UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

Promoting Regional Cooperation on the Applications of Space Technology and Geographic Information Systems (GIS) for Disaster Risk Reduction

Michio Ito, Expert

Information and Communication Technology and Disaster Risk Reduction Division (IDD)

United Nations Economic and Social Communication for Asia and the Pacific

itom@un.org

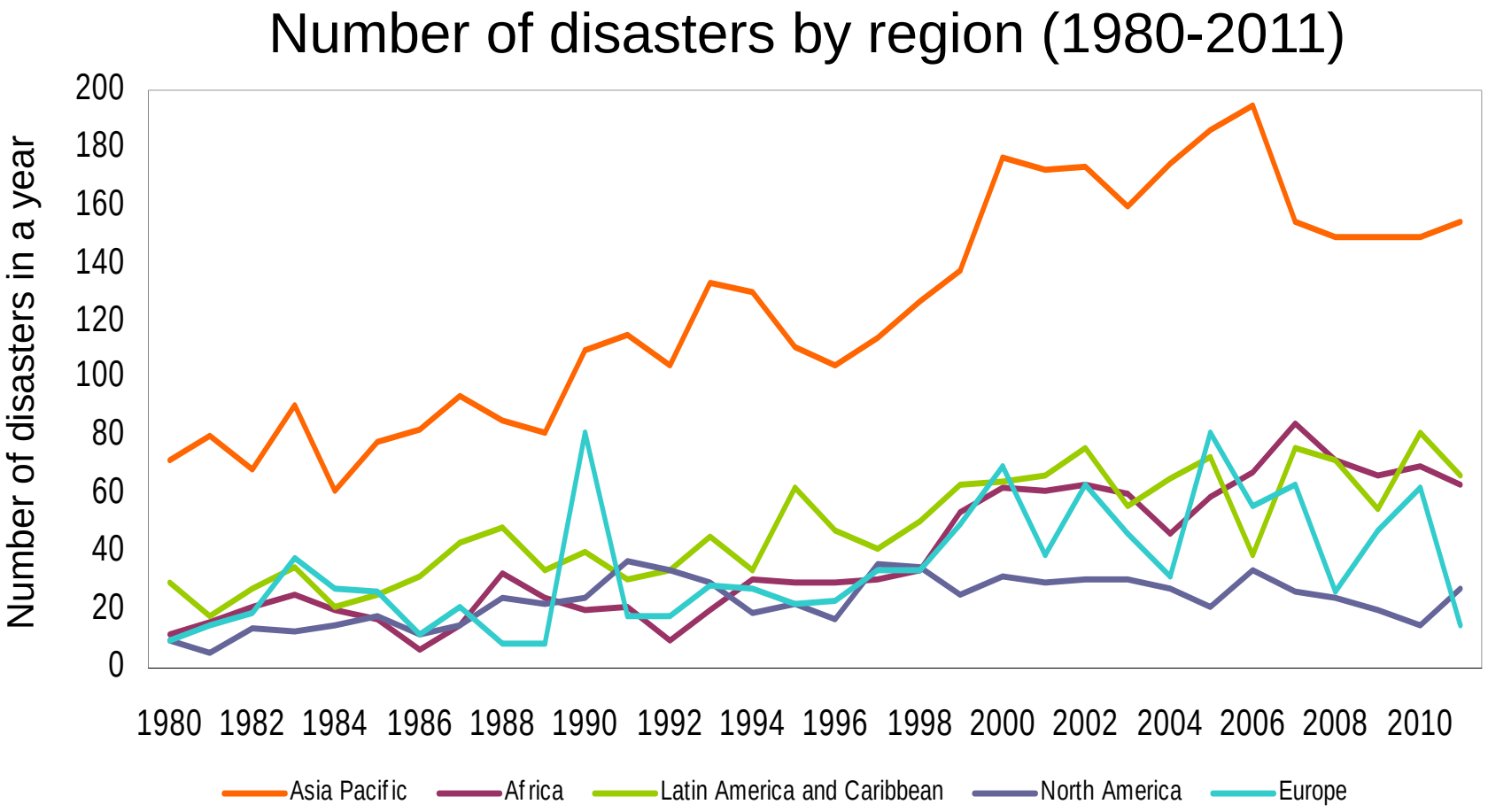
UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

- **The main economic and social development arm for the United Nations in Asia and the Pacific.**

- **To foster cooperation between 53 member states and 9 associate members, from Turkey in the west to Kiribati in the east, and the Russian Federation in the north to New Zealand in the south. The region is home to 4.1 billion people, or two thirds of the world's population.**

- **The ESCAP office is located in Bangkok, Thailand. Please visit ESCAP website at www.unescap.org.**

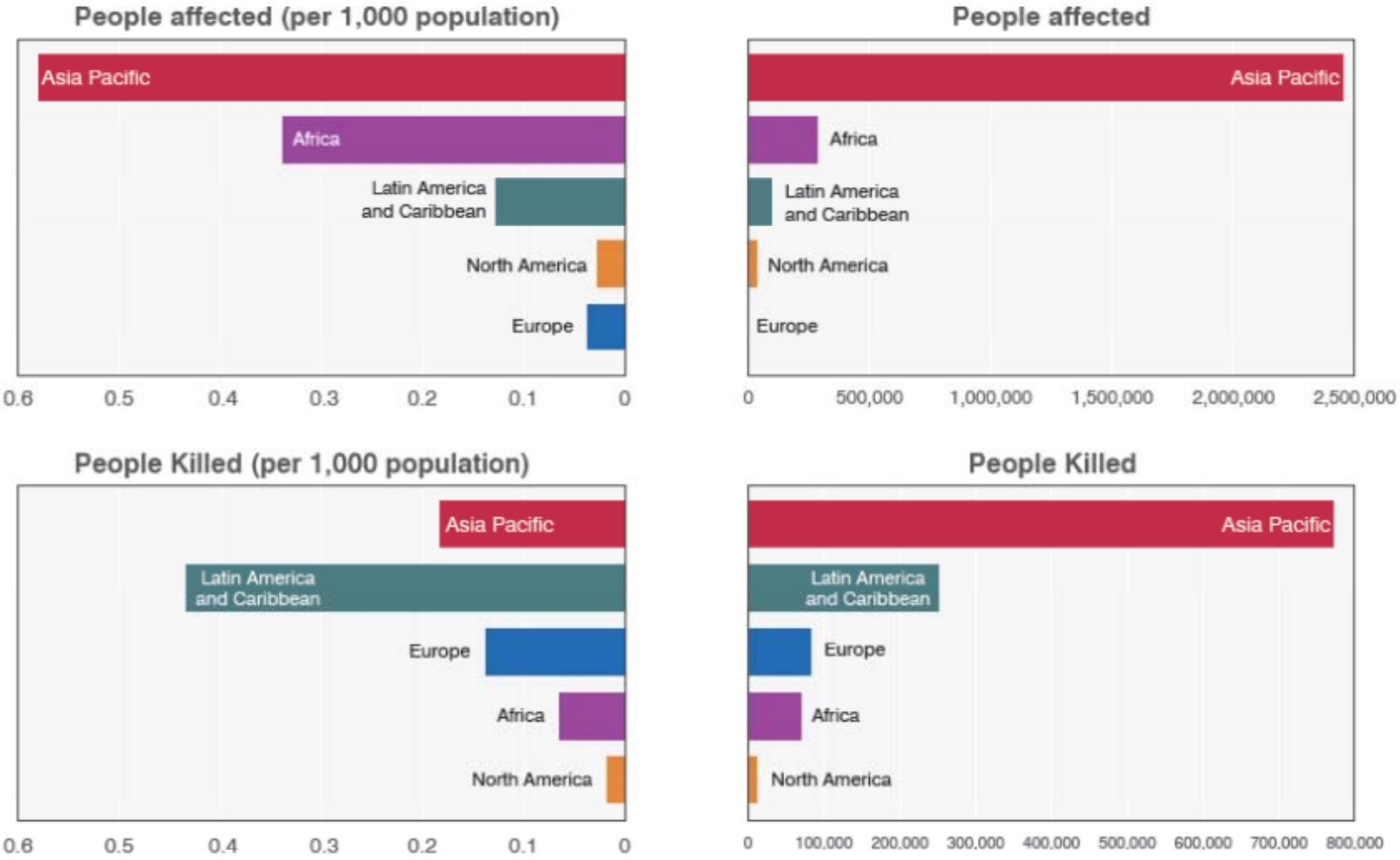
Asia-Pacific is the most disaster prone region in the world…



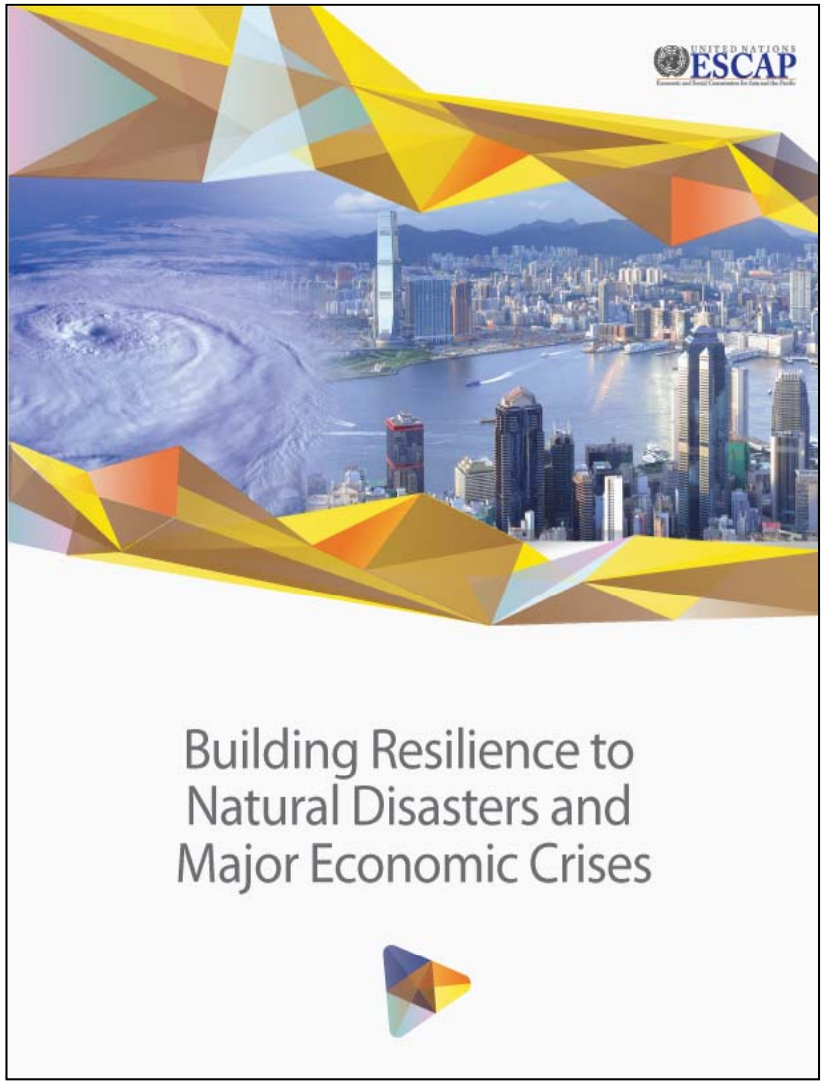
Source: ESCAP based on data from EM-DAT:
The OFDA/CRED International Disaster Database

During past a decade, around 2.5 million people in Asia and the Pacific were affected by disasters and almost 800,000 were killed ….

Risks of being killed or being affected by natural disasters, 2000-2012



Source: ESCAP based on data from EM-DAT: The OFDA/CRED International Disaster Database. Available from http://www.emdat.be/ (accessed November 2012).



UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

The 69th ESCAP Commission
25/4-1/5, 2013 at UNCC, Bangkok

Ministerial Roundtable Panel Discussion on the theme study:

Building resilience to natural disasters and major economic crises

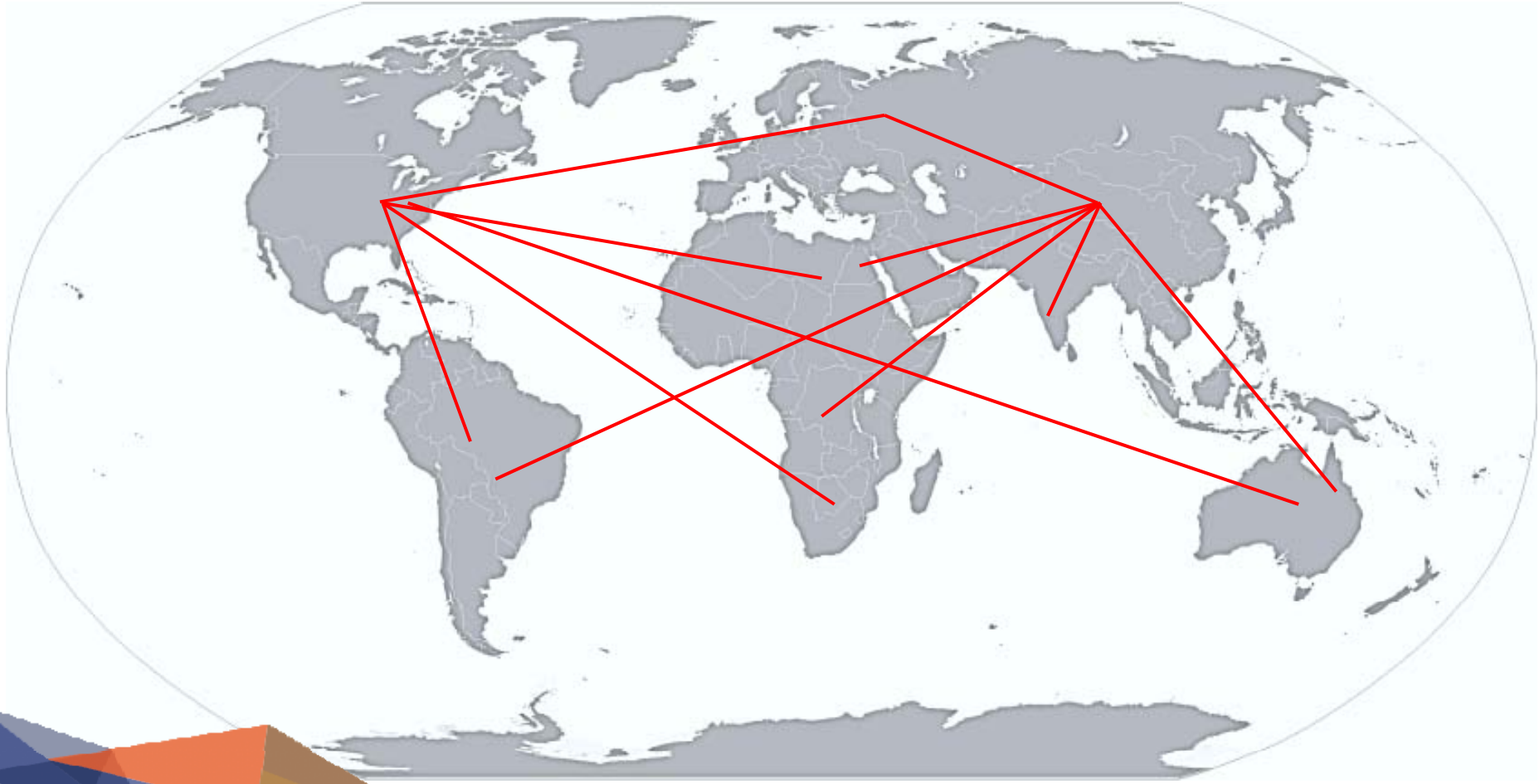
Resilience

"The capacity of countries and their people to withstand, adapt to, and recover from major economic crises and natural disasters – so that their people can continue to lead the kind of lives they value."

2013 ESCAP Theme Study

The New Normal

The world faces multiple, simultaneous, sequential and increasingly large shocks



The New Normal in Asia-Pacific

Poor and vulnerable are hardest hit

"Why should something that happens ten thousand miles away affect me?"
- Female worker in Karnataka, India, who lost her job in 2009

Is the region ready to face multiple shocks ?

"an ounce of prevention is worth a pound of cure."

Blind spots of policy making — difficulties in internalizing risks

> Macroeconomic frameworks need to factor in disasters— build the capacity to handle simultaneous shocks

> Social policy should help to build on good coping strategies and to minimize "bad" coping strategies

Key policy messages

Protect critical sectors and supply chains

Regional cooperation is of strategic importance

Workshop on Space Applications for Disaster Risk Reduction and Management

and

Second Workshop on the Use of Multi-Global Navigation Satellite Systems for Sustainable Development in Asia and the Pacific Region

5-7 March 2013, Bangkok, Thailand

Bangladesh
Bhutan
Cambodia
China
Fiji
Indonesia
Japan
Lao PDR
Malaysia
Maldives
Mongolia
Myanmar
Nepal
Pakistan
Philippines
Samoa
Sri Lanka
Thailand
Vanuatu

Strategy of **regional cooperation** to broaden and deepen the contribution of space and GIS to address issues related to disaster risk reduction and management, environment and development by increasing relevant activities at the national, sub-regional and regional levels.

The ESCAP resolution 69/11（April 25 - May 12013）“Implementation of the Asia-Pacific Plan of Action for Application of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development, 2012-2017” (Asia-Pacific Plan of Action)

1. Towards supporting DRR/M

[Regional/sub-regional level]

1) Enhancing networking and harmonization of initiatives
2) Welcome proven initiatives
3) Promote GNSS
4) Information exchange
5) Capacity Building
6) Mutual understanding between DRM authorities and space agencies/initiatives

[National level]

7) Encourage DRR/M policy, regulation and implementation plan of space and GIS

2. Towards supporting sustainable development

[Regional/sub-regional level]

1) Use space and GIS for natural resource, food security and poverty eradication
2) Use satellite communication for LLDCs, SIDS
3) Market penetration of GNSS

[National level]

4) Encourage sustainable development policy, regulation and implementation plan of space and GIS
5) Establish spatial data infrastructure to share among country

1. Implementing the Asia-Pacific Plan of Action for Applications of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development, 2012-2017

- **ESCAP was tasked to take the lead in implementing the Asia-Pacific Plan of Action at the regional level to harmonize and enhance existing regional initiatives, to pool expertise and resources at the regional and sub-regional levels and to act as a clearing house for good practices and lessons.**

- **Capacity-building to address the main technical gaps in developing countries in their use of space technology and GIS applications in disaster risk reduction that benefited approximately 400 governmental officials and practitioners from developing countries.**

- **Promotion of space technology and geographic information systems for disaster risk reduction; Geo-DRM portal established in some countries.**

- **Enhancing collaboration within UN family and regional initiatives, including UNITAR/UNOSAT,UN-SPIDER, UNISDR, the Charter, APSCO, Sentinel Asia, RIMES and AIT.**

Space technology and GIS applications are key tools in reducing levels of risk and the damage and losses that result from natural disasters.

This is possible by enabling comprehensive hazard and risk assessment, disaster response, relief and impact assessments. The major information and knowledge products emanating from space technology and GIS applications are near-real time satellite imagery, geo-referenced information, emergency communications tools and positioning, navigation and time information. Effective use of such space-based information. along with other monitoring systems, can help in mapping out hazards and vulnerabilities for evidence-based policymaking and planning, provide accurate warnings of impending disasters and provide disaster impact assessments at the regional, sub-regional and national levels, thus significantly mitigating the advance impacts of natural disasters in countries in Asia-pacific region.

Thank you !