

Great Disasters and Land Use/Cover Changes – Some Lessons of Great East Japan Disaster

32nd IGC, Cologne

28 August 2012

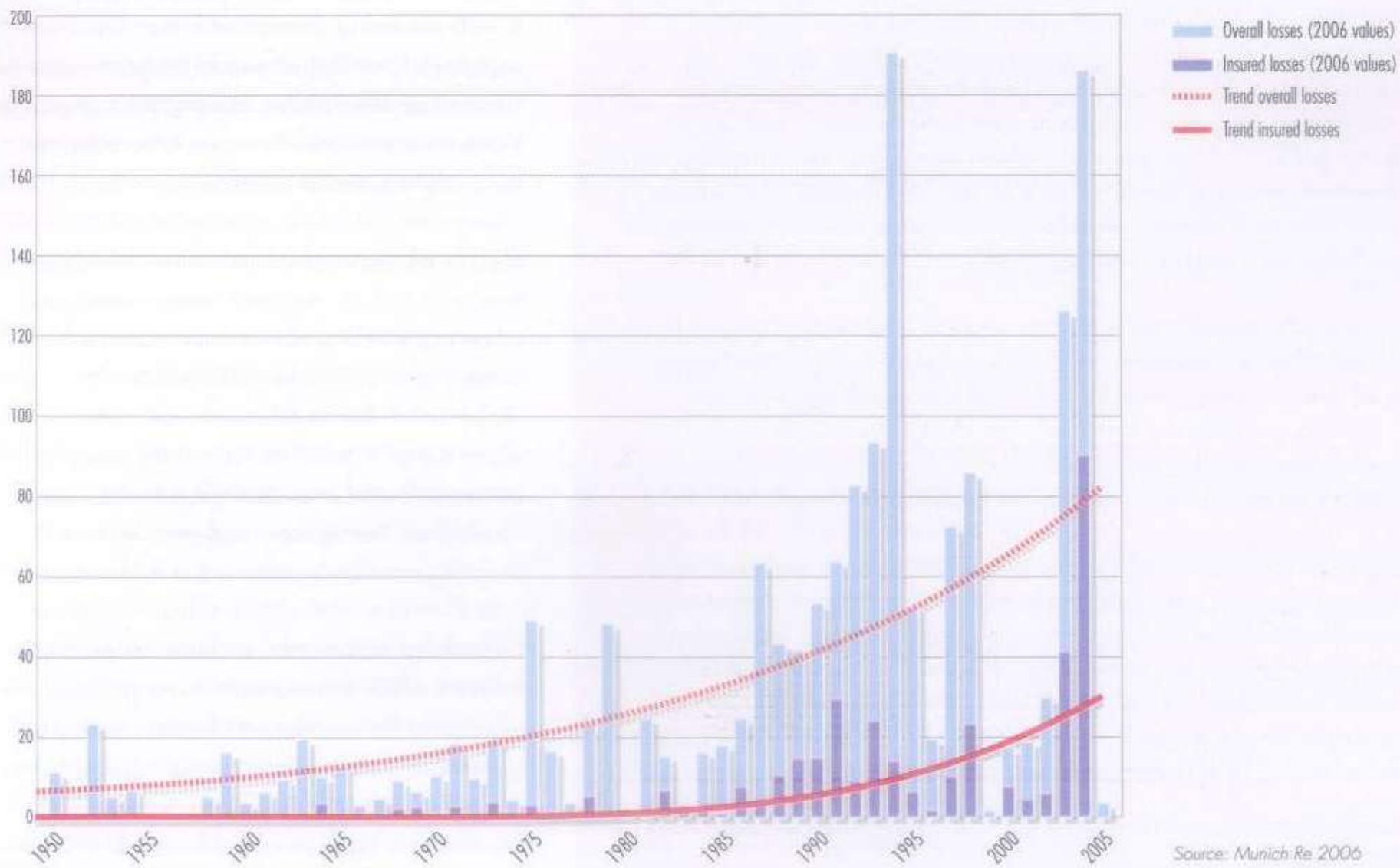
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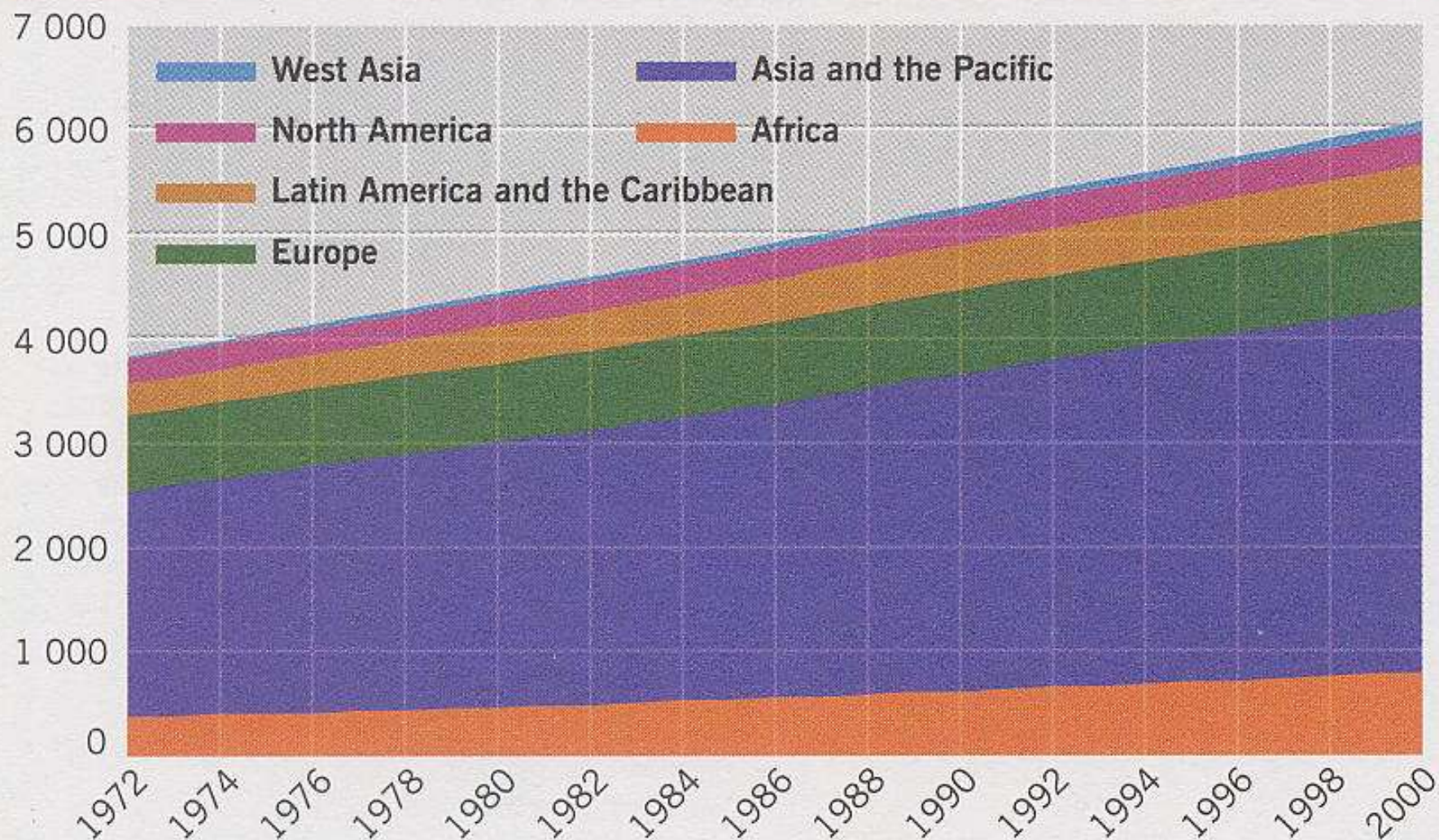
Figure 7.25 Overall losses and insured losses due to natural hazards

US\$ billion



Source: Munich Re 2006

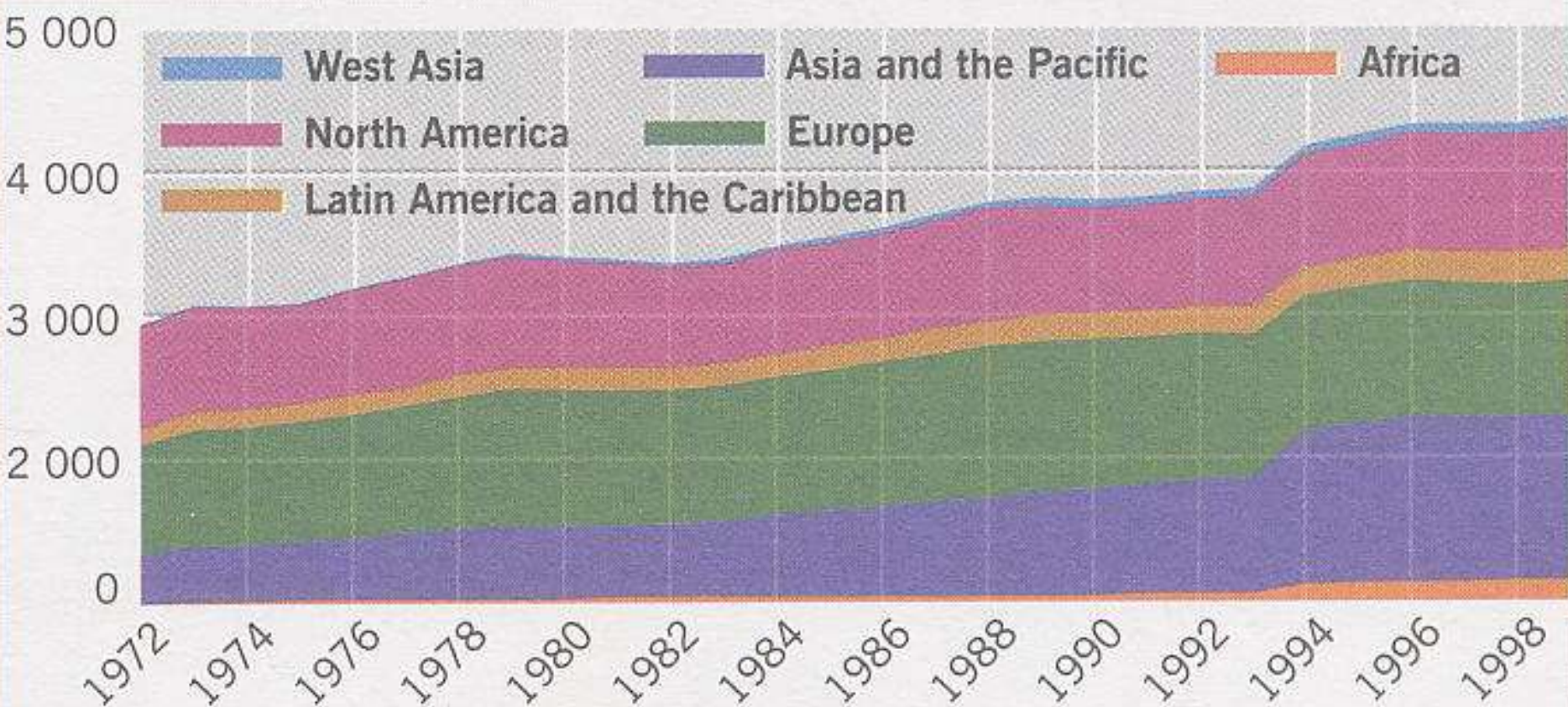
World population (millions) by region, 1972–2000



World population is currently growing at 77 million a year, with two-thirds of the growth in Asia and the Pacific

Source: compiled from United Nations Population Division 2001

Total energy consumption (million tonnes oil equivalent/year)



Source: compiled from IEA 1999 and United Nations Population Division 2001

Figure 7.24 Coastal population and shoreline degradation

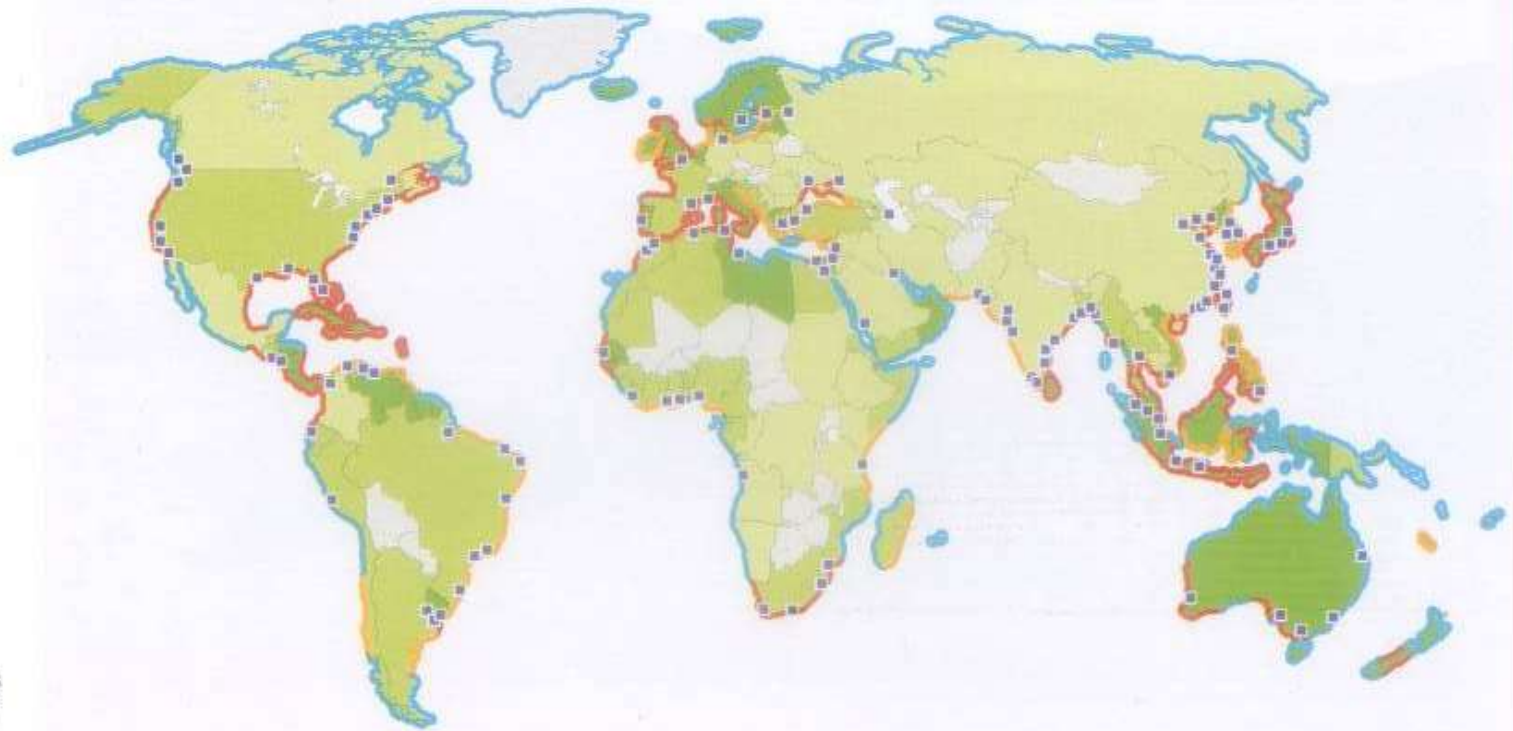
Population living within 100 km of the coast

- None
- Less than 30%
- 30 to 70%
- More than 70%

Shoreline

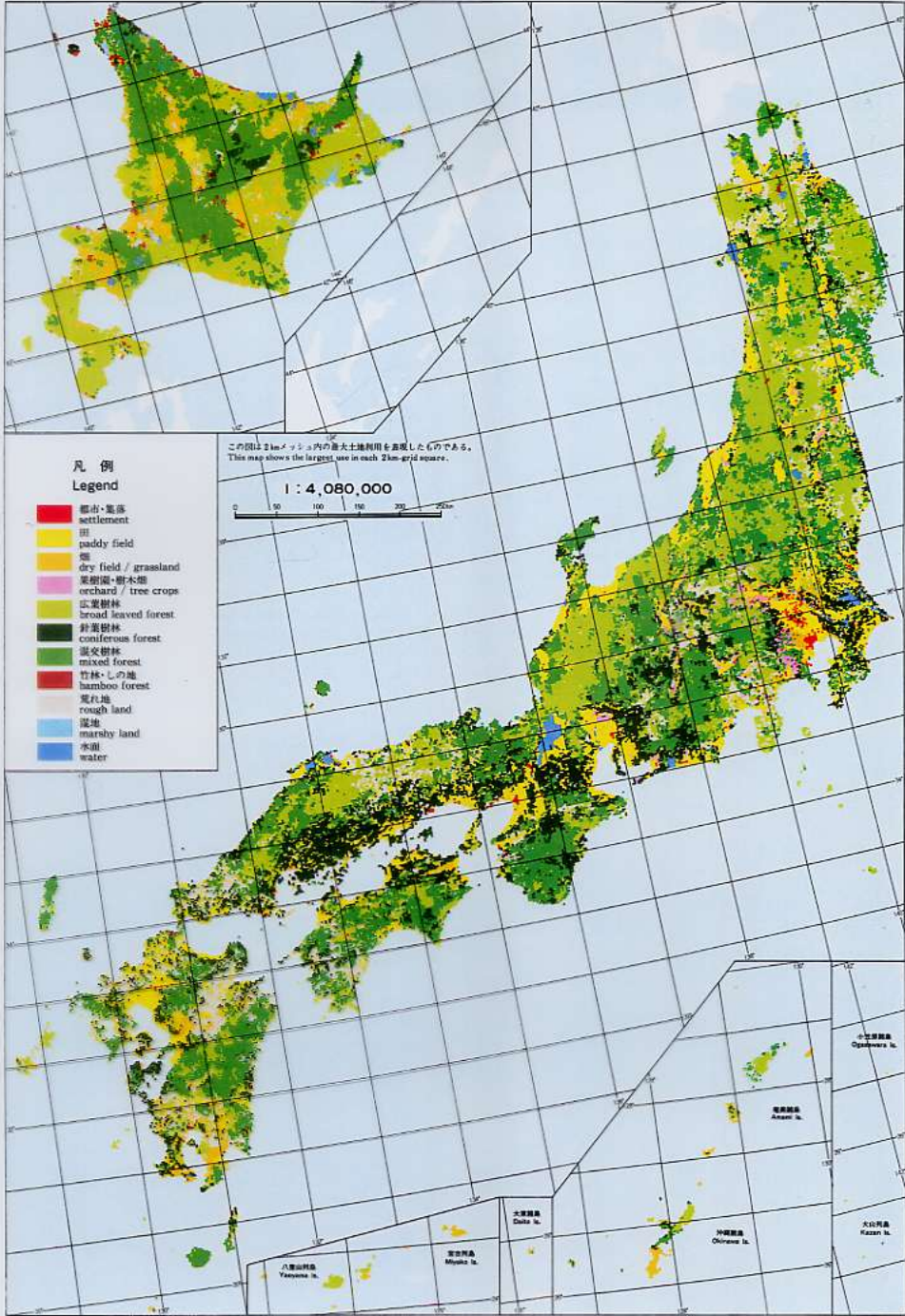
- Most altered
- Altered
- Least altered

- Selected coastal cities of more than one million people



Source: Adapted from UNEP 2002b, based on Burke and others 2001, Harrison and Pearce 2001

Land Use ca. 1900



Land Use ca. 1985

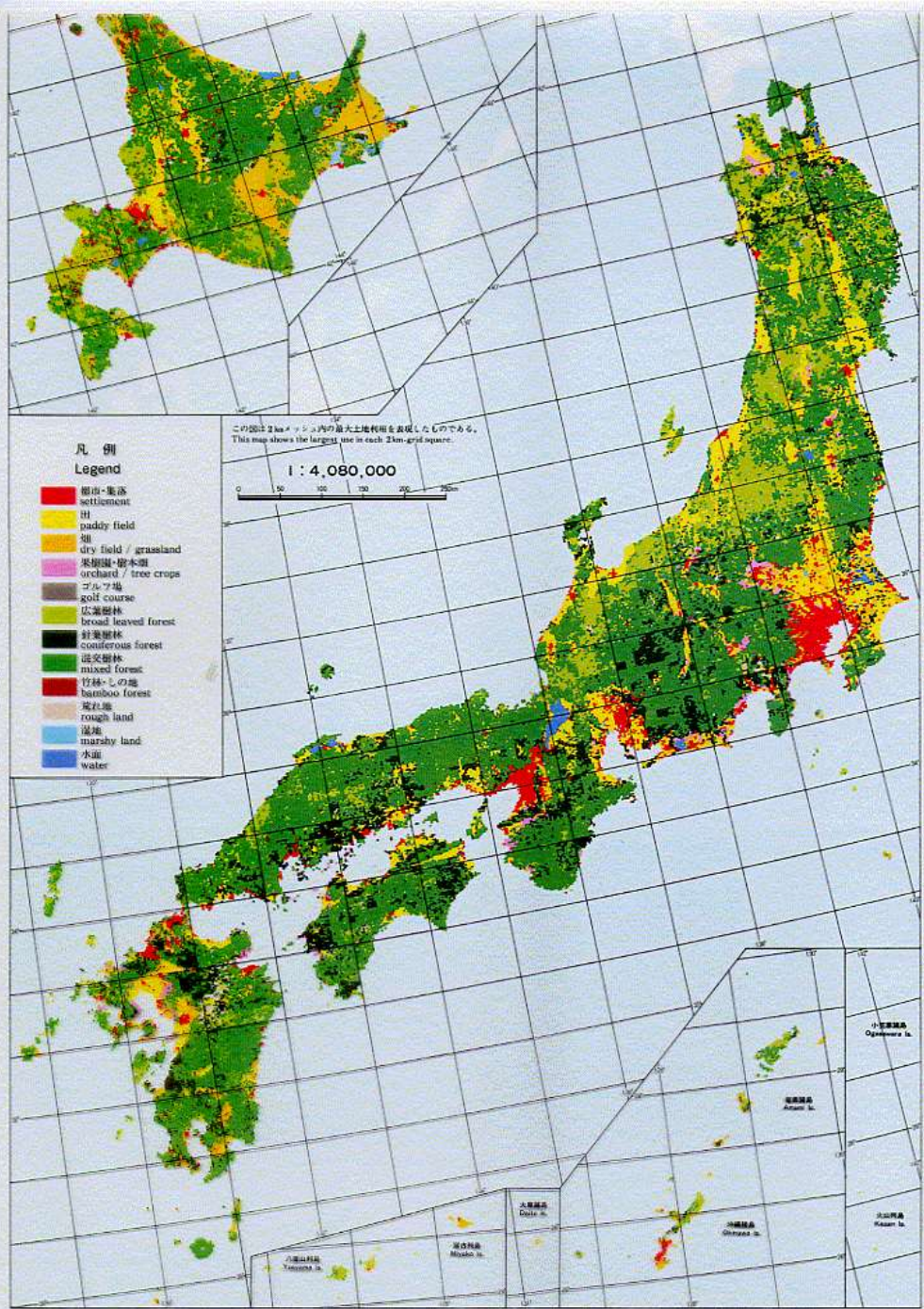
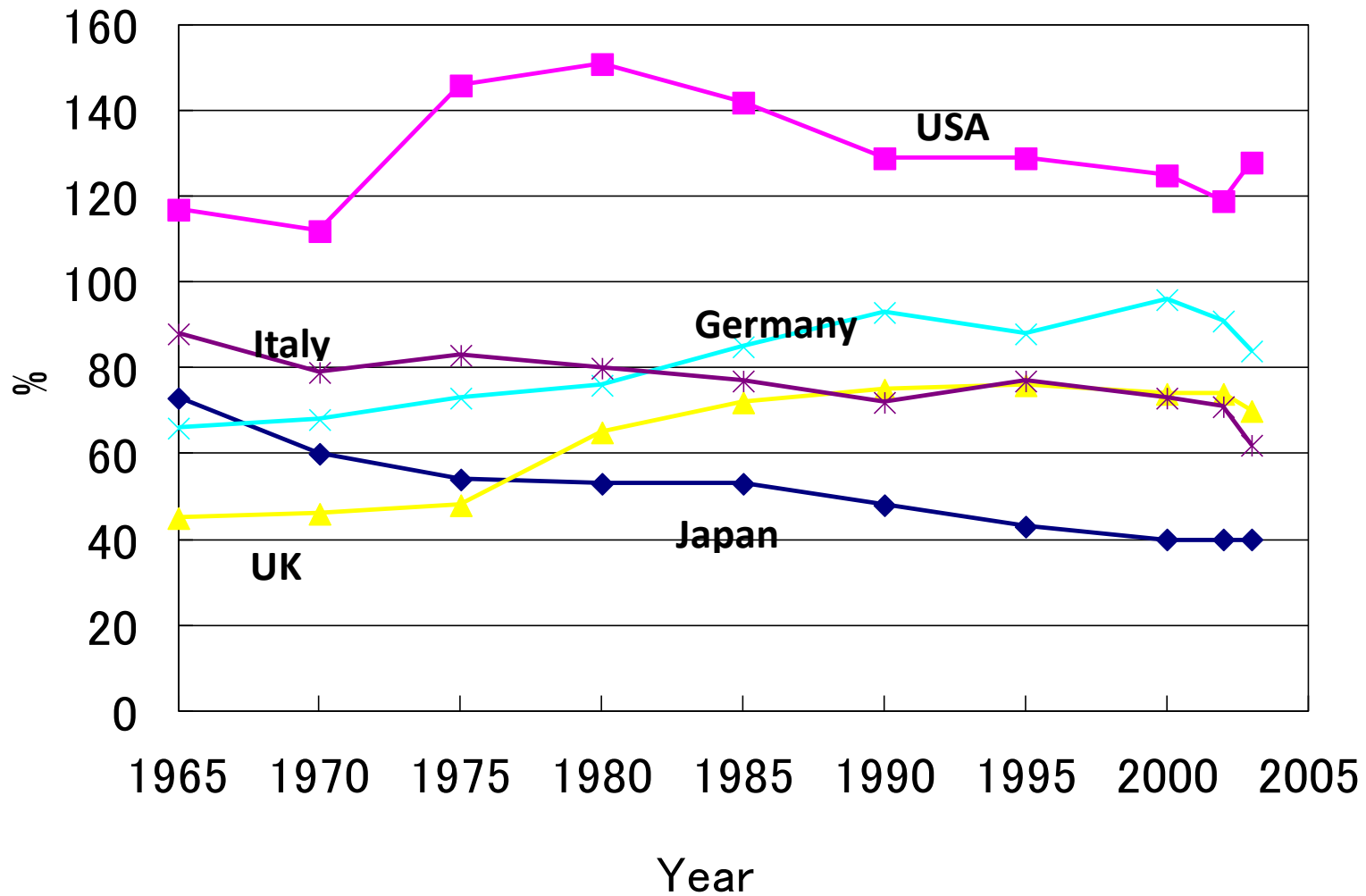


図 1.7 現代の国土利用
Fig. 1.7 Land Use in Japan circa 1985

作製：東見山幸夫
Produced by Y. Himiyama

Food Self-sufficiency











理研 研究所
リケン研究所

リケン
RIKEN
研究所

お客様駐車場
お車で来場の方は
ここで降車下さい。
※雨天は駐車場の外
へお車を移動して下さい

指差呼称を安全

火気厳禁
喫煙禁止
高圧ガス厳禁

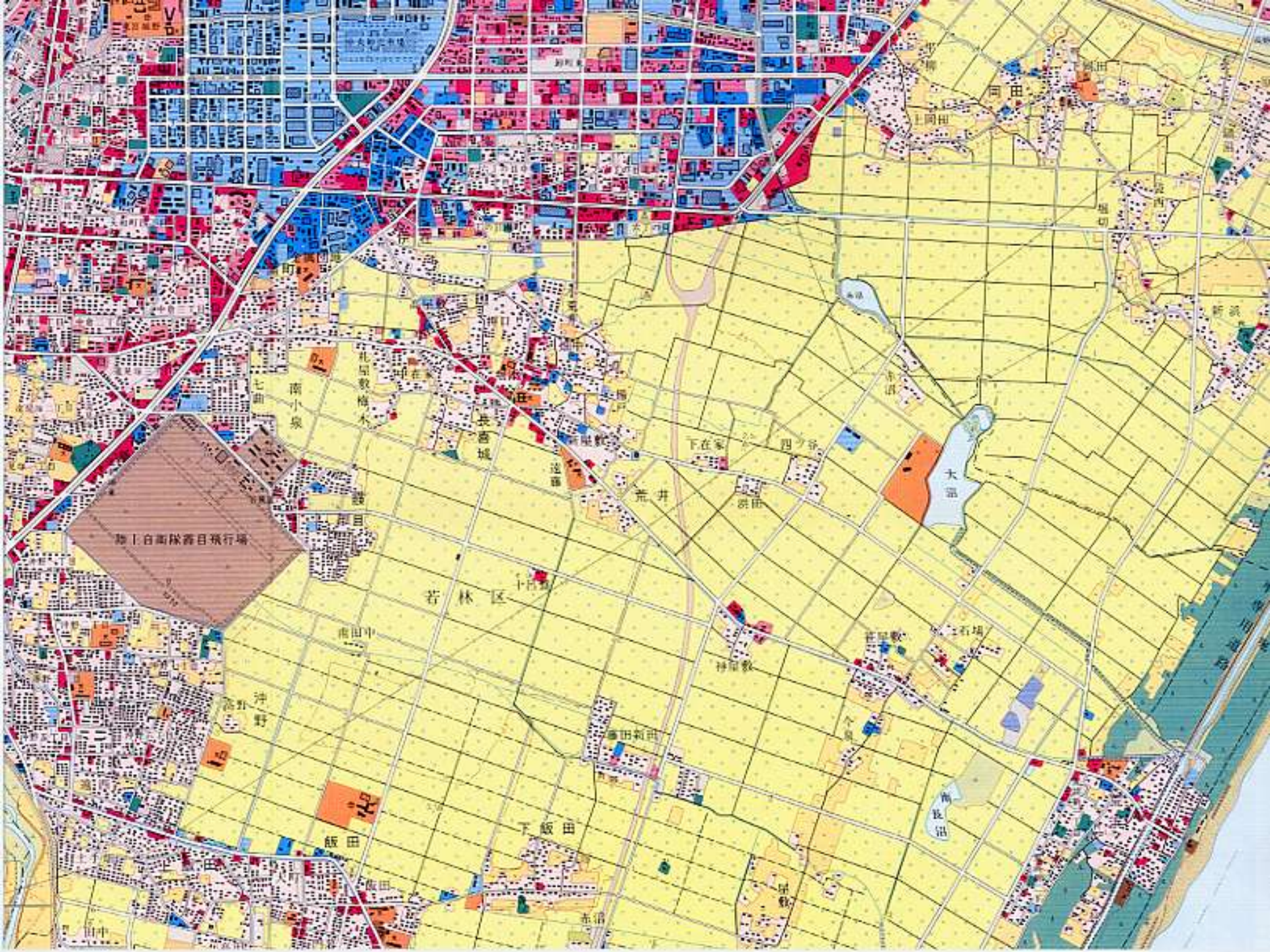
禁止

止まれ

注意

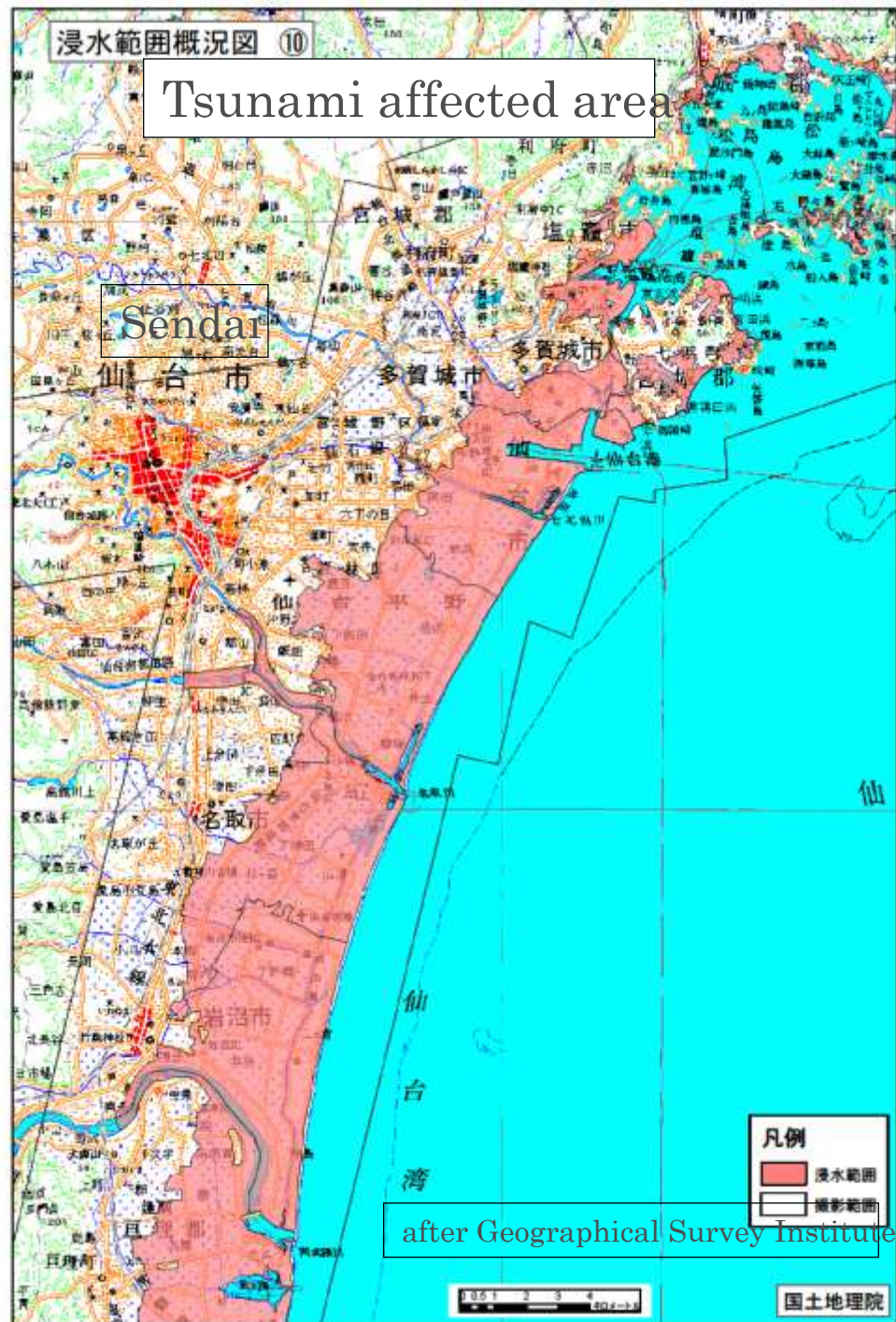
18-22





Tsunami affected area

Sendai

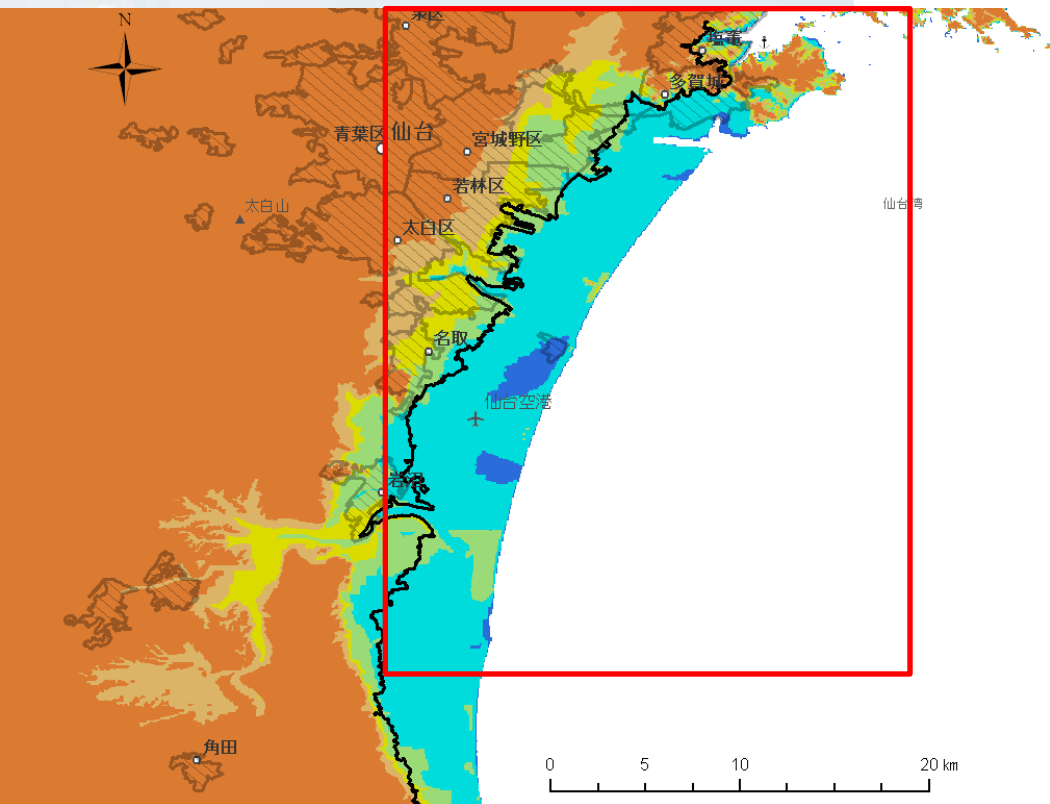
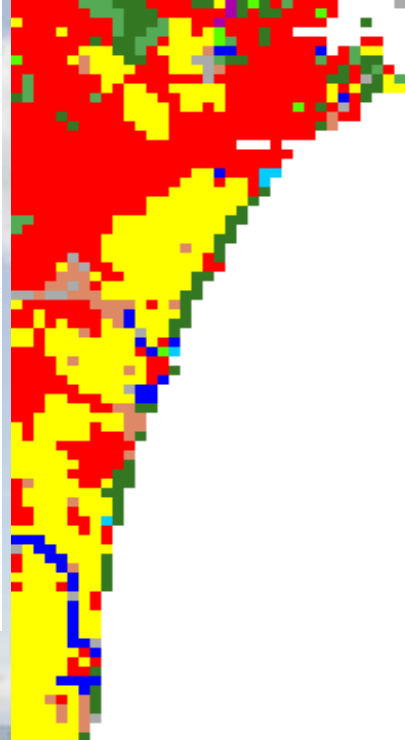


after Geographical Survey Institute

Sendai Plain

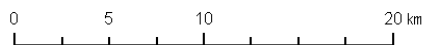


- 都市的土地利用
- 水田
- 畑
- 広葉樹林
- 針葉樹林
- 混交樹林
- 竹林
- 果樹園
- 荒地
- 湿地
- 水面 (海含む)



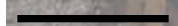
DEM (m)

- ~ -5
- 5 ~ 0
- 0 ~ 2
- 2 ~ 4
- 4 ~ 6
- 6 ~ 10
- 10 ~



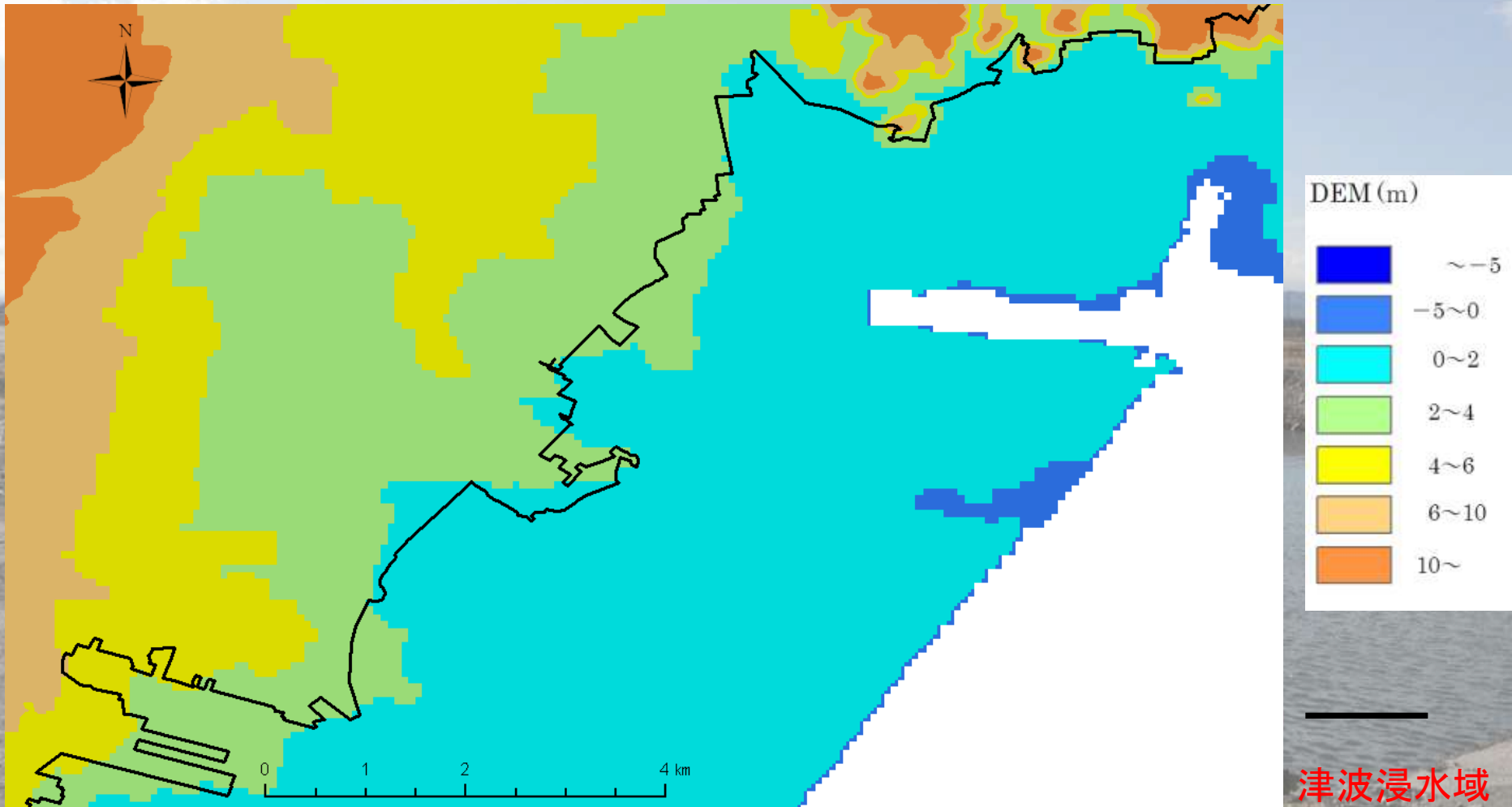
DID

津波浸水域



(東大生研地球環境工学研究グループのデータを使用)

Tsunami inundation area



津波浸水域

(東大生研地球環境工学研究グループのデータを使用)

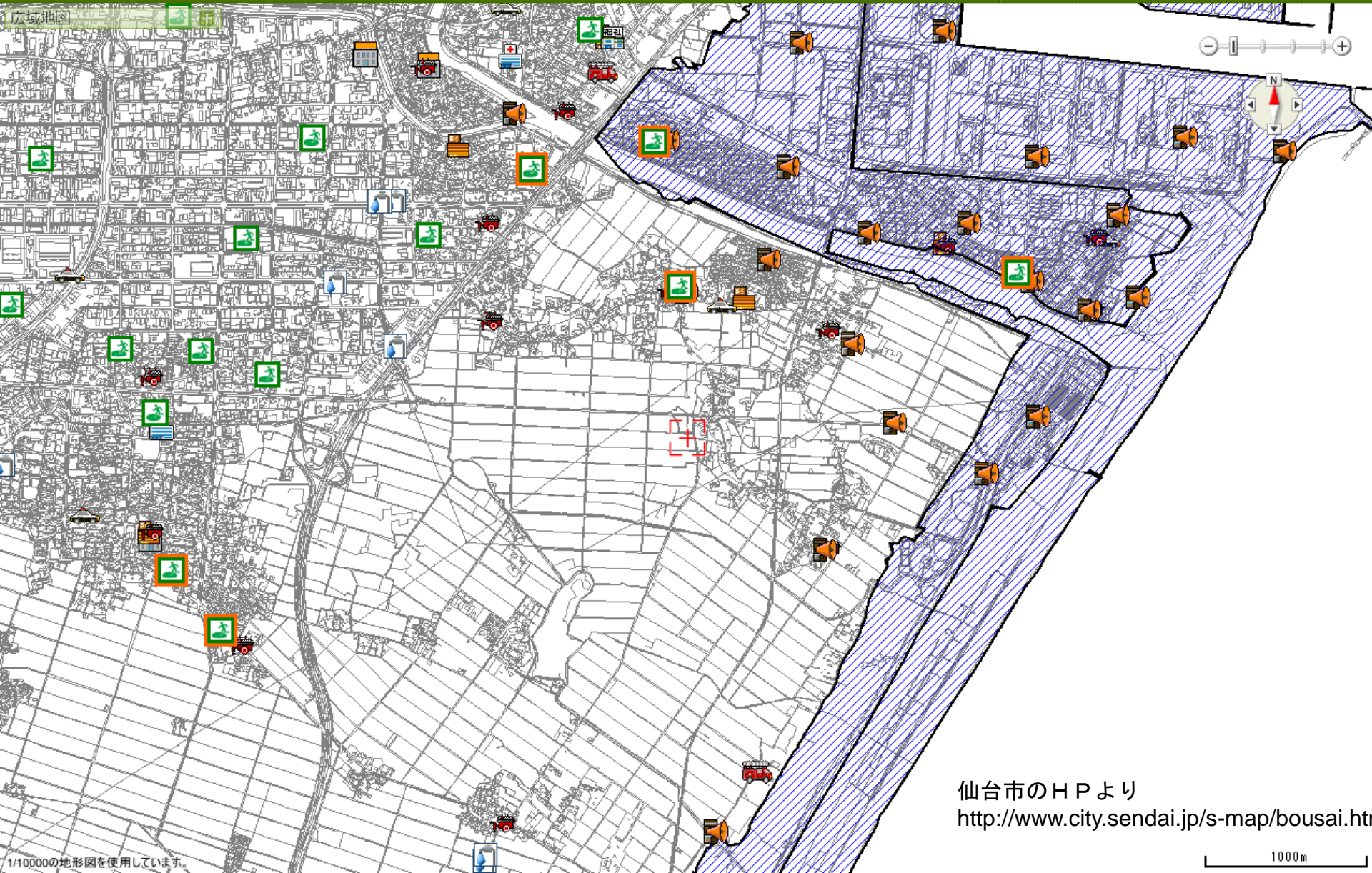
Tsunami Hazard Map of Sendai

せんだい★くらしのマップ



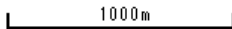
検索 地図選択

描画 計測 印刷 スクロール 凡例 使い方



仙台市のHPより
<http://www.city.sendai.jp/s-map/bousai.htm>

1/10000の地形図を使用しています。







2011年3月12日多賀城市
伊藤啓之氏提供























通行止



立入禁止



平成31年度
農林水産省
地方交付金
農産物生産者
NO-0











