

Summary and Declaration of the INTERPRAEVENT International Symposium 2018

~TOYAMA DECLARATION~

October 4, 2018, Toyama, JAPAN

INTERPRAEVENT International Symposium 2018 in the Pacific Rim (hereinafter called the Symposium) was held in Toyama, Japan from October 1st to 4th with the participation of the 492 experts from the scientific, technical and administrative fields from the 27 different nations and regions. Ten keynote speeches, 30 oral presentations, 115 poster presentations, the panel discussion with 4 panelists and 1 coordinator and excursions were held with the main theme, “Large scale sediment disasters in orogenic zones and countermeasures” for four days.

In the Symposium, there were many presentations in the sessions concerning “Large scale sediment disasters: Phenomena and countermeasures” and “Monitoring and modelling for debris flow, landslide, slope failure and rock fall”. These sessions highlighted the following participants’ understanding.

-Enormous damages frequently occur in the world due to heavy rainstorms which is considered to be caused by climate change. In the Pacific-rim, in addition, severe damages which are characteristic in orogenic zones are also caused by volcanic activities or earthquakes.

-Many studies on realities and mechanisms of various sediment disasters were presented. However, continuous efforts for better understanding about sediment dynamics are still necessary.

-In order to be prepared for sediment disasters which intensify and vary along with the climate change, it is necessary to improve or develop the techniques of observation and monitoring, modelling methodology, and theory.

In addition, there were also many presentations in the sessions concerning structural measures, non-structural measures and integrated basin-scale sediment management for sustainable development. These sessions highlighted the following participants’ understanding.

-There were many presentations of case studies on both of structural and non-structural measures against debris flows, landslides, slope failures and rock falls. It is important to share knowledge learnt from these lessons and improve the countermeasure technologies.

-There were many presentations on new techniques to observe and analyze sediment dynamics in mountain catchment. Moreover, case studies on integrated basin-scale sediment management were presented.

Then, there were comprehensive panel discussions on ways and means to success sustainable development even under the conditions where large scale sediment disasters could occur in orogenic zones by the experts from Italy, Switzerland, Taiwan and Japan. Points of the discussion are as follow.

- It is necessary to keep continuous efforts of holistic approach to disaster management with combining all the structural and non-structural measures against large scale sediment disasters.
- Holistic approach to disaster management in Italy, Switzerland, Taiwan and Japan successfully reduced damages due to sediment disasters. So, these efforts should be good references to keep efforts of basin-scale sediment management in orogenic zones.
- Especially, Tateyama Sabo Project which has been protecting Toyama for long time is considered to be
 - i) Noble example of holistic approach to disaster management which was developed in Japan with many natural disasters
 - ii) One of the best masterpieces of integrated basin-scale sediment management in modern times under the most difficult natural conditions
 - iii) Universal technique of disaster reduction which can be applied to mountainous regions all over the world

So, it is a good example for people around the world to refer as a common heritage of mankind with outstanding universal value.

In the context of the increase in the disaster risk caused by climate change and urbanization, the Sendai Framework for Disaster Risk Reduction 2015-2030 which was adopted in the Third UN World Conference on Disaster Risk Reduction 2015-2030 aims at substantially reducing the disaster risk and losses in lives, sets the seven global targets, and prescribes four priorities for action, such as i) understanding disaster risk, ii) strengthening disaster risk governance to manage disaster risk, iii) investing in disaster risk reduction for resilience and iv) enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

Strengthening the contribution to the Sendai Framework 2015-2030, the Symposium proposes to the world the things mentioned above in order to recognize our responsibilities, promote research and development of technologies for sediment disasters risk reduction and their effective applications, and promote globally sharing experiences, lessons, and technologies.