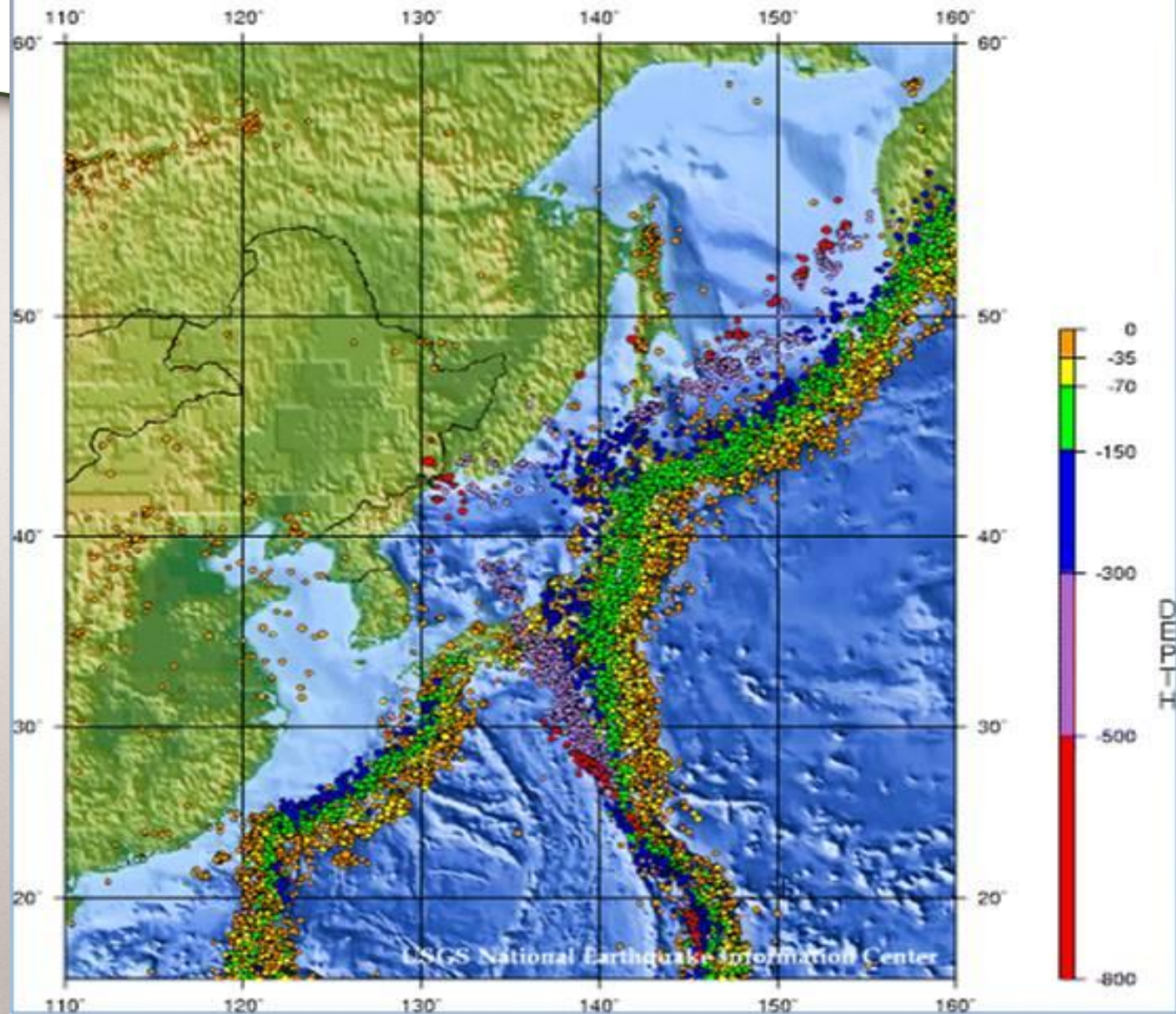


Improving input Data for the Seismic Hazard Assessment in Korea

Myung-Soon Jun

***Korea Institute of Geoscience and Mineral
Resources***

Seismicity of Japan and Kuril Islands: 1990 - 2000



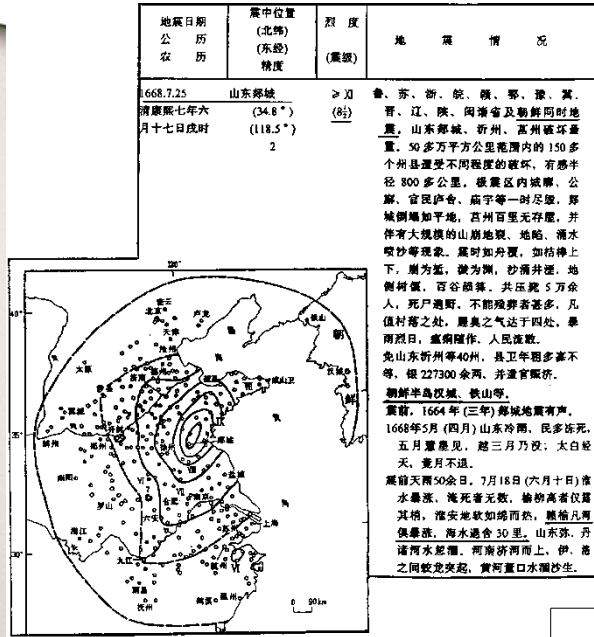
歷史地震 目錄 作成을 위한 D/B

既存 歷史地震 資料 蒐集 및 D/B

- 韓半島의 地震危險度(動力資源研究所, 1983),
- 韓半島 地震災害圖 作成을 위한 歷史被害地震의 評價 및 綜合整理(國立防災研究所, 1999),
- 歷史地震 評價 및 目錄作成(韓國原子力安全技術院, 2000),
- Historical seismicity of Korea (Lee&Yang, 2006),
- 韓半島의 地震活動 研究(경제복, 2008)

隣接國 歴史地震 目録 分析

1668. 7. 25.



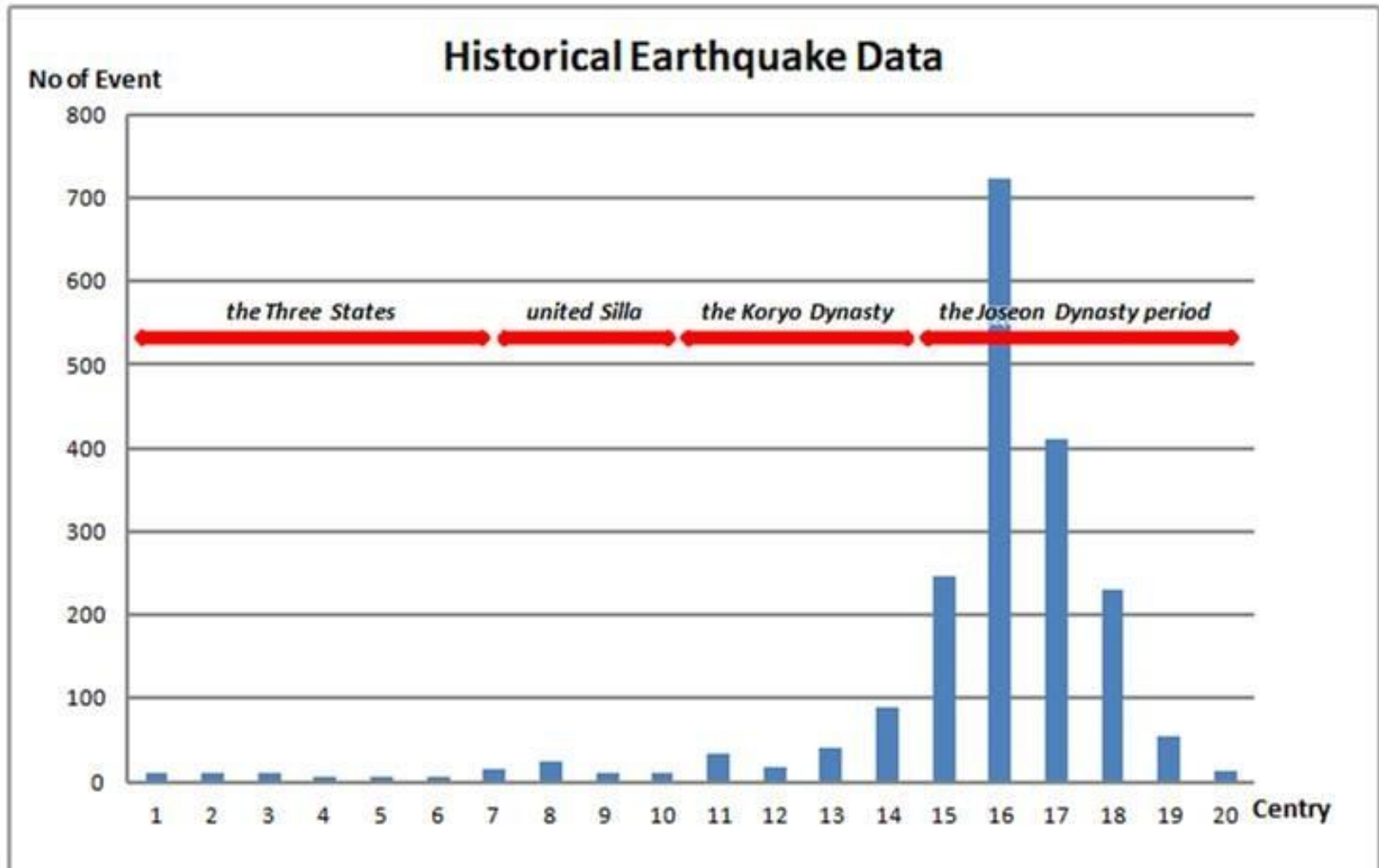
地震이 發生. 평안도(平安道) 평양(平壤), 철산(鐵山), 황해도(黃海道) 해주(海州), 안악(安岳), 연안(宴安), 재령(載寧), 장연(長淵), 백천, 봉산(鳳山), 강원도(江原道) 창원(昌原), 웅천(熊川), 충청도(忠淸道) 홍산(鴻山), 전라도(全羅道) 김제(金堤), 당진(唐津)에서 感震. 鐵山地域에 海溢(朝鮮王朝實錄)

번호	일시	진앙지		지진 규모 (M)
		위도 / 경도	지역	
1	1548. 9. 13	38.0 / 121.0	발해	7
2	1597. 10. 6.	38.5 / 120.0	"	7
3	1668. 7. 25.	35.3 / 118.6	산동반도	8.5
4	1679. 9. 2.	40.0 / 117.0	하북	8
5	1846. 8. 4.	32.5 / 123.0	동대양	7
6	1852. 12. 16.	33.5 / 122.0	"	7
7	1853. 4. 14.	33.0 / 122.5	"	7
8	1888. 6. 13	38.5 / 119.0	발해	7.5

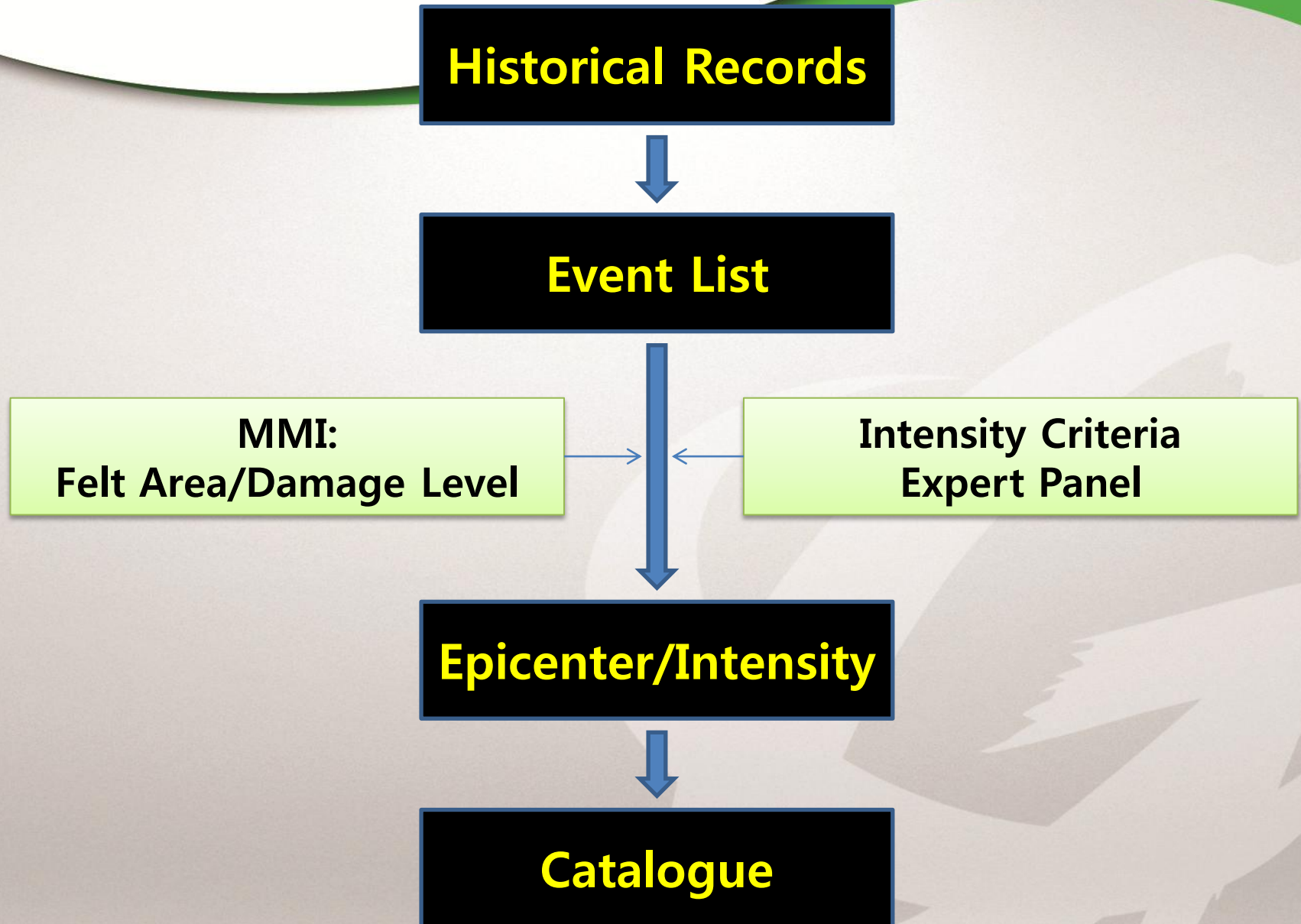
隣接國 地震目錄 중 韓半島 地域 資料 分析

- 中國近代地震目錄(1999,中國地震國),
- 黃海 및 그 周邊의 歷史지진(1995, 吳伐主),
- 國外地震科技情報(1987,中朝地震活動性研究所조)
- 日本被害地震總覽(1996, 東京大學校),
- 地震活動總說(1999, 東京大學校)

Occurrence of Historical EQ



Flow Chart for Historical Catalogue

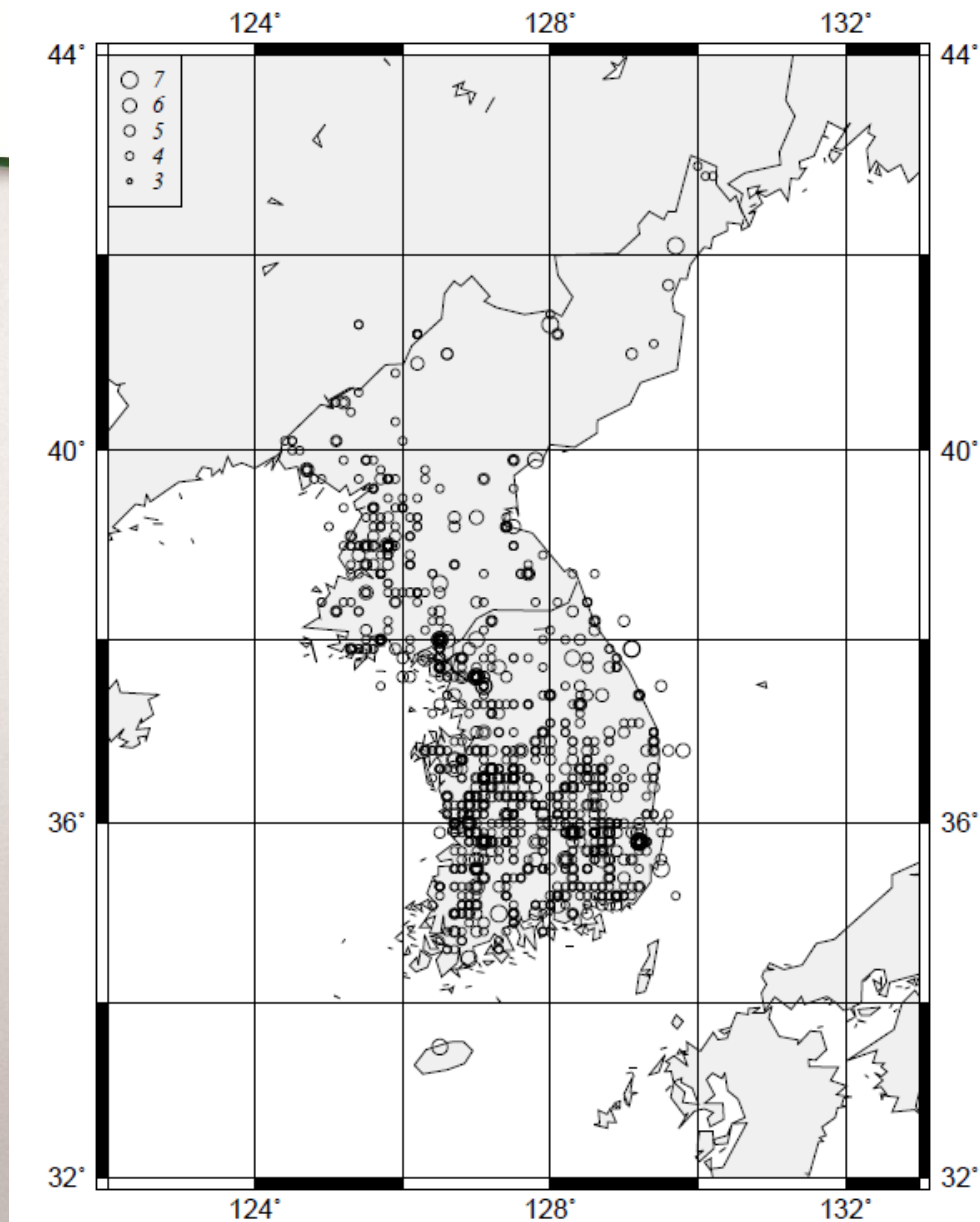


Historical Earthquakes used in Seismic Hazard

Source Parameter Estimation

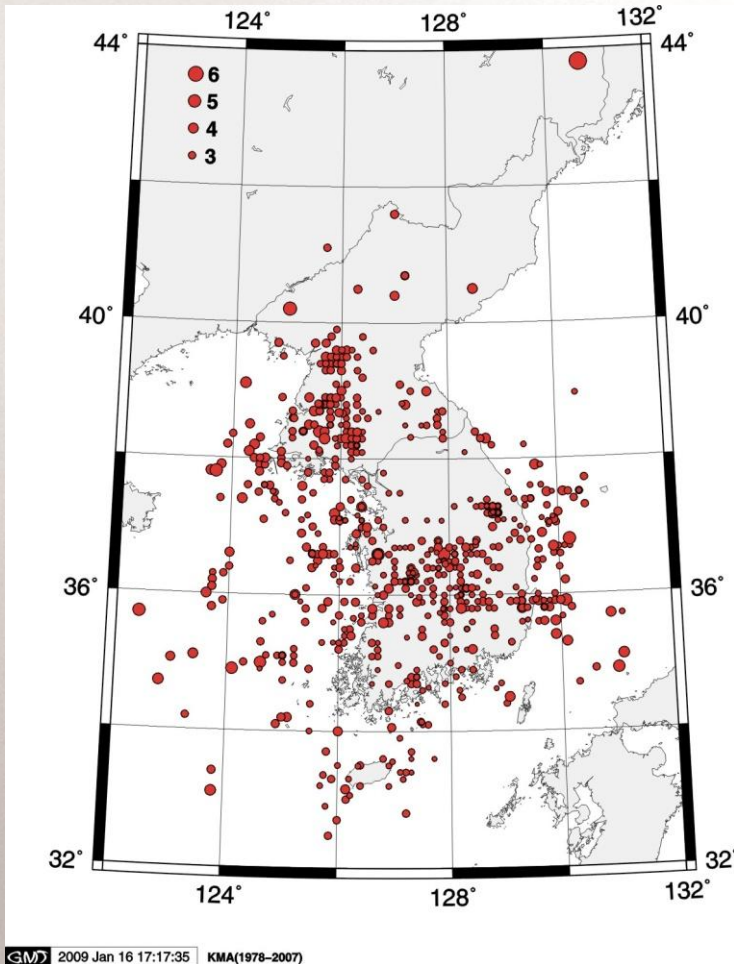
- Lunar Calendar ->
Solar Calendar
(After Korea Dynasty, 10th Century)
- Damage Distribution and
Damage Level ->
Epicenter and Intensity
- Intensity -> Magnitude

Historical Earthquakes used in Seismic Hazard

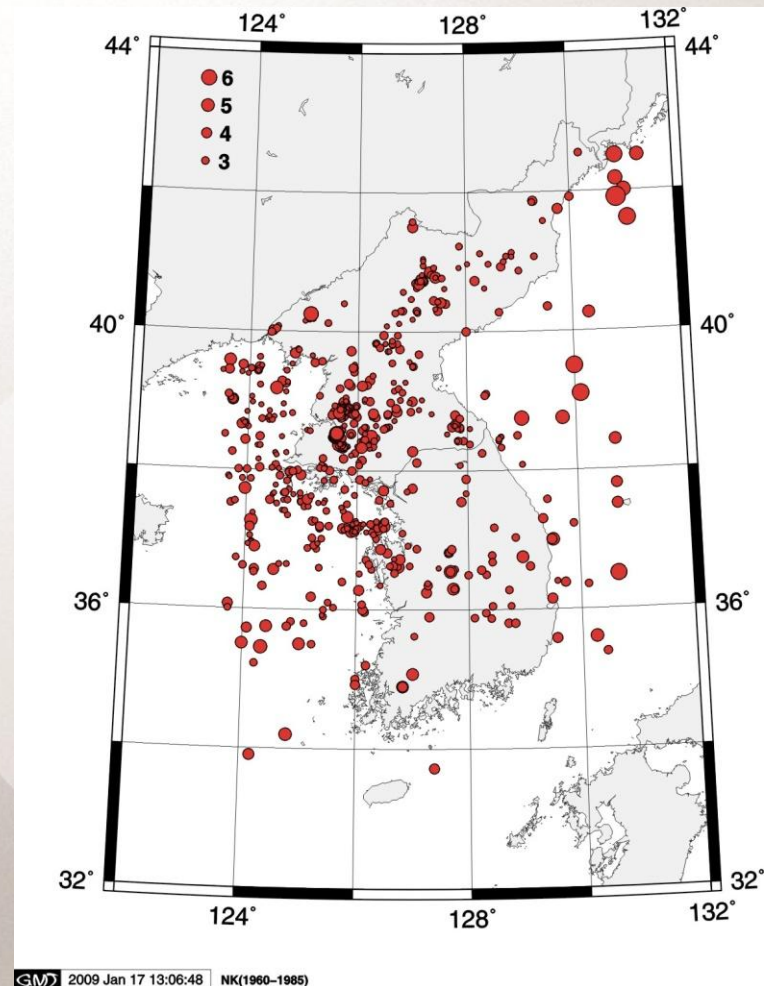


Instrumental Data

KMA(1978 ~ 2010)



North Korea(1960 ~ 1985)

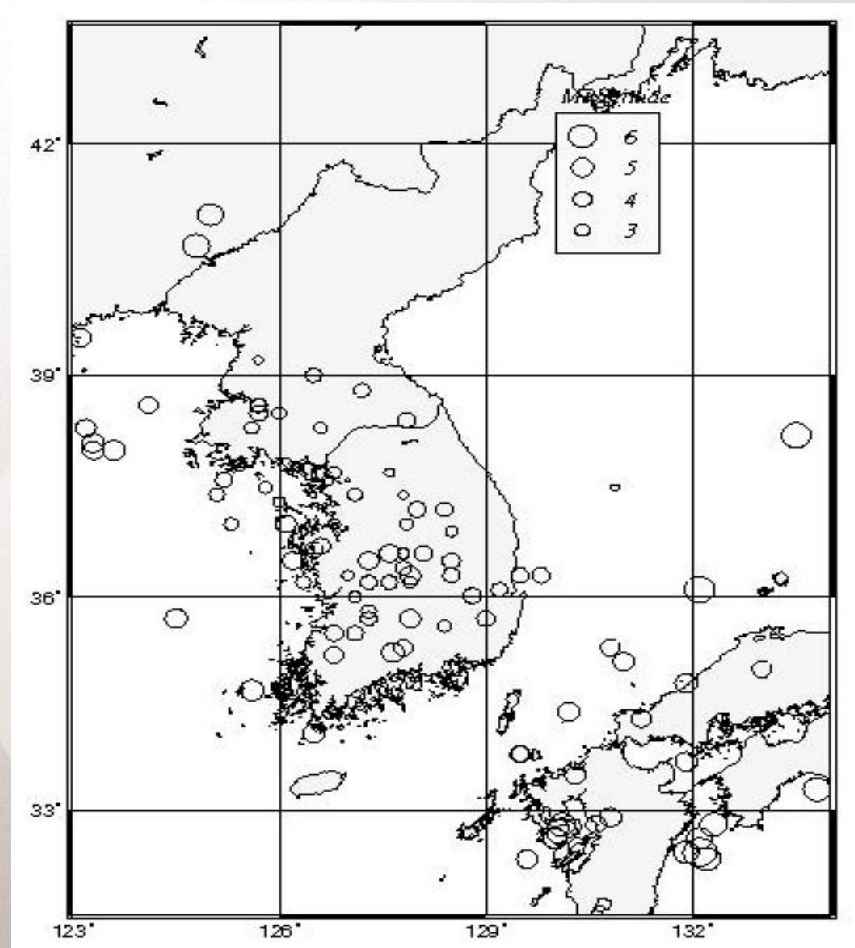
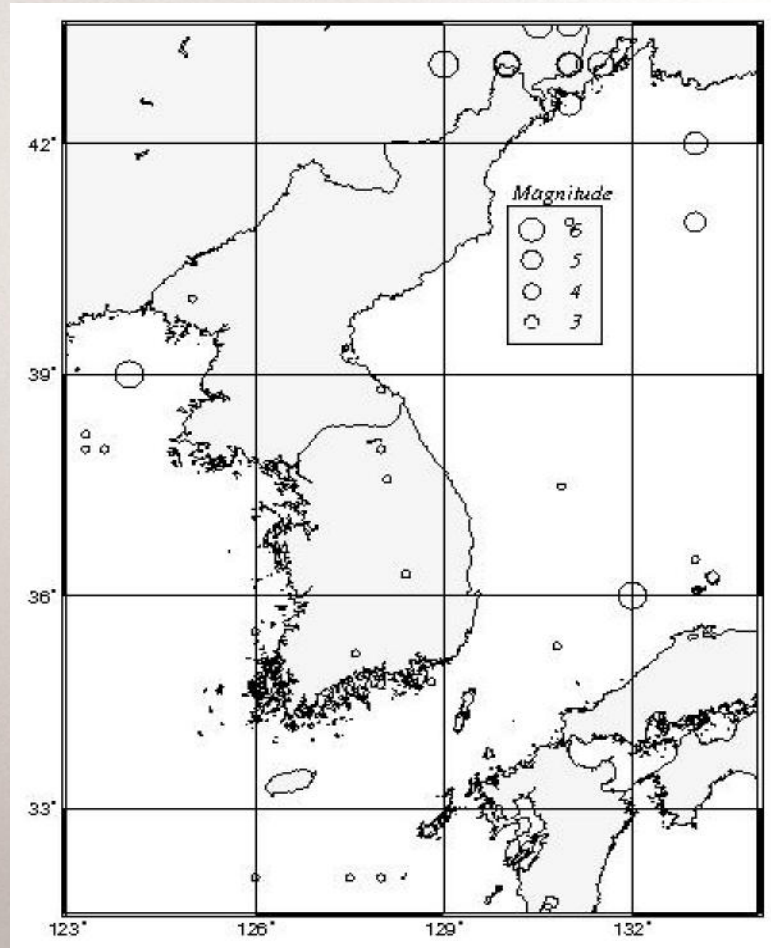


EQ Data (1905 – 1943)

– Jun and Jeon(2001)

- **朝鮮地震報告**(1905-1912)
- **朝鮮氣象30年報**(1934)
- **地震年報**(1933-1938)
- Annual Report of the Weather Bureau of Tyosen(1935-1939)
- **朝鮮總督府氣象臺 地震年報**(1940)
- **朝鮮氣象要報**(1940-1942)
- The seismological Bulletin of the Central Meteorological Observatory, Japan(1952)
- ISS Bulletins

ISS and Jun & Jeon (1905-1943)



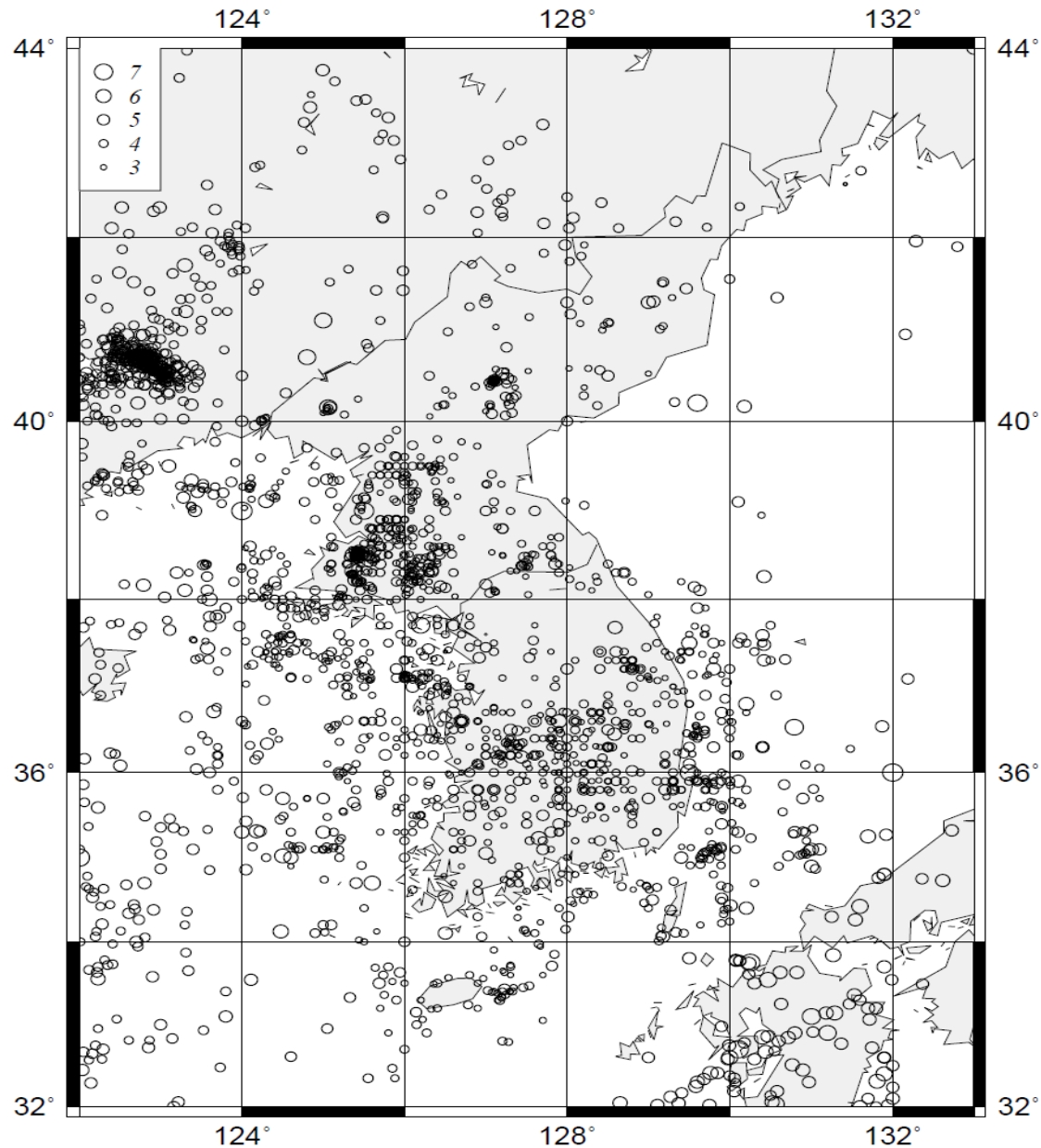
Instrumental Data (1945 ~ 1977)

- **Between 1945-1963**
- **WWSSN Seoul Station (1963)**
- **KSRS data from late 1960'**
- **Data from North Korea**
- **Data from ISS & ISC & USGS**

Earthquake Observation in Korea

- Until 1974 **No Magnitude Information, JMA Intensity information only**
- Since 1975 **Magnitude Information**

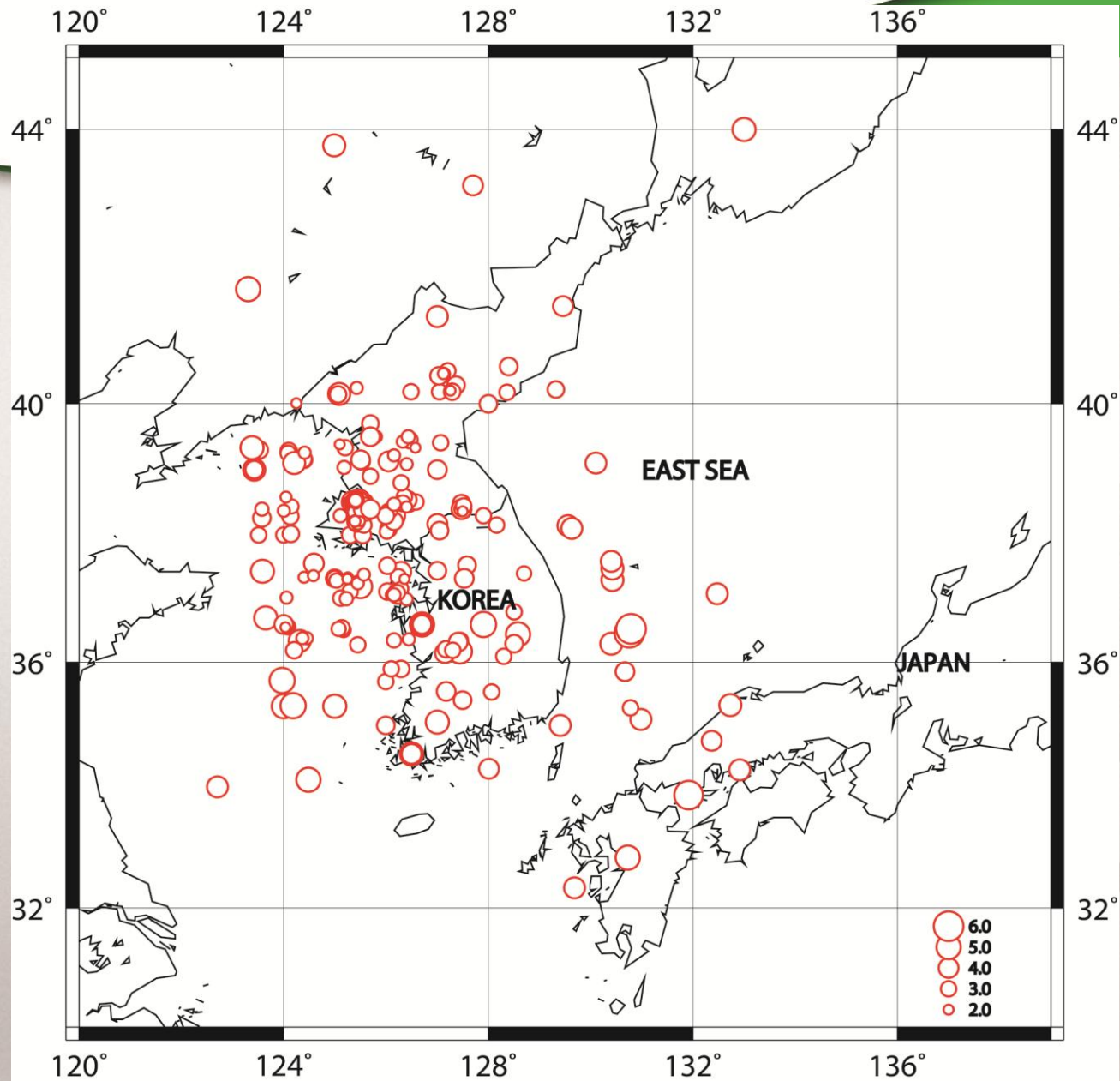
Instrumental Earthquakes used in Seismic Hazard



Earthquake Data in Korea

Historical Data	Instrumental Data			
Before 1900	1905 - 1943	1943 - 1962	1963 - 1977	After 1978
Historical Documents	Jun and Jeon (2001)	ISS, DPRK	WWSSN	KMA data

Seismicity between 1963 - 1979



Dear Jun Myung-Soon san

JMA data were attached, but 2 events were not reported.

> > Date	Time (GMT)	Lat	Lon	Depth	M	Source
> > 1965-02-26	06:42:54.0	35.32	132.73	2	4.4	ISC
> > 1973-02-25	10:09:45.0	34.75	132.36	12.1	4.0	ISC
> > 1974-07-04	02:26:19.0	32.34	129.68	-	4.3	ISC
no data						
> > 1976-05-06	01:02:29.0	37.09	132.47	33	-	ISC
no data						
> > 1977-06-28	02:46:43.0	32.84	130.72	24.1	4.8	ISC
> > 1979-04-09	13:12:54.0	34.28	132.91	61.5	4.2	ISC
> > 1979-07-13	08:10:12.0	33.87	131.91	74	5.7	ISC

cheers,

Yuzo Ishikawa

Invited researcher

Active Fault and Earthquake Research Center (AFERC)

The National Institute of Advanced Industrial Science and
Technology (AIST)

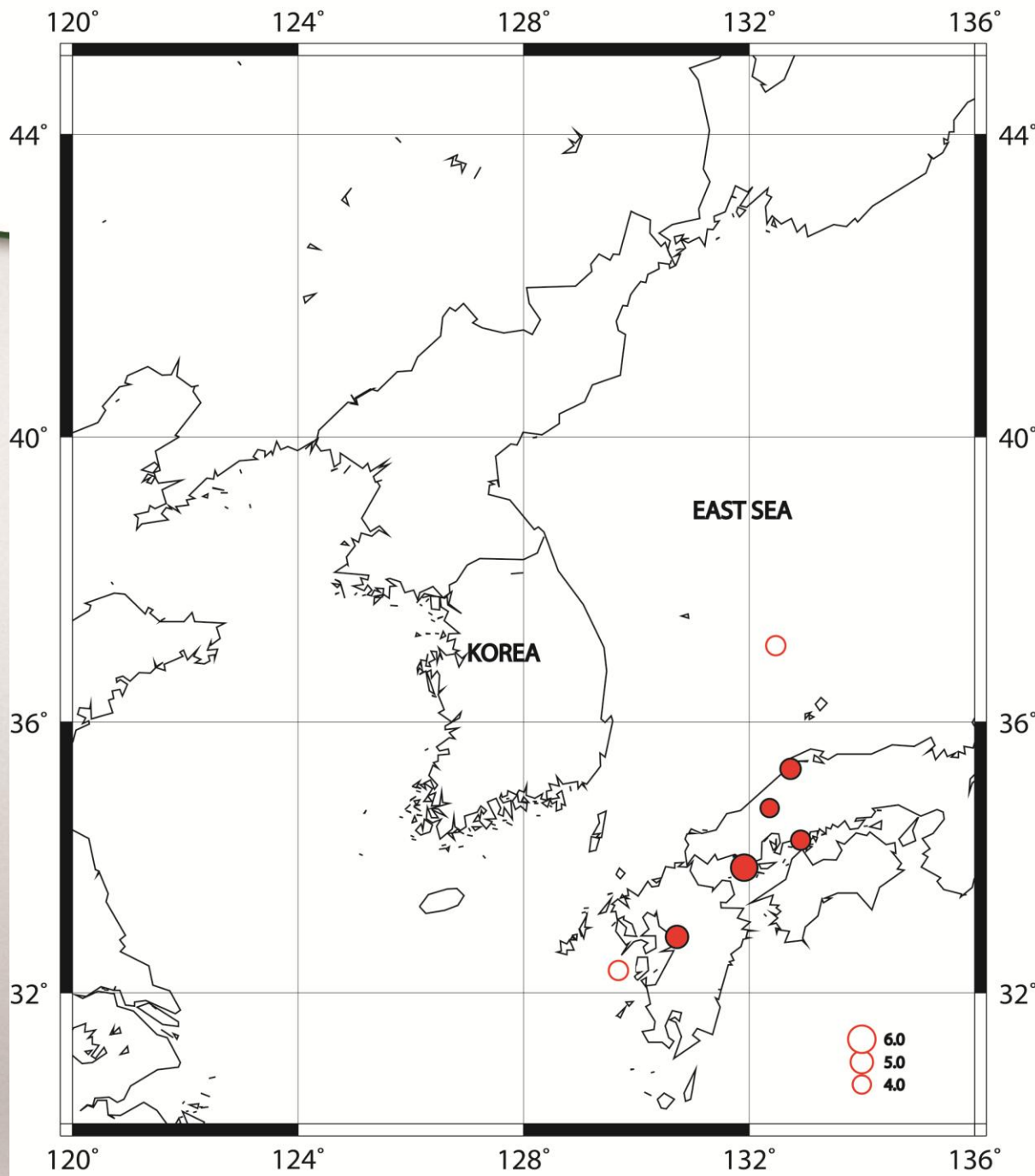
AIST Tsukuba Central 7

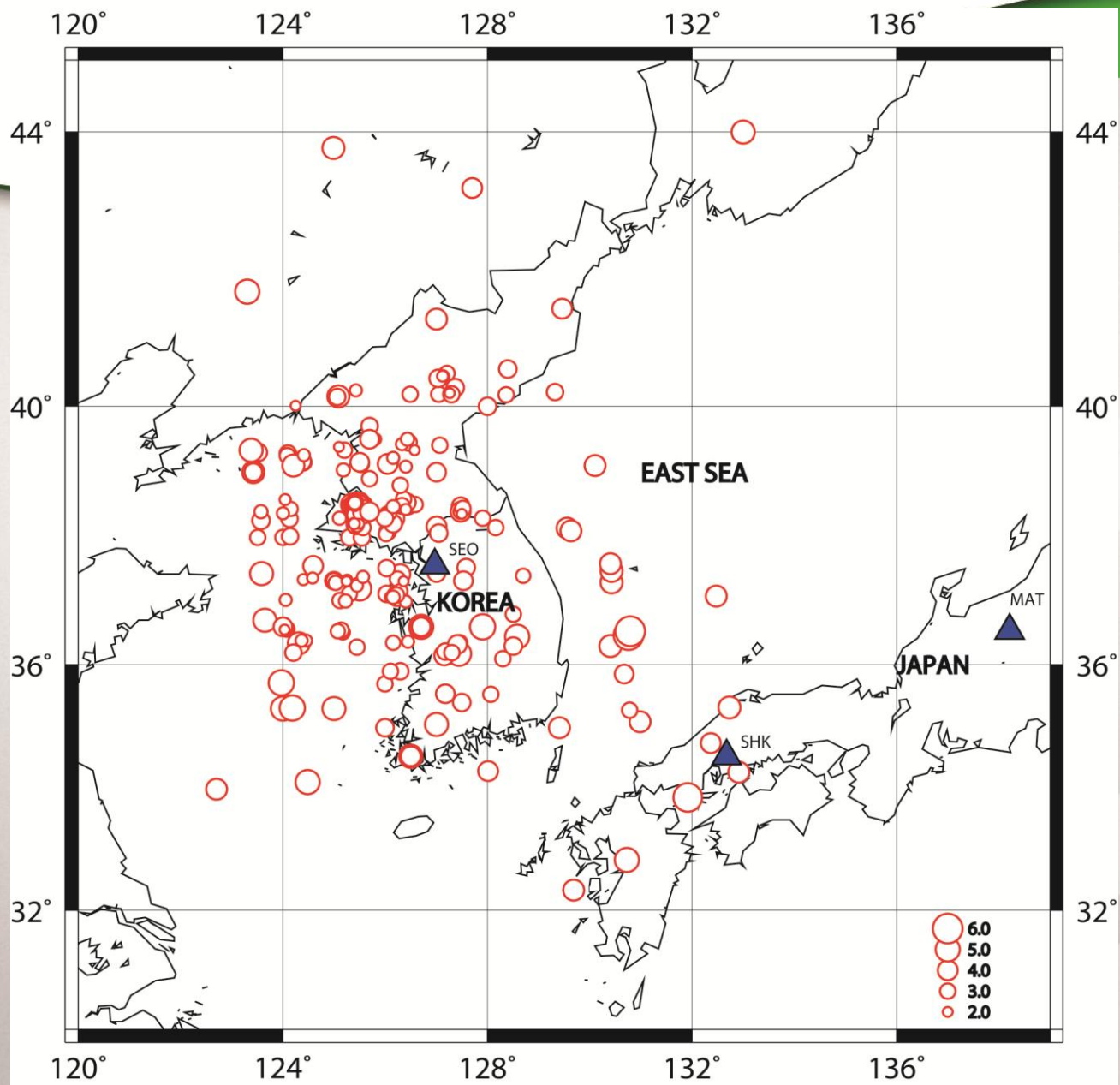
1-1-1 Higashi, Tsukuba, Ibaraki 305-8567 Japan

Tel: +81-29-849-1076, Fax: +81-29-855-1298

Visiting Professor of

The Center for Integrated Hazards Research and Education,
Shizuoka University







Thank You !!