

Expert Group Meeting on Regional Strategies towards Building Resilience to Disasters
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Challenges and Opportunities of Early Warning for Managing Risks of Water-related Hazards with Transboundary Origins in the Asia-Pacific Region

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(ICHARM)**

under the auspices of UNESCO

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Outline of ICHARM



International Centre for Water Hazard and Risk Management (ICHARM)

- Established in the **Public Works Research Institute (PWRI), Japan** on **6th March 2006**
- **UNESCO category II center** (ICHARM is under the auspices of UNESCO)
- **Director: Professor Toshio Koike, Tokyo University**
<http://www.icharm.pwri.go.jp/index.html>



Signing ceremony for the official launch of ICHARM:
the representative of the Japanese government (left), UNESCO Secretary-General (center) and PWRI Chief Executive.
(March 3, 2006)



ICHARM building

Three-pillars of ICHARM Activities



Practice of

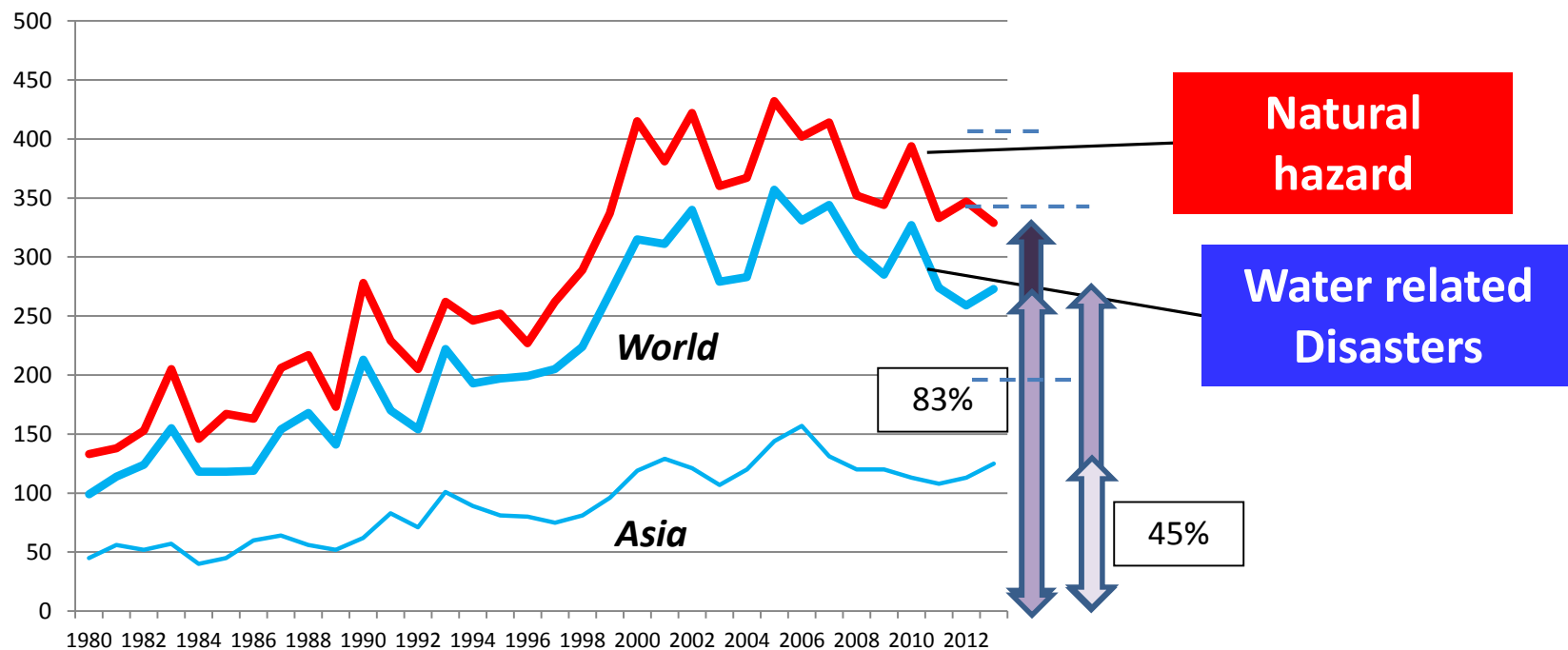
Localism

ICHARM emphasizes localism, i.e., project implementations tailored to local needs and conditions, by creating an efficient worldwide information network based on innovative research and effective capacity building.

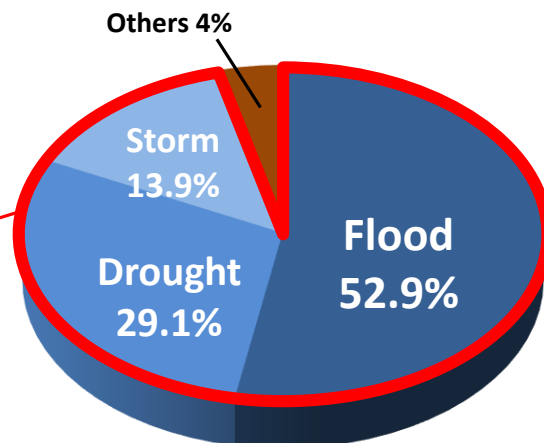


Increase in water-related disasters

Recorded numbers of disasters per year

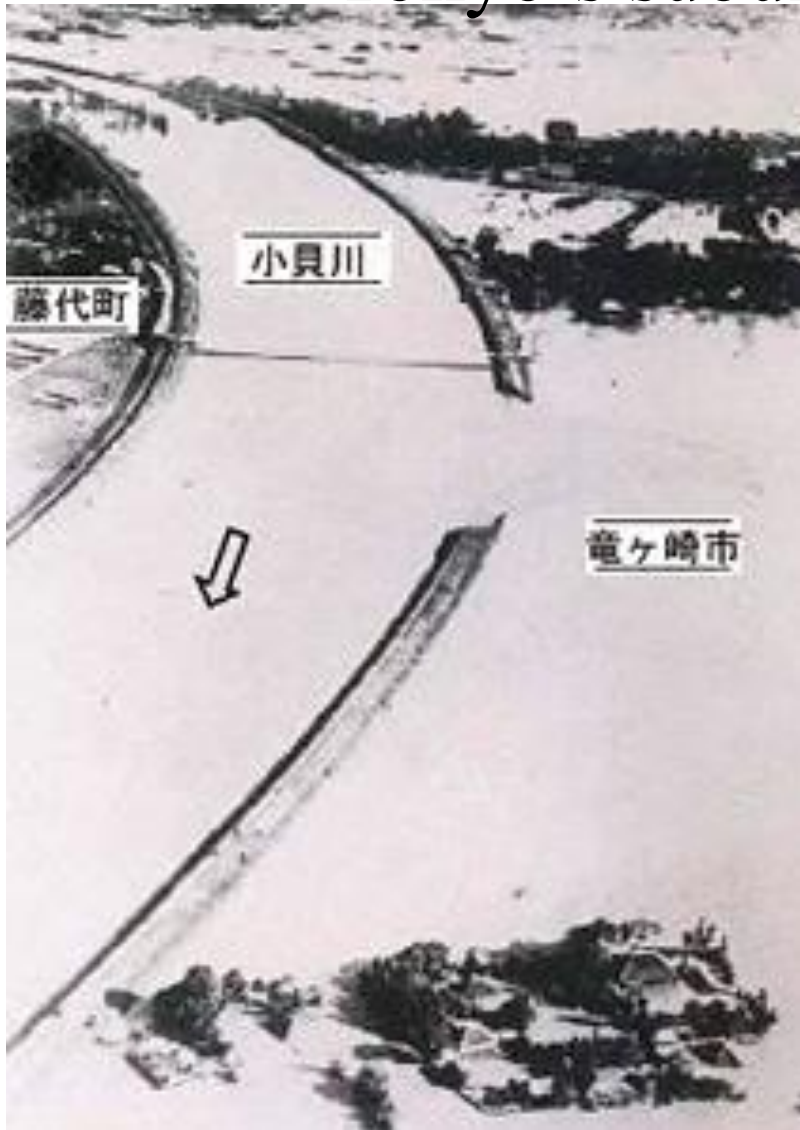


Affected people
(1980 – 2013)



Source: EM-DAT (The OFDA/CRED International Disaster Database, Université Catholique de Louvain, Belgium)
Reproduction by ICHARM, 2014

Tokyo's suburbs in 1930-40s



Levee break, Kokai River (a tributary of Tone River) in Sep., 1935

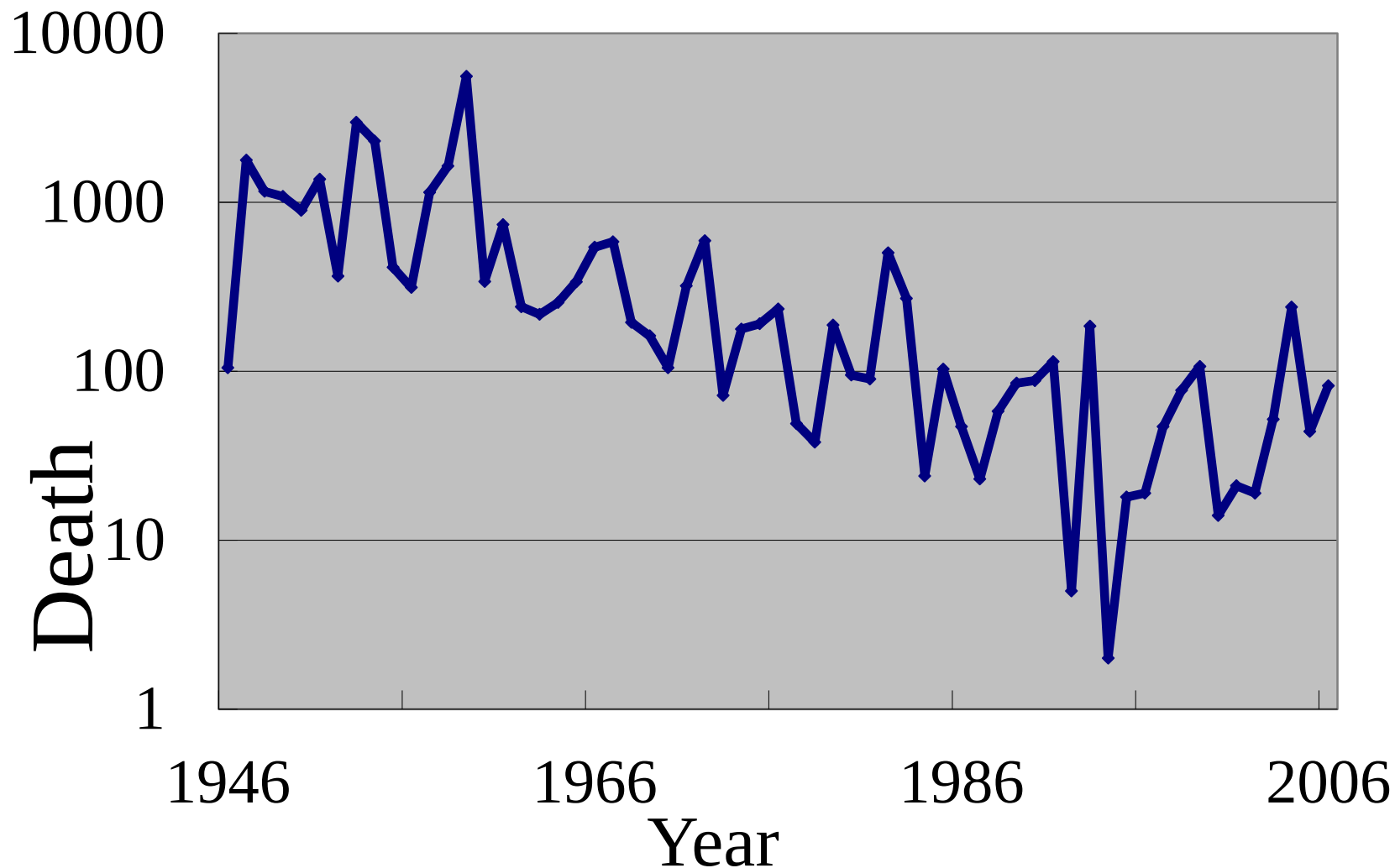
<http://www.ktr.mlit.go.jp/tonege/rekisi/kakokiroku.html#s22>



Levee break (top) and flooding (bottom), Tone River, Sep., 1944

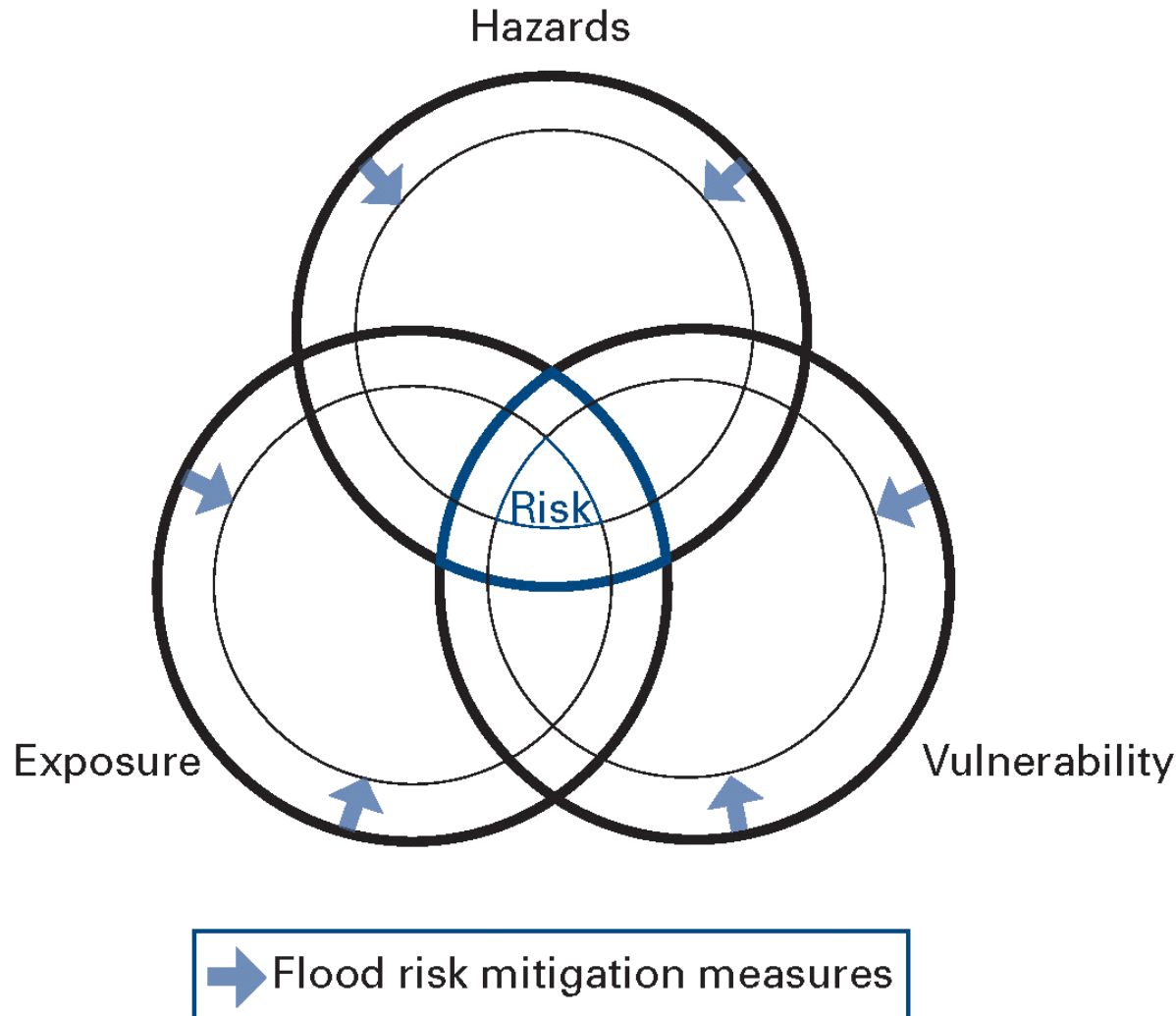
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Transition of Annual Deaths by Floods from Flood Damage Statistics of Japan



Constructs of Disaster Risk and its Reduction

Disaster Risk = f (Hazard, Exposure, Vulnerability)



(Social Aspects and Stakeholder Involvement in IFM, WMO 2006)

Rough Ideas on what contributed to massive reduction in deaths (red-color: negative factor)

Hazard

- (Increase in extreme events ?)
- Dams, levee system improvement, and other structural measures

Exposure

- Increase in population
- Unregulated urbanization (sprawling)

Vulnerability

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_3992

