

# **Joint Statement of 30 Disaster-Related Academic Societies of Japan**

## **Global sharing of the findings**

### **from the Past Great Earthquake Disasters in Japan**

- Toward the 2015 United Nations World Conference on Disaster Risk Reduction -

- Toward the World Engineering Conference and Convention 2015 -

**November 29, 2014**

#### **Academic Society Liaison Association**

#### **Corresponding to the Great East Japan Earthquake**

**Executive Committee (members of the Committee on Civil Engineering/Architecture of Science Council of Japan)**

Architectural Institute of Japan	Association for Children's Environment
Atomic Energy Society of Japan	Geographic Information Systems Association of Japan
Institute of Social Safety Science	Japan Association for Earthquake Engineering
Japan Association for Fire Science and Engineering	Japan Association for Planning and Public Management
Japan Concrete Institute	Japan Society for Disaster Information Studies
Japan Society for Natural Disaster Science	Japan Society of Civil Engineers
Japan Society of Engineering Geology	Japan Society of Erosion Control Engineering
Japan Society on Water Environment	Japanese Association for Disaster Medicine
Japanese Institute of Landscape Architecture	The City Planning Institute of Japan
The Japan Landslide Society	The Japan Society of Mechanical Engineers
The Japanese Geotechnical Society	The Japanese Society for Active Fault Studies
The Japanese Society of Irrigation, Drainage and Rural Engineering	The Seismological Society of Japan
The Society of Environmental Instrumentation Control and Automation	The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan
The Society of Instrument and Control Engineers	The Japan Association for Regional Economic Studies
Japan Society of Material Cycles and Waste Management	

東日本大震災の総合対応に関する学協会連絡会（英語名と同順）

幹事会（日本学術会議 土木工学・建築学委員会）

日本建築学会、こども環境学会、日本原子力学会、地理情報システム学会、地域安全学会、日本地震工学会、日本火災学会、日本計画行政学会、日本コンクリート工学会、日本災害情報学会、日本自然災害学会、土木学会、日本応用地質学会、砂防学会、日本水環境学会、日本集団災害医学会、日本造園学会、日本都市計画学会、日本地すべり学会、日本機械学会、地盤工学会、日本活断層学会、農業農村工学会、日本地震学会、環境システム計測制御学会、空気調和・衛生工学会、計測自動制御学会、日本地域経済学会、廃棄物資源循環学会

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The 2011 off the Pacific coast of Tohoku Earthquake (Great East Japan Earthquake) was huge and exceeded our expectations. Its induced damage was so serious that we are still recovering from it and still face many issues. Response activities undertaken against the accident of the Fukushima Dai-ichi Nuclear Power Station are very difficult and insufficient to alleviate its impact to both inland and marine environments.

For many years, Japanese scientists and engineers have been trying to establish scientific knowledge and to develop technologies for disaster reduction, but they were divided into each specialty. Specialization has caused significant knowledge gaps and communication difficulties among specialties. Issues between specialties have not been tackled. There is a serious reflection that we blindly believed our scientific knowledge and technologies and we didn't have enough sense of the awe and humble feeling to nature.

After the 2011 Great East Japan Earthquake, we, 30 Japanese academic societies related to disaster management, started to deepen mutual understanding and made efforts to integrate different specialties. We also studied lessons for better recovery and preparedness from the 1995 Kobe Earthquake disaster and others.

Experience and knowledge learnt from natural disasters should be widely applied to reduce all disasters worldwide. Prior to the United Nations World Conference on Disaster Risk Reduction (March, 2015 Sendai, Japan) and the World Engineering Conference and Convention 2015 (November, 2015 Kyoto, Japan), representatives from these 30 academic societies relevant to disaster management, have started to discuss ways of exchanging very rare and important experience and knowledge on such disasters.

For global sharing, the representatives of 30 societies declare to promote the following actions:

**1. Serious soul-searching on blind belief in our science and technologies**

We, Japanese scientists and engineers, have been trying to establish scientific knowledge and to develop technologies for disaster reduction and we could reduce damage by natural hazards to lower levels than before. But based on the experiences after the 2011 Great East Japan Earthquake, we seriously recognized that there was blind belief in our scientific knowledge and technologies and that they were not enough. We should always question our knowledge and never forget the sense of awe and humble feeling to nature for implementation of a disaster safe society.

## **2. Sharing of our experiences with international community**

We will contribute to disaster reduction around the world by sharing the lessons learnt from the past earthquake disasters, such as the 2011 Great East Japan Earthquake and the 1995 Kobe Earthquake disasters. We will emphasize the importance of pre-event countermeasures including damage mitigation, preparedness, disaster prediction and early warning, and warning for the possibility of unexpected huge hazards with extremely low probability.

## **3. Collaboration of academic societies**

We will collaborate across academies to promote multidisciplinary research for disaster reduction and sustainable development. The researchers in both natural and social science fields, such as physical science, engineering, medicine, sociology, and economics etc. will work together to create practical measures that have been examined from various perspectives.

## **4. Application to local communities**

We will integrate different specialties and establish comprehensive and effective risk reduction countermeasures for local communities around the world as well as in Japan, considering each local environment and condition.

## **5. Enhancing earth observation and strengthening international human network**

We will enhance the global earth observation and monitoring system, and carry out broad and integrated studies across the earth sciences, focusing on evolution and dynamics of the earth. We will pursue the cause of natural disasters and strengthen the international network of researchers and practitioners for disaster reduction.

## **6. Resiliency for huge hazards that exceed conventional expectations**

We will consider the preparedness against huge hazards, which lie beyond conventional expectations. Even if it seems to be technically impossible, we will do our best to find a way to reduce the impact due to the hazard considering environmental issues and needs for uninterrupted business and social activities during and after severe disasters.

## **7. Human resource development**

We will promote the capacity building of scientists and engineers worldwide by sharing knowledge and experiences learnt from the past earthquake disasters around the world. We will develop Japanese experts in comprehensive disaster management who can work nationally and internationally. We will also train local experts who can contribute to local disaster risk control and management.

## **8. Public awareness**

We will improve public awareness, which is one of the most important measures for disaster reduction. Pre-disaster countermeasures are effective in both human security and economic growth. We will present the knowledge based on the experiences from the past earthquake disasters in an easy-to-understand format to the public. We will promote understanding of the self-help effort, mutual assistance and public support, and will appeal their importance for disaster reduction to the public.

## Academic Society Liaison Association Corresponding to the Great East Japan Earthquake

**Executive Committee** (members of the Committee on Civil Engineering/Architecture of Science Council of Japan)

Steering: Akira Wada, Teruhiko Yoda, Kazuo Tamura, Masako Yoneda, Yasushi Asami and Kimiro Meguro

Masanori Hamada, Shunsuke Ikeda, Mitsuru Senda, Masashi Kamon,

Toshimitsu Komatsu, Haruo Hayashi, Toshihiro Iwatate, Yoshiaki Nakano, Junji Kiyono

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Japan Society for Natural Disaster Science	President, Kazuo Takahashi,	Kimiro Meguro,	Kaoru Takara,	Fumihiko Imamura
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Japanese Institute of Landscape Architecture	President, Akio Shimomura,	Ryohei Ono		
The City Planning Institute of Japan	President, Norihiro Nakai,	Naofumi Takeuchi		
The Japan Landslide Society	President, Satoshi Tsuchiya,	Daisuke Higaki,	Hiroataka Ochiai,	Satoshi Goto, Hiroomi Nakazato
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The Japanese Geotechnical Society	President, Ikuo Towhata,	Makoto Suzuki,	Mamoru Mimura,	Motoki Kazama, Jun Ohbayashi
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The Japanese Society of Irrigation, Drainage and Rural Engineering	President, Tsugihiko Watanabe,	Takeshi Kikutsuji,	Akiko Kuroda	
The Seismological Society of Japan	President, Teruyuki Kato,	Kazutoshi Imanishi,	Keiichi Tadokoro,	Aitaro Kato
The Society of Environmental Instrumentation Control and Automation	President, Yoshihisa Shimizu,	Kunio Waseda,	Takuji Nakazato,	Masaki Takaoka
The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan	President, Takashi Inoue,	Masaya Okumiya,	Hiroaki Tomita,	Yasuo Murata, Toshiharu Ikaga
The Society of Instrument and Control Engineers	President, Ryuichi Nakata,	Satoshi Honda,	Toshiharu Sugie,	Masami Namiki
The Japan Association for Regional Economic Studies	President, Tomohiro Okada,	Makoto Suzuki,	Yoshifumi Ikejima	
Japan Society of Material Cycles and Waste Management	President, Toshihiko Matsuto,	Toshiaki Yoshioka,	Yuichi Moriguchi	
Cooperation:		Muneyoshi Numada,	Hiroki Kobayashi	

### 'Academic Society Liaison Association Corresponding to the Great East Japan Earthquake'

The members of Science Council of Japan become founders and 30 academic societies relevant to disaster management gathered since the 2011 Great East Japan Earthquake occurred. This Association and Science Council of Japan held 10 serial symposiums of 'How to protect people's lives and national land from huge hazards'. This Association aims to collaborate across academies and deepen mutual understanding, and discuss the direction of future beyond different expertise. This activity is supported by the Interdisciplinary sub-committee set up under the Committee on Civil Engineering / Architecture of Science Council of Japan.

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