Risk: a Challenge for Development - A Global Report. UNDP Bureau for Crisis Development and Recovery, 2004. [www.undp.org/bcpr/disred/rdr.htm](http://www.undp.org/bcpr/disred/rdr.htm)
- Know Risk, Ed. Terry Jeggle, UN International Strategy for Disaster Reduction. Tudor Rose, UK, 2005, 376 Pp.
- Web pages <http://www.unisdr.org/>; [www.eird.org/](http://www.eird.org/); [www.unisdr.org/africa/](http://www.unisdr.org/africa/) (SPS/BE/JC/PG-070228)