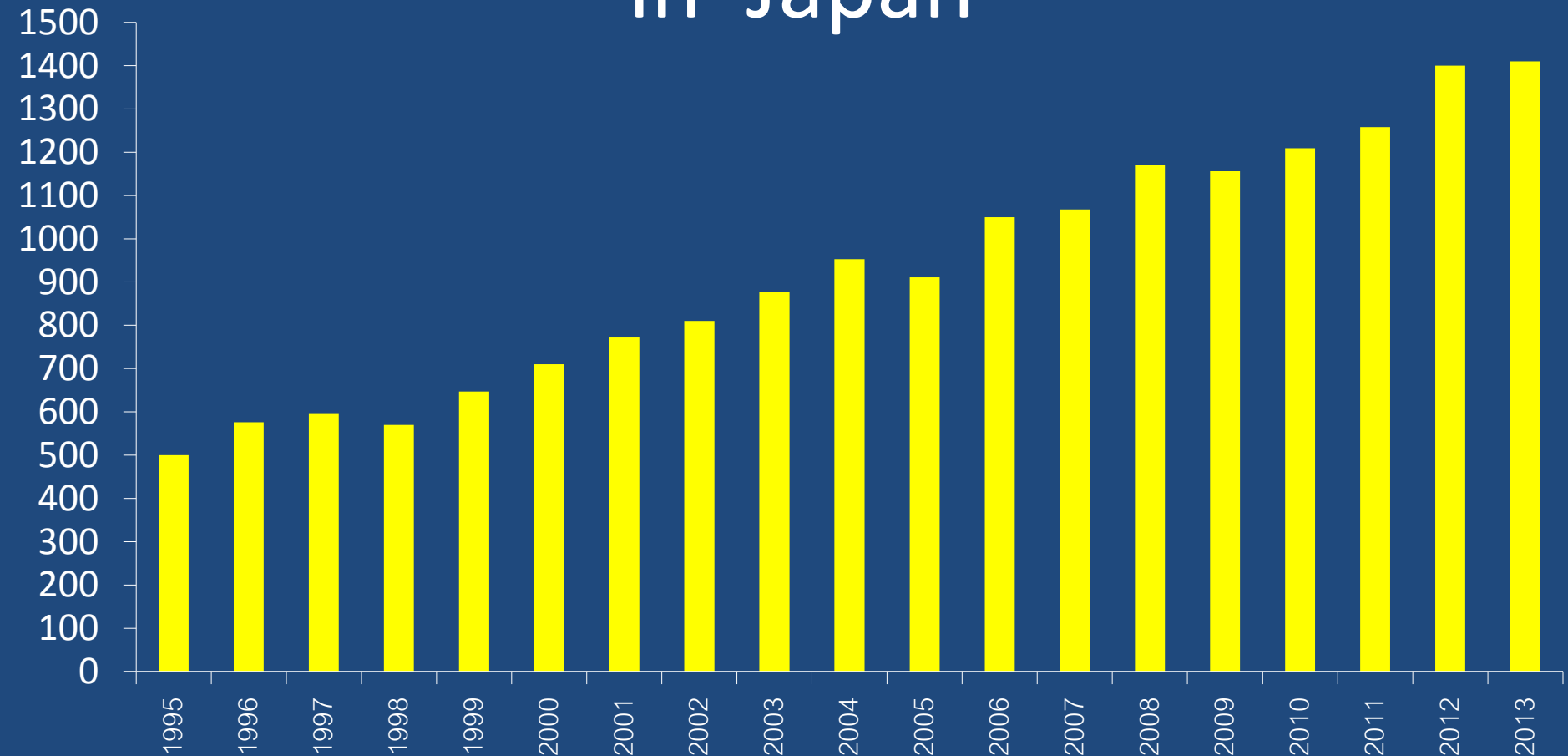


International Conference Expedite
Asia to be Free from Asbestos Hazard
Nov. 24-25, 2014

Why asbestos disaster spread in Japan?

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Annual Mortality of Mesothelioma in Japan



- The Number may continue to increase until 2030 to 2035 (Murayama et al, 2006, Myojin et al, 2012)
- Necessary long-term monitoring and measures for increasing victims

Kurumatani and Kumagai (2006)

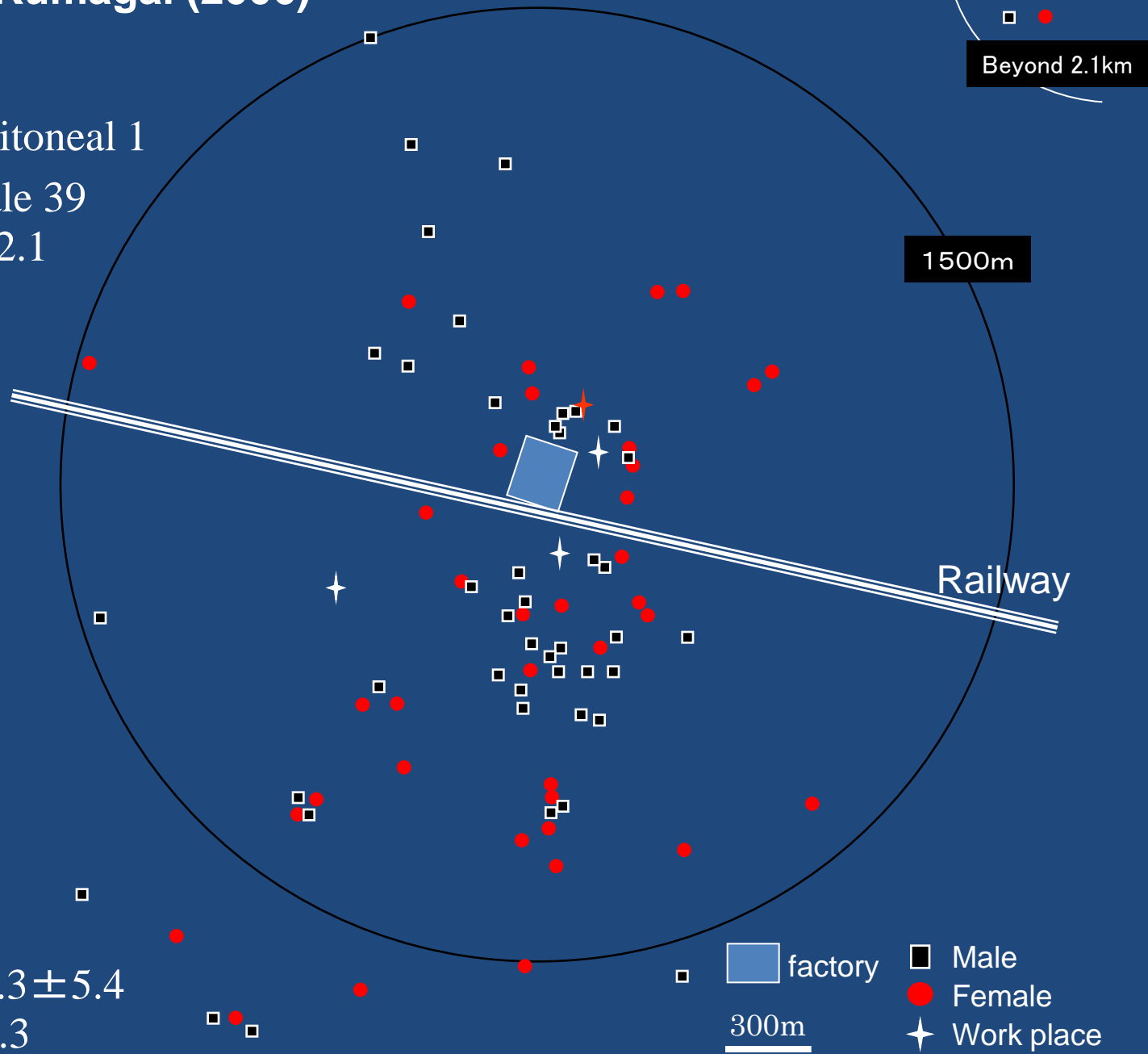
Pleural 85, Peritoneal 1

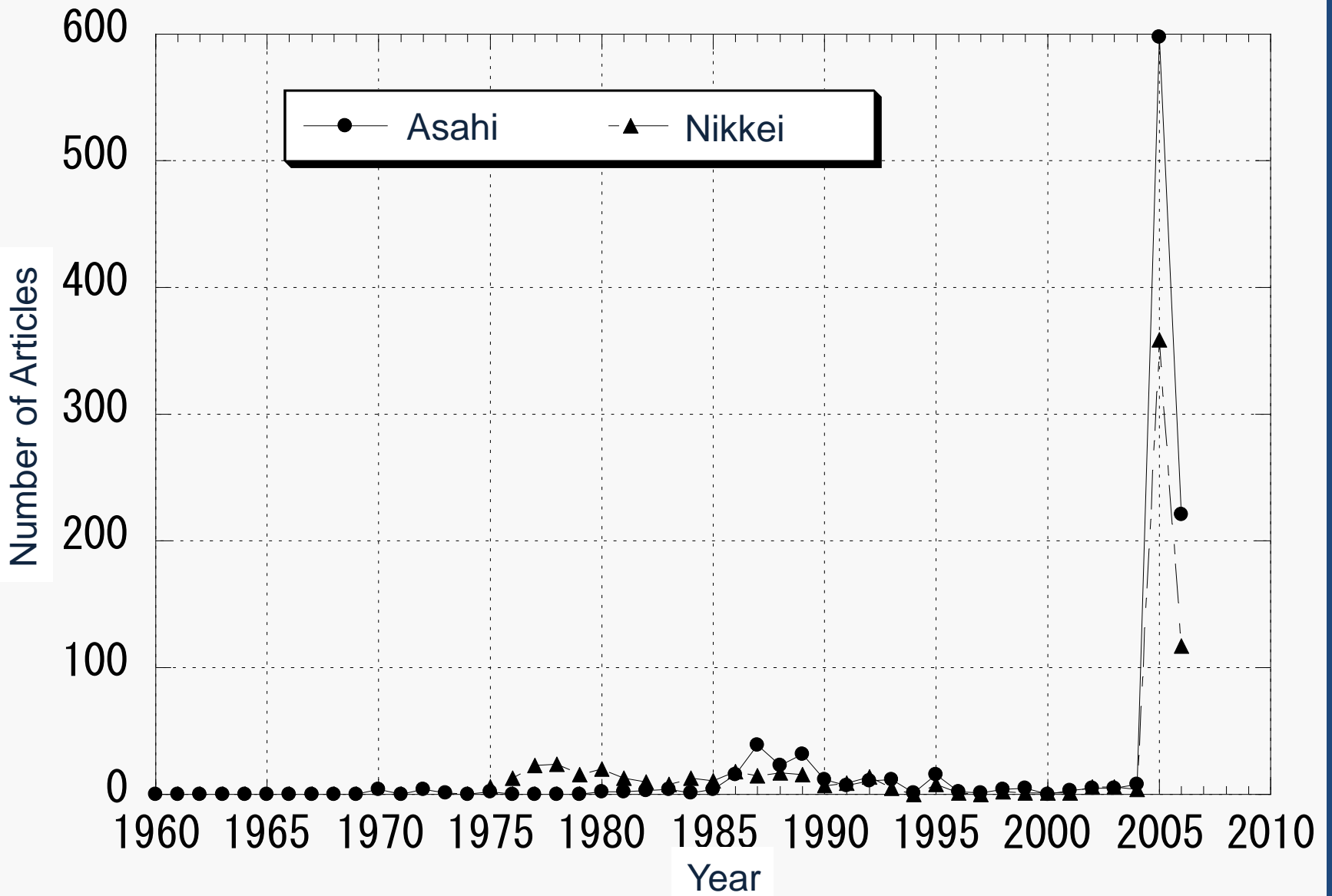
Male 47 Female 39

Age: 59.2 ± 12.1

Exposure period: 11.3 ± 5.4

Latency: 41.0 ± 5.3





Annual Change of Number of Nationwide Newspaper Articles

Inspection on past regulations

- National government limited the target period of their review to 1972 and after.
- History before 1970s should be reviewed to understand development of the industries, medical knowledge and measures.
- Since May of 2006, members including Asbestos Center has begun to discussed, and published a book.
- This work would be similar to “Late lessons from early warnings: the precautionary principle” (European Environment Agency, 2002, 2013)

“Why asbestos disaster spread in Japan?”



1. Overview of products & industries
2. Beginning of domestic industries
3. Mines in Japan and East Asia
4. During & just after WWII
5. Industries in 1950-60s
6. Trading companies
7. Knowledge of toxicity
8. Regulation & measures
9. Why spread?

Edited by Japan Asbestos Center
(Published in June, 2009)

App. Chorological table, Map of
Distribution of Mesothelioma &
related factories

Chronological medical knowledge in Japan

Year	Events
1928	A report of asbestosis case of a factory worker
1937-40	Detailed survey for asbestos factories including Nichias by National government
1951	Warning on lung cancer by asbestos as a carcinogen (researcher of a national institute)
1956	Description of asbestos as a carcinogen in a book (description on Doll report)
1960	Case of lung cancer with asbestosis
1964	Attending of government official(s) to international conference in NY (?)
1965	National government subsidized research dealing with asbestos and cancers inc. Mesothelioma
1966	9th international cancer congress in Tokyo
1969	16th international congress of occupational health in Tokyo

Factor (2) : Promotions of asbestos uses by governments and industries

- Before and during WWII
 - Initiative of military sector
 - Government order on production and standardization
 - Expansion to east Asia as colonies
- After WWII
 - Government encouragement of the industry in the decontrol process
 - Protection of domestic industries and control on invasion of overseas capitals
 - Standardization for various type of asbestos products

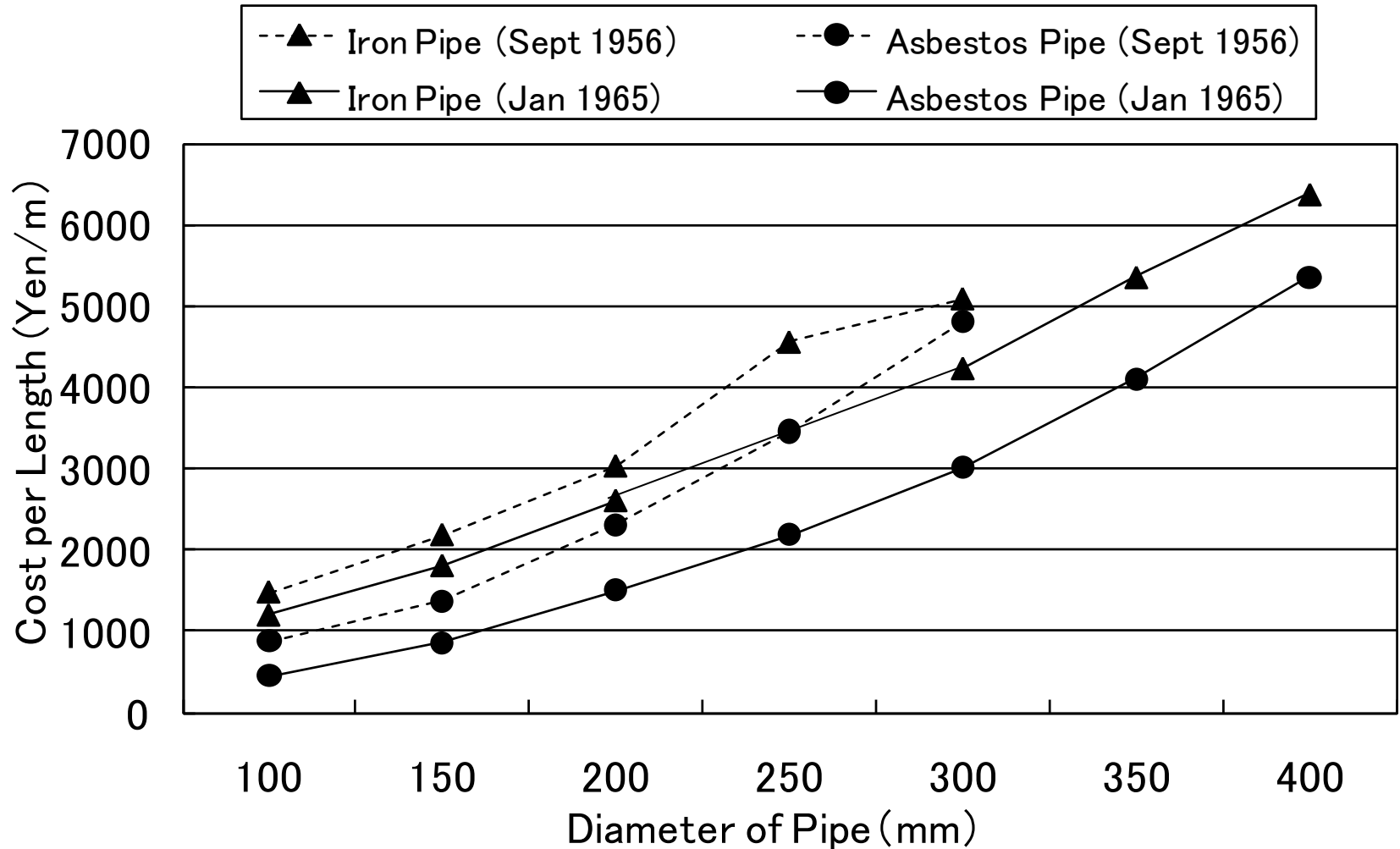
Progress of regulations and acts

- 1960 Pneumoconiosis Law
- 1971 Specified Chemicals Ordinance
- 1975 Ban of sprayed asbestos (with exemption)
- 1987 Measures for sprayed asbestos in schools
- 1989 Standard in border of factory site (10 f/l)
- 1995 Ban of blue and brown asbestos
- 2002 Examination for total ban
- 2003 Report on alternatives, Opinion from Canada
- 2004 Ban of all types of asbestos (with exemption)
- 2005 (Kubota Shock)
- 2006 New compensation act

Comparison of prohibition measures among countries

	UK	Germany	France	Japan
Prohibition after decrease of consumption by administrative guidance	1985 (Crocidolite, Amosite) 1999 (Chrysotile)			1995 (Crocidolite, Amosite) 2004 (Chrysotile)
Total Ban after partial prohibition		1993 (Amosite)	1994 (Amosite)	
Total Ban after prohibition in principle		1986 (Crocidolite) 1993 (Chrysotile)	1988 (Crocidolite) 1996 (Chrysotile)	

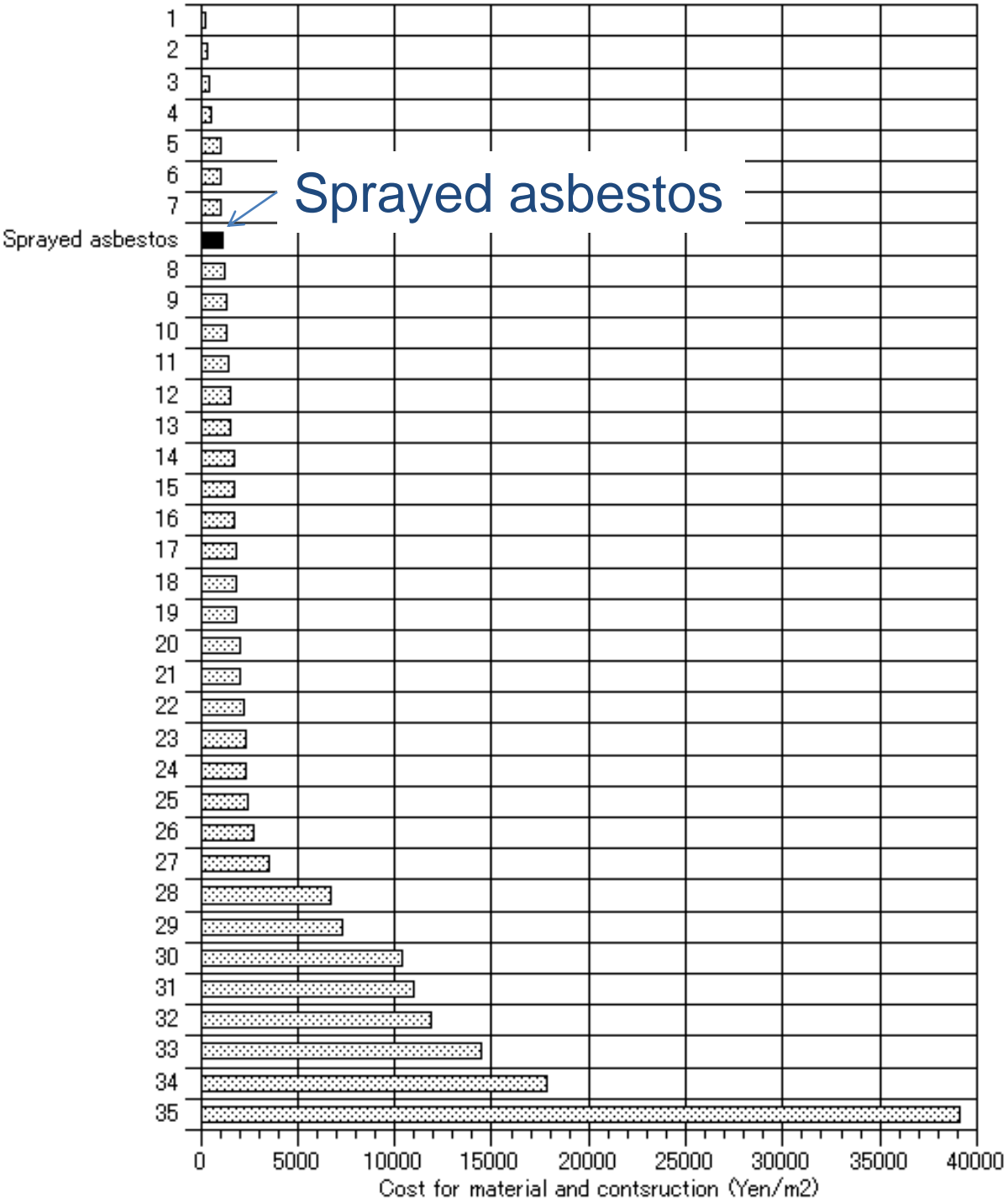
Factor (3): Cost of Products



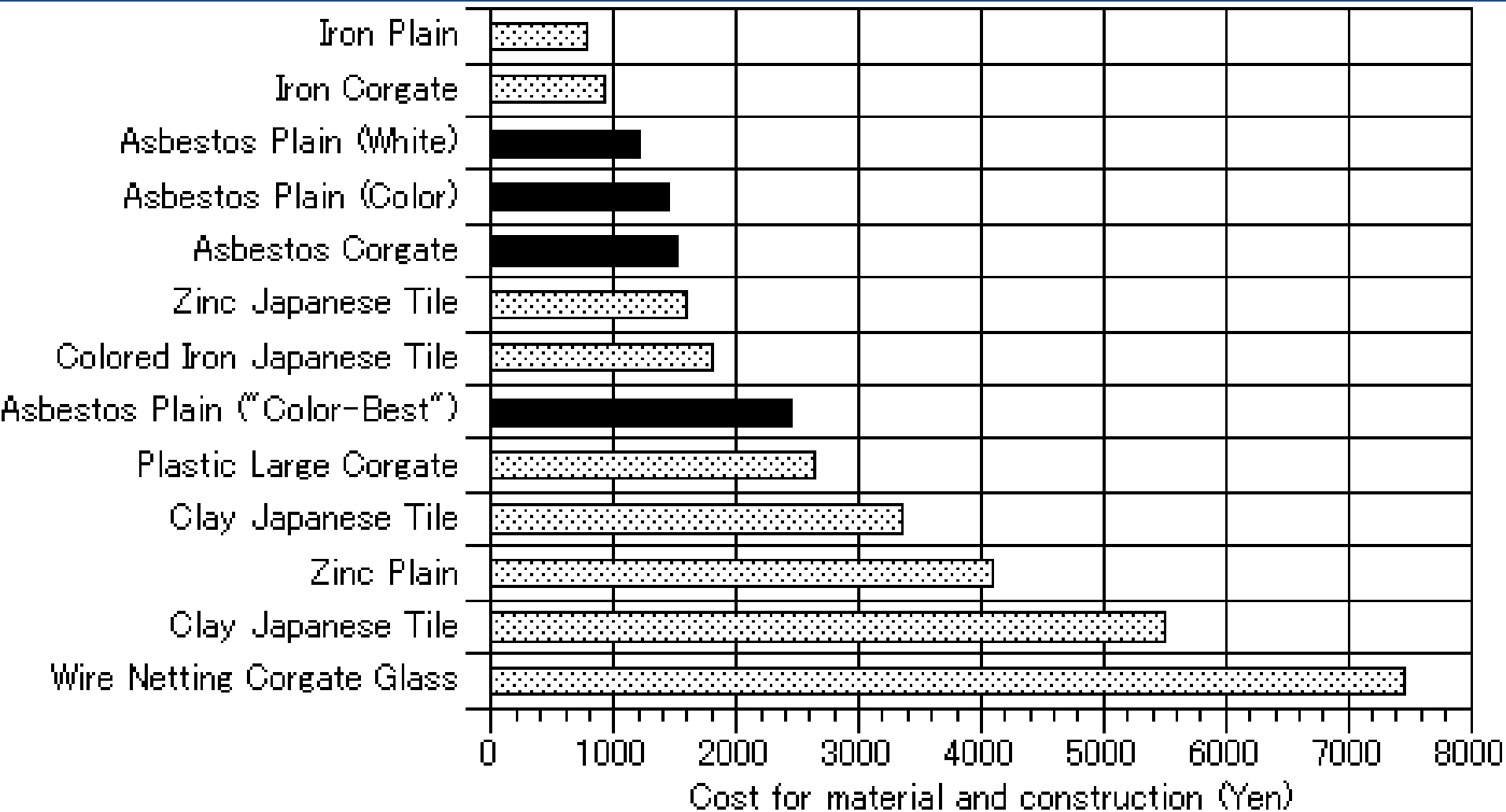
Case of Asbestos Cement Pipe (1956 & 1965)

Data: "Sekisan Shiryo"

Cost of Ceiling materials in early 1970s



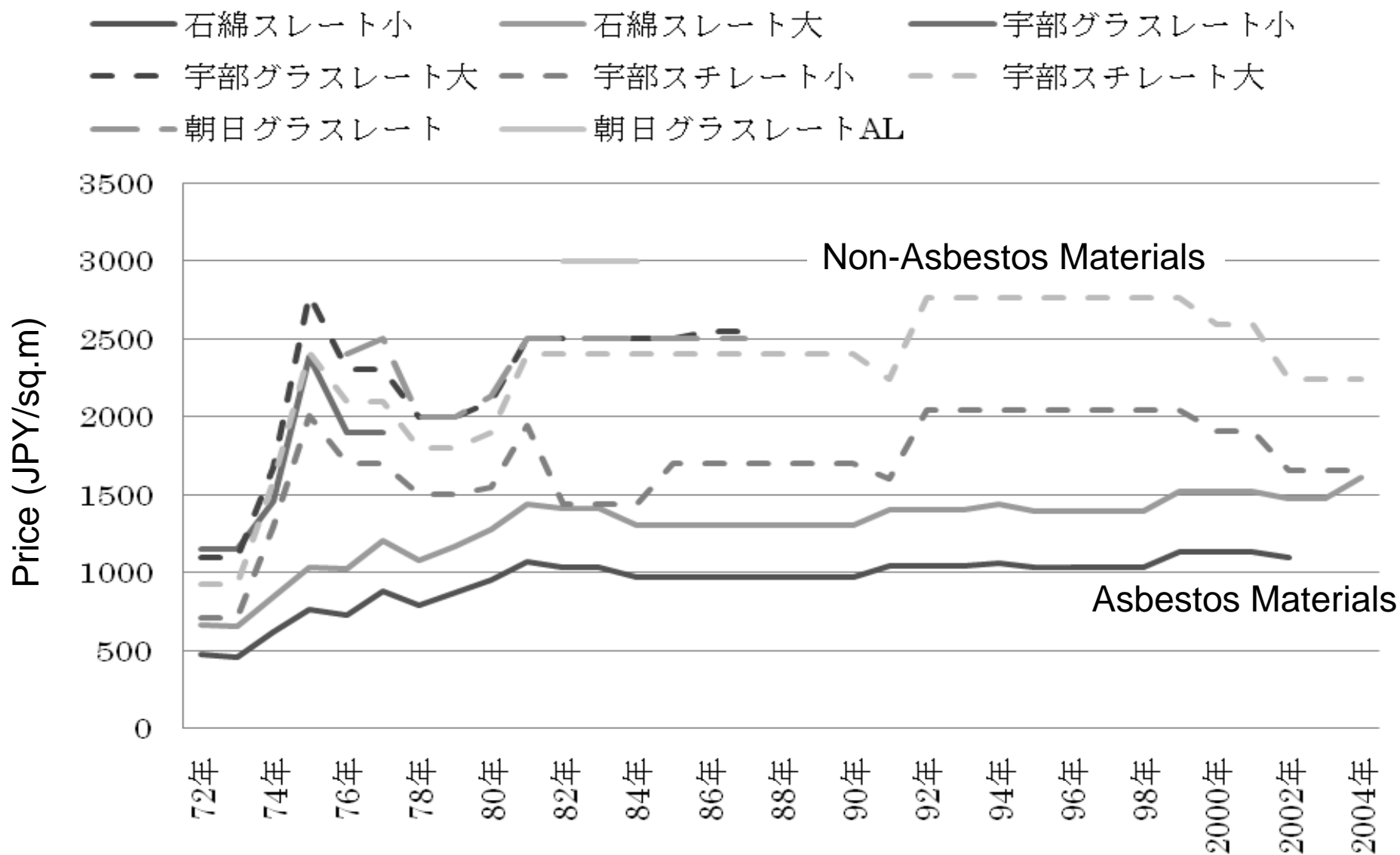
Data: Kenchiku to Sekisann (Jan of 1972)



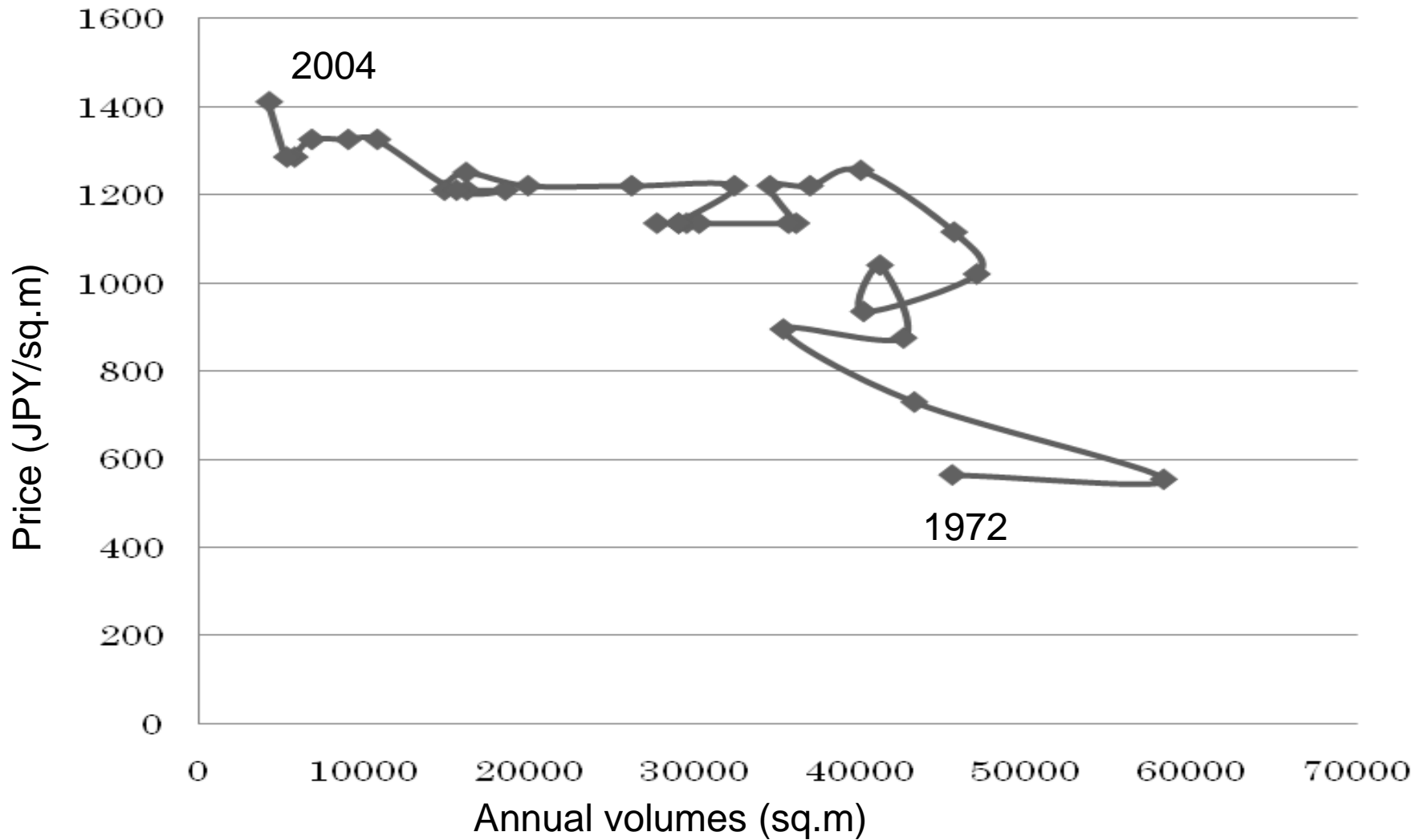
Cost of Roofing Materials in early 1970s

Data: "Kenchiku to Sekisan" (Apr. of 1974)

Price change of roofing materials



Production volumes and prices of asbestos cement sheet



Factor (4)

Information gap /Manipulation

- Knowledge of Company executives and government
 - Cumulative knowledge until 1960s
 - Exchange with foreign major companies
- Onsite workers and public
 - Insufficient information on toxicity
 - Gap on environmental exposure (50 years bet 1966 to 2005)
- Negative chain reaction of the gap
 - 1950~60s: Western countries to Japan
 - 1970~80s: Japan to East Asia
 - 1990s ~ : East Asia to South and South-East Asia



Nara, -1970

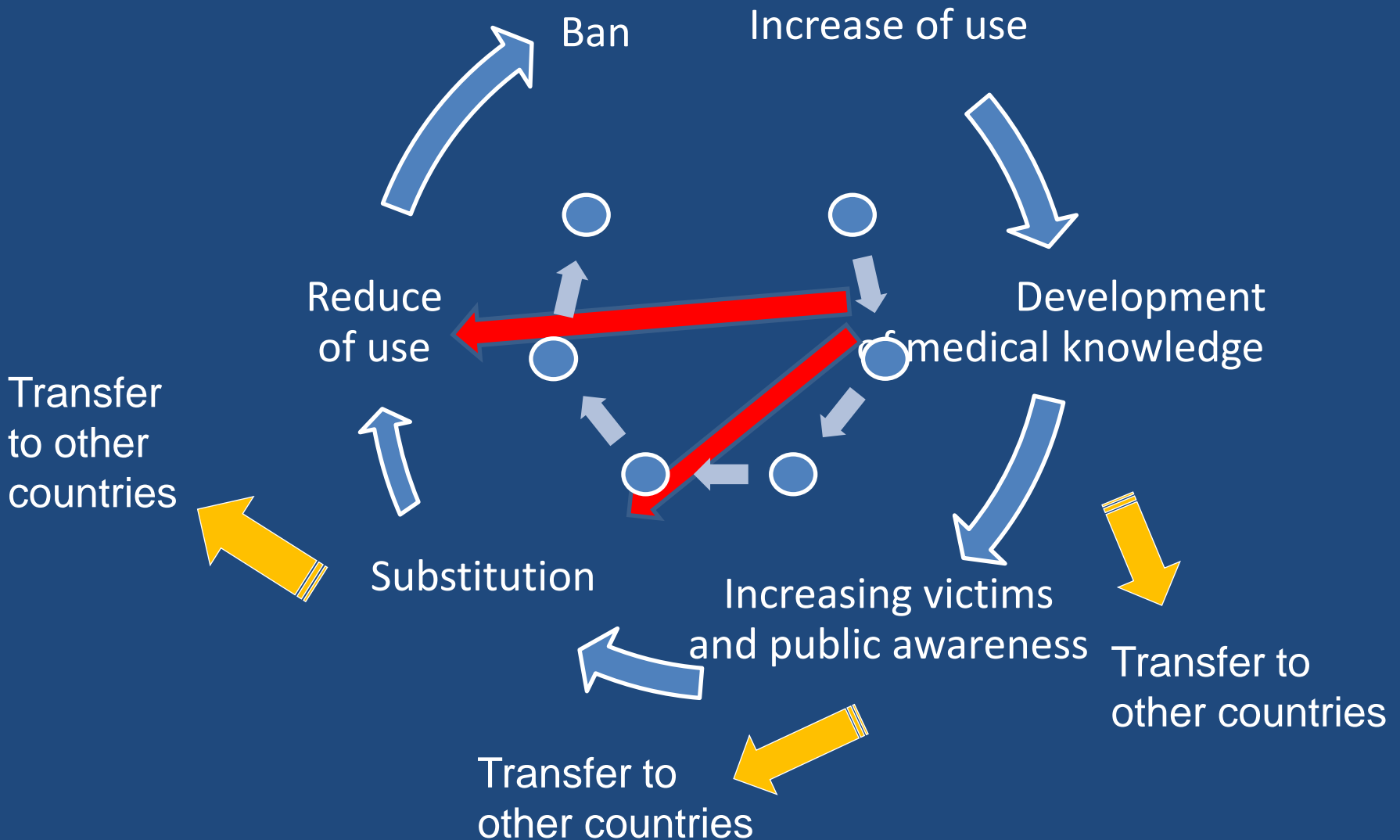
Busan, 1971

Jibu(Jibo), 2008

Chibinong, 1990

Transfer to other regions after 1970s

Process of asbestos use to reduction and ban



Conclusions

- Increasing numbers of victims (estimated until 25 to 30 years after ban)
- Japan delayed the measures due to
 - Insufficient application of medical knowledge
 - Promotions of the use by governments and industries
 - Relatively low cost of asbestos products
 - Information manipulation and abuse of the knowledge gap among stakeholder
- Use to ban process should be made shorter or short-cuts in viewpoint of precautionary approach.

Framework on Precautionary Approach

