The first 5 years of IPL and IPL-ICL session held on 9 May

Kyoji Sassa

Executive Director

International Consortium on Landslides (ICL)

11:45-12:00 on 10 May 2011

Ignite Presentation at Market Place, Global Platform 2011 in Geneva

- The International Consortium on Landslides (ICL) has served as the thematic platform on landslide risk reduction under ***the Hyogo Framework for Action: Building the Resilience of Nations and Communities to Disasters.***
- The International Programme on Landslides (IPL) has been successfully coordinated and implemented jointly by ICL, UNESCO, WMO, FAO, UNISDR, UNU, ICSU, WFEO and IUGS since the 2006 Tokyo Action Plan.

Participants in IPL-ICL Session

Round Table Discussion-towards a dynamic and global development of the International Programme on Landslides

CCV Room D on 9 May 2011 in the Global Platform in Geneva

Albania (1): Albania Geological Survey	16. Nepal (1): ICIMOD
Bulgaria(1): Univ. of Mining & Geo. (in process)	17. Nigeria(1): University of Nigeria
1. Cameroon (1): University of BUEA	18. Norway (1): ICG, NGI
2. Canada (1): Geological Survey of Canada	19. Peru (1): Grudec Ayar,
3. China (5): China Geological Survey, et al.	20. Russia (5): Moscow State University
4. Columbia (1): Univ. Nacional de Columbia	Serbia (1): Univ of Belgrade (in process)
5. Croatia (1): Rijeka Univ. + Zagreb Univ.	21. Slovakia (1): Comenius University
6. Czech Republic (1): Charles University	22. Slovenia (2): Univ. Ljubljana, Geological Survey
7. Germany (1) :Technische Univ. Darmstadt	23.South Africa(1): Council for Geoscience
8. Indonesia (1): Gadjah Mada University	24.Sri Lanka (1): Cent. Eng. Consul. Bur.
9. India (1): Inst. of Disaster Management	25. Thailand (2): Ministry of Agri, ADPC
10. Iran (3): Agri. Res. and Edu. Organization etc	26. The Netherland (1): ITC School
11. Italy (4): University of Firenze, ISPRA, etc	27. Ukraine (1): Inst.Telecom. & Infor.
12. Japan (6): Kyoto Univ, Japan Landslide Soc.	28. USA (1): US Geological Survey
13. Korea (1): Korea Inst. (KIGAM)	29. Uzbekistan (1): Institute Hydroingeo
14. Malaysia (2): Public Works Depart.	30. Vietnam (1): Inst. Transport S & T.
15. Mexico (1): Institute of Geography, UNAM	UNESCO, WMO, FAO, UNISDR, UNU, ICSU, WFEO, IUGS

Members of IPL, 4/2011. **Participants in Red**

Proposal of a new regional consortium of ICL

Latin America Consortium on Landslides (LAC)

Discussion Result (1)

- **To strengthen regional network of ICL and IPL** through regional Consortium on Landslides

  Adriatic-Balkan Consortium on Landslides (ABC)

  Latin American Consortium on Landslides (ABC)

  ASEAN Consortium on Landslides (ASC)

  through a new initiative Landslide School Network (LSN)

  Capacity development activities by ICL members and non-ICL members which are willing to contribute to Landslide risk reduction in the region within the ICL-IPL cooperation network

Discussion Result (2)

To strengthen social-economical impact by putting Science into Practice for "Building the Resilience of Nations and Communities to Landslide Disasters"

- Stronger link to government and communities through application and implementation science and technology for landslide risk reduction.
- Intensifying landslide risk assessment due to climate change and great tectonic activities like Tohoku earthquake.
- Development of cooperation of IPL with many of other Programmes directly and indirectry related to landslides.

Discussion Result (3)

- ICL was established in Kyoto to create IPL on 21 January 2002 with participants from UNESCO, UNISDR, WMO, FAO, with supports from the Government of Japan.
- **The 10th Anniversary of ICL** will be organized in Kyoto on 18-21 January 2012 including symposia on IPL projects, the planning of WLF-3 in Beijing 2014, and another Round Table Discussion to make a strategy for the next decade
- Group of ICL and IPL will gather to further develop the discussion of this IPL-ICL session at the 10th anniversary of ICL in Kyoto in January 2012.

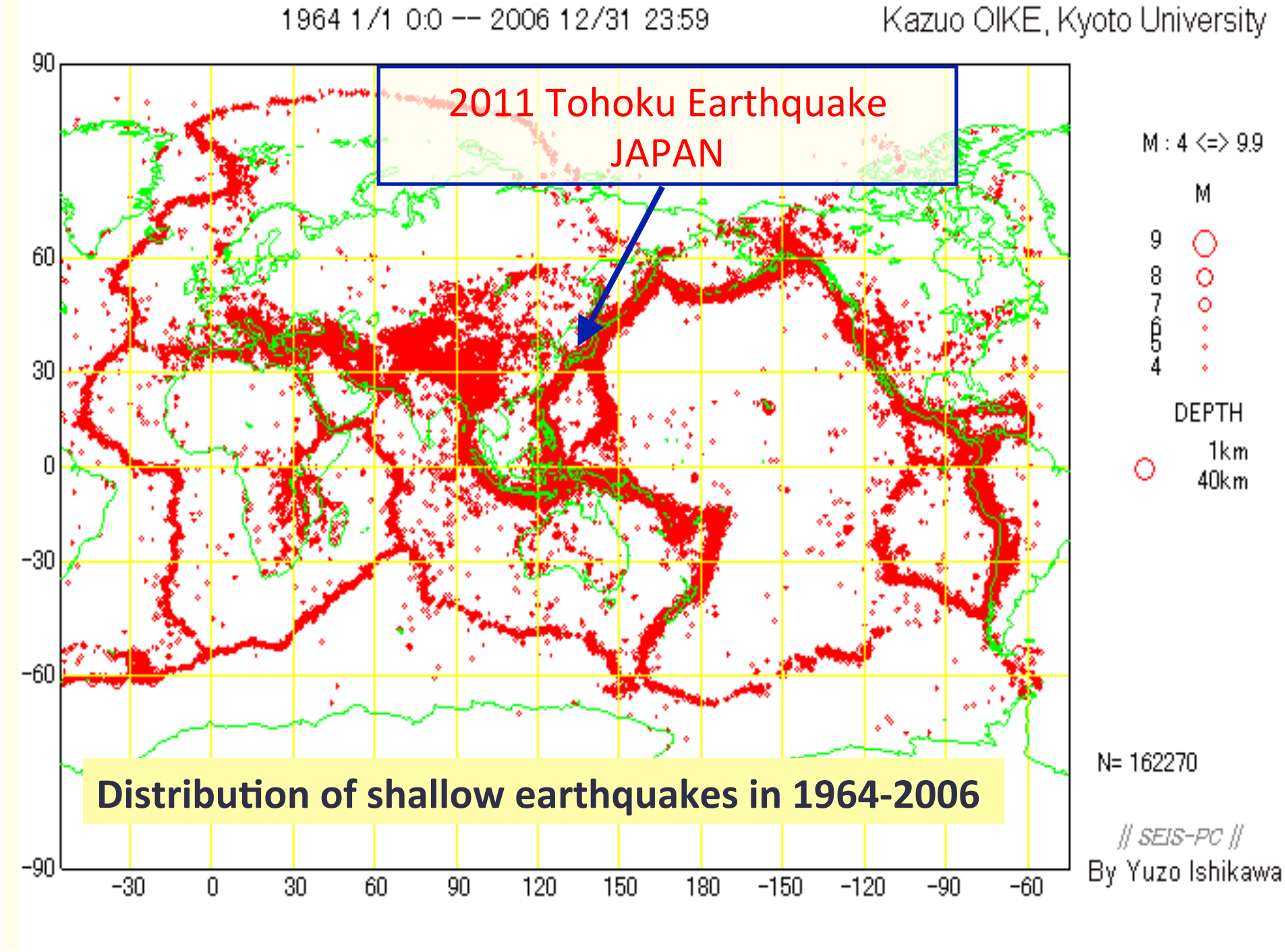
Global Network of IPL WEB: http://www.iplhq.org/

Global Network of IPL may be promoted through Journal, IPL Projects, WCOE, WLF and New Initiatives of:

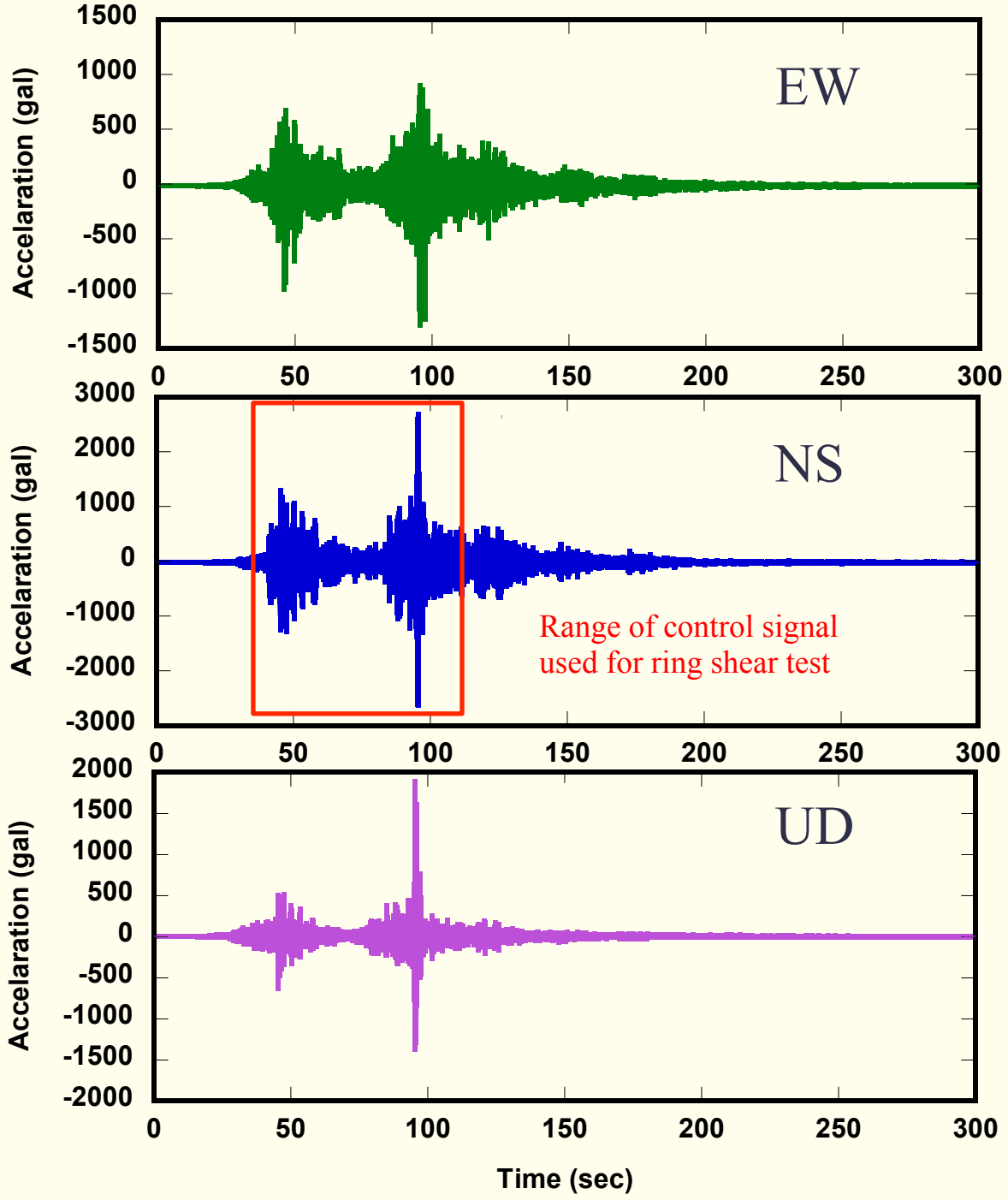
1. Establishment of the Regional Consortium on Landslides, such as Adriatic-Balkan, Latin-American, ASEAN etc.
2. Development of Landslide School Network with ICL and Non-ICL organizations
3. Creating World Reports on Landslides (Database easily uploaded by ICL-IPL members) within new IPL WEB http://www.iplhq.org/

An Example of IPL (IPL-157) in cooperation with IODP Exp 333 Risk Assessment Technology of Earthquake Induced On-land and Submarine Megaslides

- Risk assessment of large-scale submarine landslides
- by a new undrained dynamic loading ring shear tests developed by IPL
- on a sample drilled by IODP in the Nankai Trough, Japan
- Using the 2011 Tohoku earthquake strong motion record as well as the cyclic loading test.

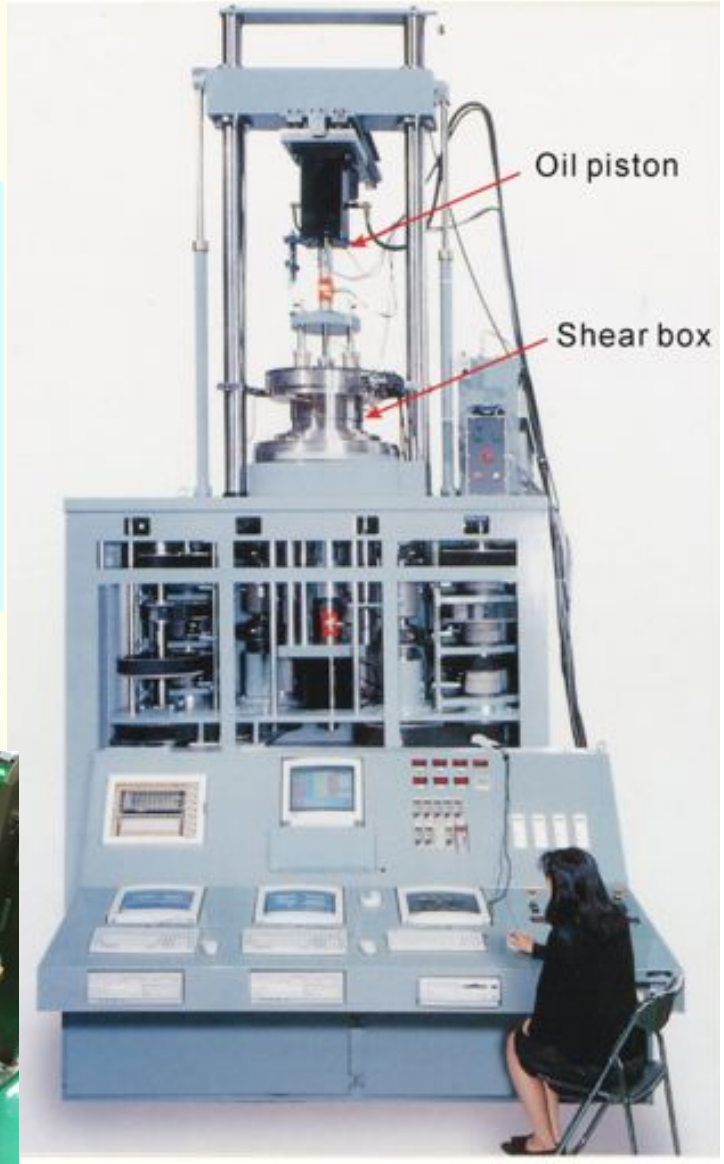

1964 1/1 0:0 -- 2006 12/31 23:59
Kazuo OIKE, Kyoto University
2011 Tohoku Earthquake
JAPAN
M : 4 <=> 9.9
M
9
8
7
6
5
4
DEPTH
1km
40km
90
60
30
0
-30
-60
-90
-30
0
30
60
90
120
150
180
-150
-120
-90
-60
Distribution of shallow earthquakes in 1964-2006
N= 162270
// SEIS-PC //
By Yuzo Ishikawa

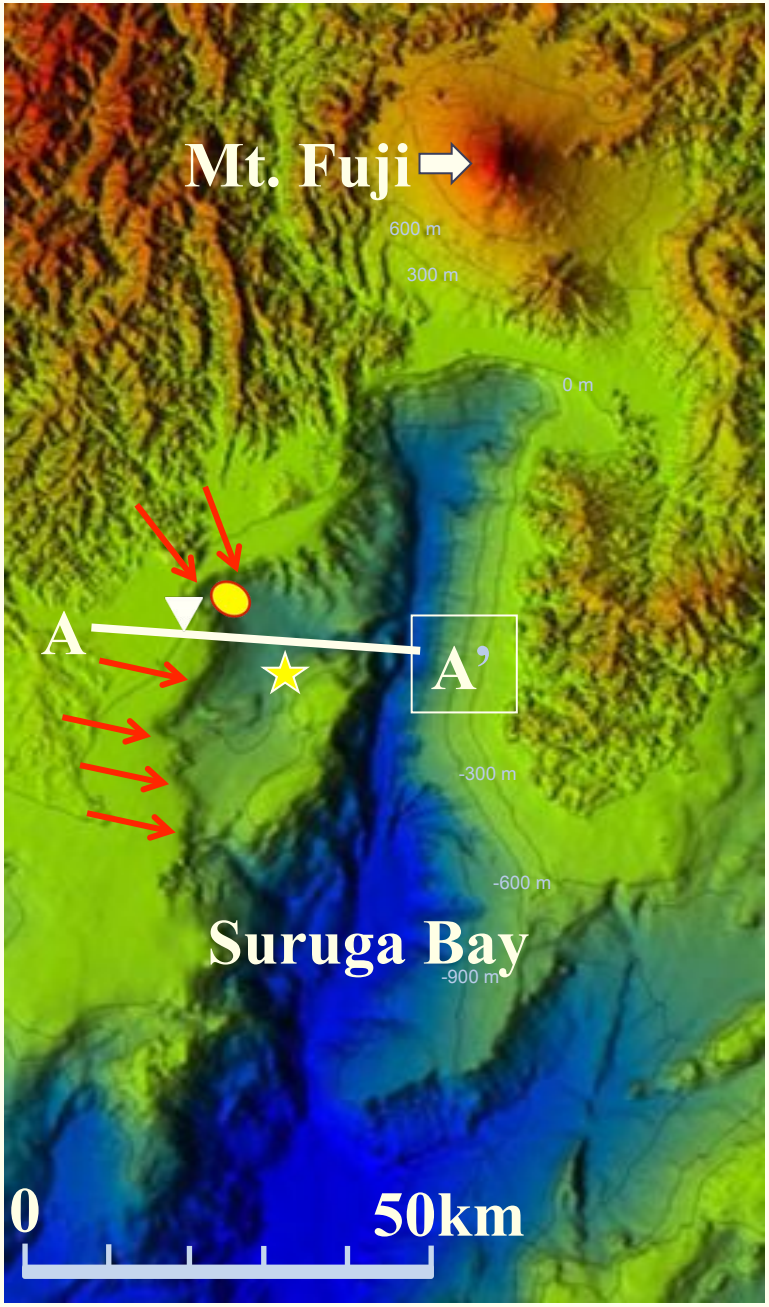
The Maximum Tohoku Earthquake Record at MYG004



The undrained dynamic loading ring shear apparatus for landslide dynamics developed in 1996 by 1 million USD (Right)

Portable ring shear apparatus (0.1 million USD) under development by the Croatia-Japan Joint project (IPL-161) in 2010. A doctoral student invited from Croatia is handling it at the initial test (Left and Center)





IPL-157 “Dynamics of subaerial and submarine megaslides” studies a large-scale submarine landslide in Suruga bay. The size is 30x40 km. Depth is 800 m (similar to Usoy on-land landslide triggered by an earthquake in Tajikstan)

Submarine landslide induced by 2009 Suruga bay earthquake

2009 Surga bay earthquake

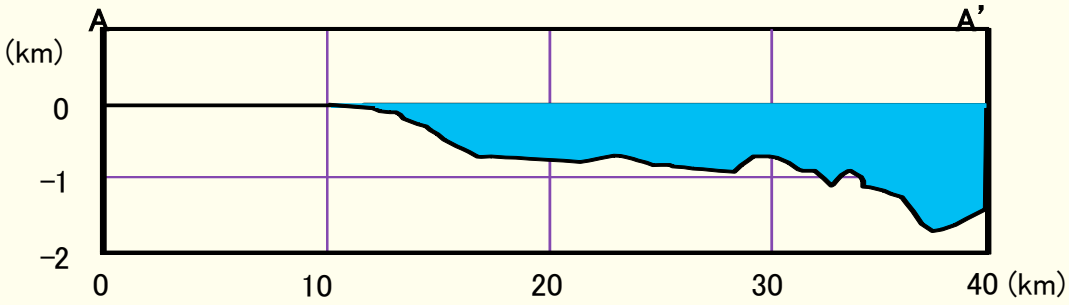
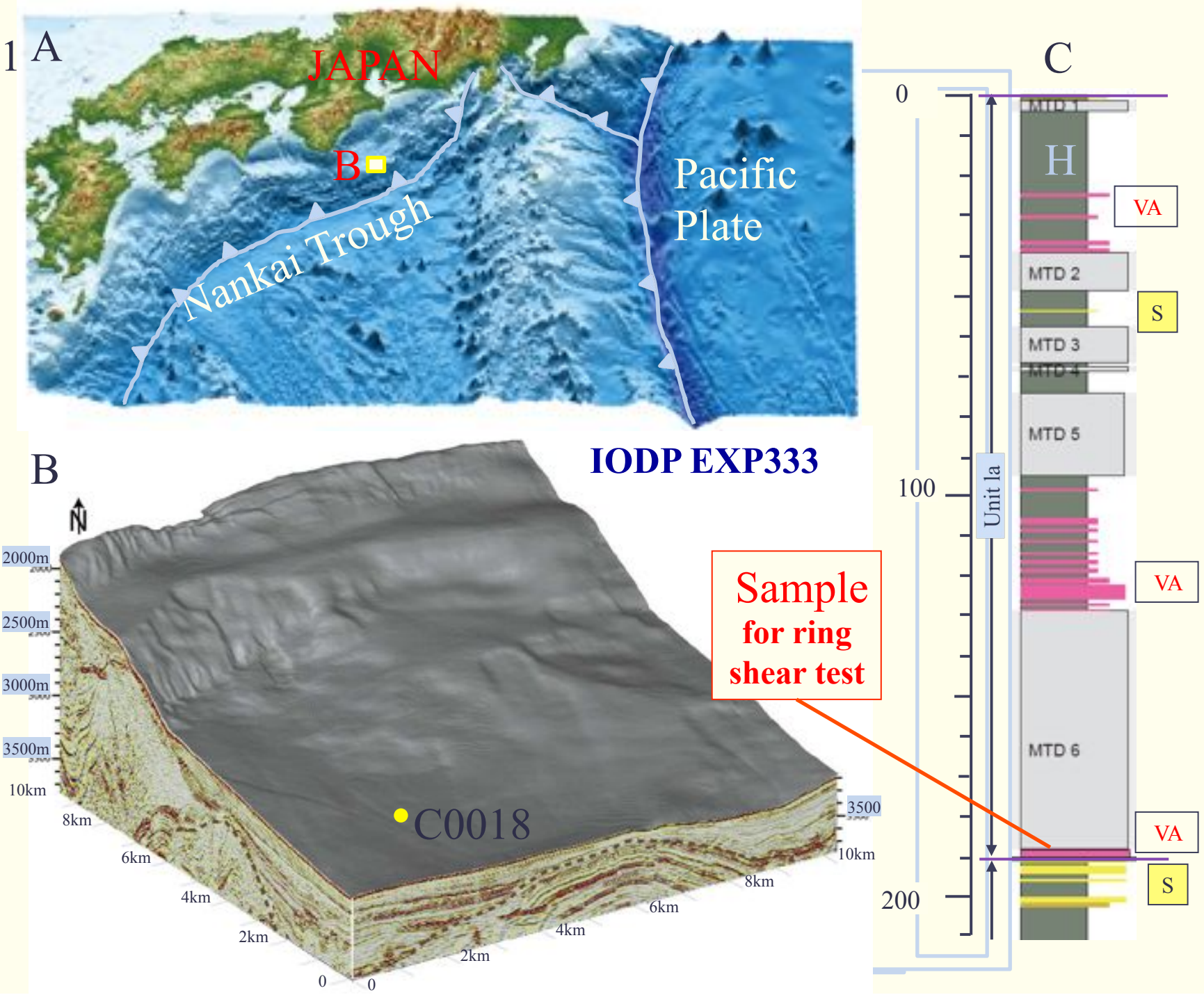
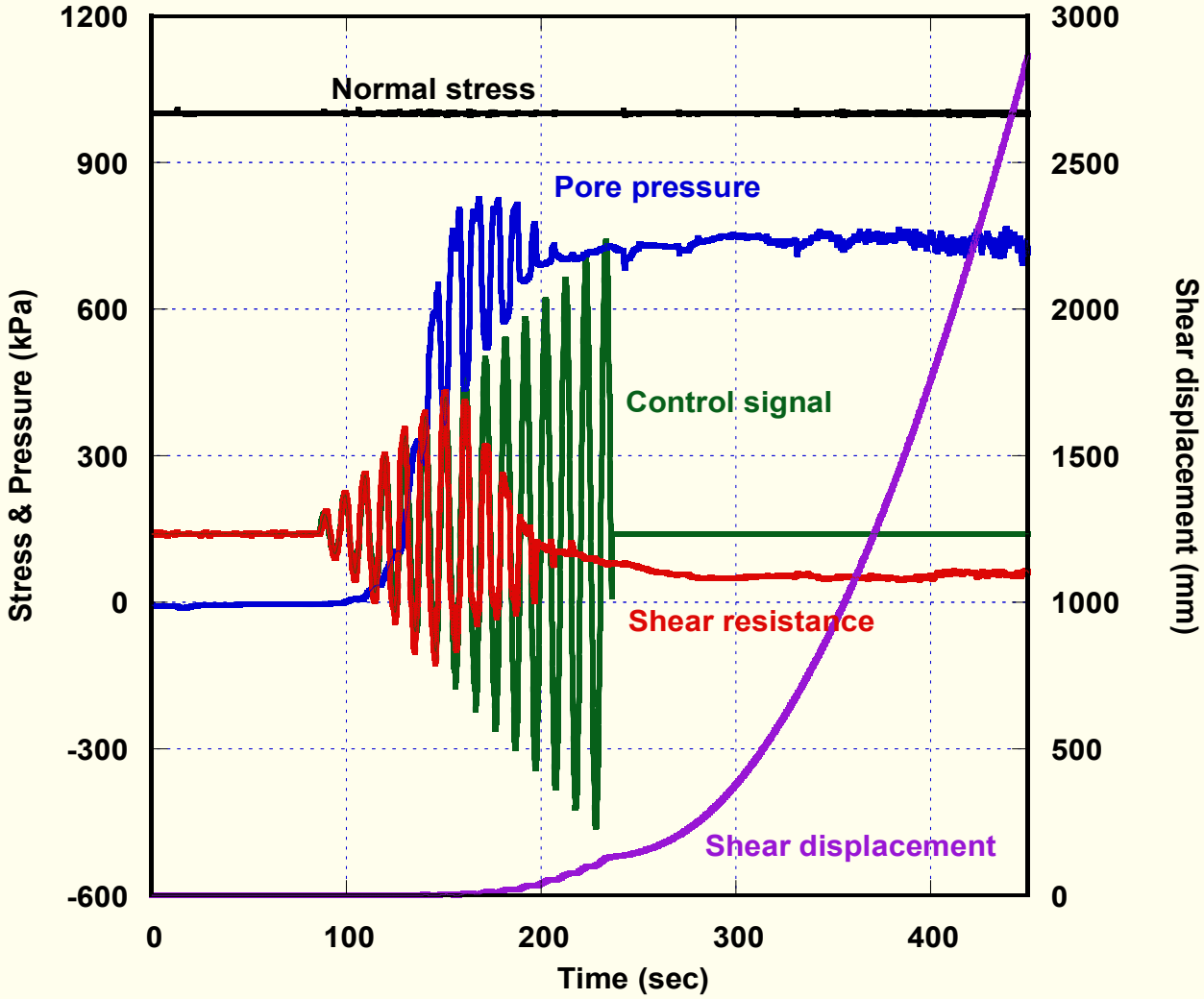


Fig.1


A
JAPAN
B
Nankai Trough
Pacific Plate
IODP EXP333
B
N
2000m
2500m
3000m
3500m
10km
8km
6km
4km
2km
0
C0018
3500
10km
8km
6km
4km
2km
0
Sample
for ring
shear test
C
0
100
200
Unit Ia
H
VA
MTD 2
S
MTD 3
MTD 5
VA
MTD 6
VA
S

Cyclic loading test on 190 m deep submarine deposit drilled by IODP Exp333 demonstrated that a large-scale rapid submarine landslide will be triggered by an earthquake on gently slope less than 9 degrees in Nankai, Trough, Japan. The test result loading shear stress corresponding 30 % of 2011 Tohoku earthquake (MYG004) presented the same result.



Wishing Further Development of Global Network of IPL from Usoy landslide dam in Tajikstan.

Usoy landslide source area

Usoy landslide dam

Sarez lake

Triggered by 1911 earthquake in Tajikstan
Volume of landslide: 1.1 billion m 3. The Dam Crest is 567 m.