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**PROPOSALS
FOR THE SECOND PART OF IDNDR**

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A Safer World for the 21st Century

Union of Structural Engineers in Bulgaria

PROPOSALS FOR THE SECOND PART OF IDNDR

Introduction

For the realization of the announced United Nations and IDNDR aims and goals we define the problem more widely, classify the reasons and factors, observe the role of the governments, and make respectively proposals for a globally strategic and radically preventive confrontation of disasters, both natural and technological.

Goals and Aims - Task on the Problem

The announced in the motto of the World Conference and in the United Nations Documents for IDNDR goals and aims - "For a Safer World for the 21st Century", "... programmes for the future", "... responsible persons of highest range", etc. - determine the humanitarian social task for a long-term global strategic and radical preventive confronting natural and technological disasters. And the problem is how to solve this social task?

Problem and Scope - Natural and Technological Disasters

Human societies function and develop in artificial (man made) buildings and other civil engineering works, facilities, structures, infrastructure, etc. ("buildings etc."). Built on the planet, they are under the impact of natural phenomena - earthquakes, landslides, windstorms, tsunamis, floods, wild fires, snow and ice-coverings, volcanic eruptions, etc. Their elemental "Natural Impacts" destroy the basic conditions for life and work of the people, they take away lives - cause "Natural Disasters". Usually "Natural Impacts" are misrepresented directly as "Natural Disasters".

In modern societies we however refer to "Natural Impacts", to which we have to counteract by structural engineering means (know-how) - so as to avoid the "Natural Disasters". Therefore the general humanitarian problem is not to eliminate the Natural Impacts, which is impossible, but to prevent the caused by them Natural Disasters, which is possible. The struggle against Natural Disasters is carried forward ever more BEFORE (BUT NOT ONLY AFTER) THEM.

Let us remind ourselves that for an earthquake of the same degree, human victims at one place (for example Japan, USA) are 0-3 people, while at another place (Turkey, Armenia, etc.) they are 3000-30000 people. The difference - of thousand times - is due namely to the different degrees of care before the disasters.

On the other hand technological accidents are also causing destruction of buildings etc., depriving human life, causing economical disturbances - are also causing DISASTERS. And the struggle against them is the same social risk and safety, which is carried out by the same preventive structural engineering means. The structural engineering has always interpreted natural and technological impacts and loads in a joint action - in a simultaneously possibly most unfavourable combination - so that buildings etc. not to be destroyed.

The general task therefore is: Buildings etc. shall be planned, designed, constructed, operated and maintained structurally so as to sustain normatively established natural and technological impacts and loads. All that suggests the necessity of expanding the scope of the IDNDR problem - on the natural and technological disasters.

Causes and Factors - Attention and Efforts

OBJECTIVE TECHNICAL CAUSES for disasters of buildings etc. are the destructions of their carrying structures, due to:

- Natural elementary impacts - earthquake, wind storms and all others
- Technological overloading - operational errors and failures
- Physical ageing and discrepancies of the structural materials - lacking supervision, unobserved durability
- Geometrical deformations and disparity of the structural systems - lack of control, maintenance, repair

SUBJECTIVE ADMINISTRATION FACTORS are imperfections of the Normative Basis and the Administration Control, caused by:

- Negligence or lack of respective structural engineering administration - in the central and territorial departments and municipalities
- Subjective personal and/or collective structural engineering incompetence and errors in designing and construction of the carrying structures - of persons, companies, etc.
- Poor and/or lacking structural engineering permanent and periodical control and supervision during operation and maintenance of the carrying structures - by the owners and users of the buildings etc.

An analysis shows that all - without exceptions - destructions of buildings etc. are due to the indicated above hazardous causes and factors.

States and Communities - Management and Responsibilities

The defined global strategic, radical preventive and in a wider scope task goals and aims stated require obligatory higher participation of the state administration in structural engineering. This is easy to be realized in modern countries. But in the aspect of global strategic long-term aspects, this is and will be valid also for the countries with insufficiently developed structural engineering administration. They all shall achieve the necessary level of such a state administration in the strategic future - for "A safer world for the 21st Century".

THE GOVERNMENTS OF THE STATES HAVE TO ESTABLISH A STATE STRUCTURAL ENGINEERING ADMINISTRATION which shall create the **NORMATIVE BASIS** and realize **ADMINISTRATIVE CONTROL** in respect to:

- Identifying, zoning, classifying the possible natural and technological hazards
- Specifying the sufficient degrees of safety, reliability and durability of building etc.

- Creating and serving the respective structural Normative Basis (laws, Codes, etc.)
- Erection (planning, designing, construction) of the buildings etc. with the normatively prescribed safety, reliability, durability
- Their use (operation, supervision, maintenance) during their entire life

The world has sufficiently knowledge and experience, scientists and experts, practice and achievements. And what is done is remarkable, but unfortunately not at many places. Information and experience from the Decade (not only from it) can be used without any limitations. Unfortunately, structural engineering administration is also lacking - entirely or in the sufficient degree in most of the countries, not only in the developing ones. Many examples in the world confirm this categorically. For example, the collapsed hotel in Taiwan, the earthquake in Turkey in 1992, the earthquake in India in 1993, and others. That is why joining the states to IDNDR is of great importance. It will grow contentiously in the future because of:

- Expanding the scope - "Natural and Technological Disasters"
- Formation of "Globally Strategic and Radically Preventive Policy Against the Disasters"
- Including in this Policy the great possibilities of the structural engineering specialists, administrations, associations, etc.

Proposals and Recommendations - Future and Strategy

1. To expand the scope of the IDNDR problem - on the natural and technological disasters
2. To change the name of the Decade to "International Decade for Natural and Technological Disasters Reduction (IDNTDR)"
3. The activities of IDNTDR to proceed also in a Globally Strategic Future ("For a Safer World for the 21st Century") and Radically Preventive Plan ("Before the Disasters")
4. The IDNTDR activities shall grow at governmental level into wider international cooperation between the states in the world
5. The present temporary IDNDR activities (and Secretariat to the UN office) shall be transformed into a permanent IDNTDR activities (and Secretariat/ ...)
6. The World Conference to accept an "APPEAL TO THE GOVERNMENTS OF THE STATES IN THE WORLD", given separately.

The last World Conference Update No2 (see the - "Programme of the Conference") fully confirm the truth and importance of the Proposals made. There are pointed out as "major topics" - "Vulnerable Communities", "Hazard - resistant construction", "Technological and Natural Hazards: Interrelationships", and as "Other subject" - "The Effects of Disasters on Modern Societies (megacities, information systems, communications and insurance)", which all completely confirm the correctness of the "Proposals ..." and the importance of the structural engineering for the globally strategic and radically preventive confronting disasters.

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