

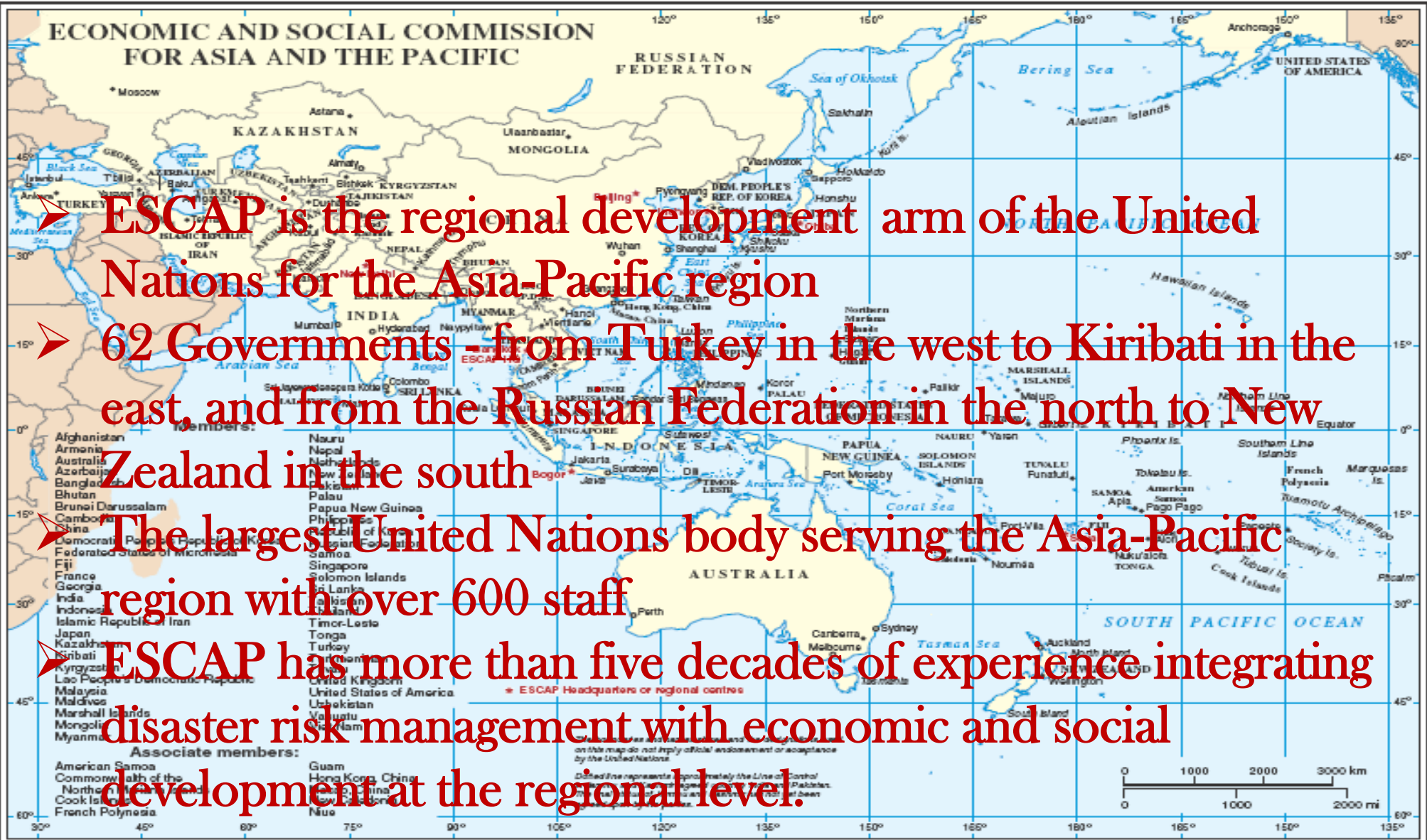


ESCAP Activities in ICT and Space Technology for Disaster Risk Reduction

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- ESCAP is the regional development arm of the United Nations for the Asia-Pacific region
- 62 Governments - from Turkey in the west to Kiribati in the east, and from the Russian Federation in the north to New Zealand in the south
- The largest United Nations body serving the Asia-Pacific region with over 600 staff
- ESCAP has more than five decades of experience integrating disaster risk management with economic and social development at the regional level.



Disasters in Asia and Pacific - Unevenly Distributed

- More than 200 million people were affected by natural disasters in the Asia-Pacific every year during the last decade.
- Of the world total the Asia and Pacific region included 90% of those affected by natural disaster, 65% of deaths due to natural disaster, and 38% of economic damage from natural disasters between 2001 and 2010.
- In high-income Asia-Pacific countries, about 1 in every 1,000 people was affected by disasters and 1 in 1 million died annually during 2001 to 2010; by contrast, in low-income countries nearly 30 in 1,000 people were affected and 52 in 1 million people killed.



Gaps analysis

- Insufficient EO resources/difficult to access to available resources
- Lack of data policy for providing archived EO information and processed products for DRR/free of charge or at an affordable price to LDCs
- Processing and analyzing capacity of most developing countries
- Lack of technical guidance for disaster management products from different satellites
- Lack of national institutional arrangement
- The service capacities need to be improved for most countries
- Internet bandwidth for accessing services.
- Lack of a regional gateway for easy access to all these existing and planned initiatives and effective use of services.

The Role of UN ESCAP in DRR

- ESCAP has been promoting regional cooperative mechanisms on space applications for disaster management since 2002
 - Harmonized development of space information sharing platform
 - Drought disaster monitoring and early warning
 - Disaster management communications
- To better address the cross-cutting DRR issue
 - Commission established Committees on DRR and ICT
 - Secretariat established IDD
 - Requested to establish a Asia-Pacific gateway for DRR & development for information sharing and analysis
 - Space information a key component



Key Partners



Economic and Social Commission for Asia and the Pacific



INTERNATIONAL CHARTER
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KOREA
COMMUNICATIONS
COMMISSION



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Regional Space Applications Programme for Sustainable Development (RESAP)

- **Launched the RESAP at the first Ministerial Conference on Space Applications for Development, 19-24 September 1994, Beijing, China**
- **The broader vision of RESAP included the following key functions:**
 - Promote space applications for environmentally sound and sustainable development in the region;
 - Assist countries in achieving the Agenda 21/Millennium Development Goals (MDGs);
 - Promote national capacity building and human resource development;
 - Promote knowledge transfers;
 - Coordinate pilot projects in the region;
 - Operate information services;
 - Provide technical advisory services;
 - Enhance regional and subregional cooperation through policy studies.

Structure of RESAP

- Intergovernmental Consultative Committee
 - The decision making body of RESAP
- Training Network
 - BAKOSURTANAL (National Coordinator for Survey and Mapping Agency, Indonesia, Indonesia)
 - CSSTEAP (India)
 - Various Universities (China)
 - Training provided as in-kind contribution to RESAP with ESCAP supporting travel to the country via Section-22 (South-South cooperation) funding.
 - Over 200 experts and managers from various countries have benefitted from the platform in last ten years.
- Thematic Working groups

The Regional Cooperative Mechanism for Disaster Monitoring and Early Warning, Particularly Drought

- was officially launched at a stakeholder meeting on the Mechanism in Nanjing, China, on 16 September 2010.
- It comprises of 3 components **coordinated** by **2 national focal points** (1 each from NDMO and space based organization)
- a **distributed platform** designed to provide satellite information products and services for disaster monitoring and early warning;
- an **information portal** for accessing drought disaster management-related information, technical resources and services of the Mechanism;
- **capacity-building** through various technical and non-technical advisory services, training sessions and workshops to assist less capable drought-prone countries in developing capacities at the national level.



Capacity Development for DRR

ESCAP has provided the following **regional platforms** to learn through exchange information and experiences in disaster risk reduction strategies;

Pakistan Flood (July - September 2010)

- Regional High-level Expert Group Meeting to Reduce Flood Disaster Risk, Islamabad, 9- 10 November 2010.
- Workshop on Developing Capacity for resilience to Water-related Disaster in Pakistan through Space Applications and Flood Risk Management, Islamabad, 1- 4 March 2011.

Great East Japan Earthquake (11 March 2011)

- Expert Group Meeting Toward Creative Reconstruction from the Great East Japan Earthquake, 29- 30 May 2011, and so on.



National Capacity Development in the Pacific

- **Organized three days national training workshops in Palau, Papua New Guinea, Tuvalu and Fiji during 5 August to 10 September 2011 for building the capacity of key stakeholders.**
- **Strengthen comprehensively national capacity for disaster risk reduction and sustainable development.**
 - Applications, Practices and Experiences in Disaster Early Warning and Emergency Response;
 - On-line Practices on Interpretation and Application of Satellite Imageries for Disaster Risk Management and sustainable development.
 - In-depth modular training on RS & GIS will be jointly organized with CSSTEAP, on 5-16 December 2011 at Dehra Dun, India.



Partners

- Regional - PITA, SPC including SOPAC
- National: NDMO, Land and Resource Information System, National Comm. Corp., National Weather Service, Building Zoning Department ,National disaster Center etc

Feedback

- All participants rated the training “very useful” and learned "very much" - as reflected in respond to the questionnaires

Outcome

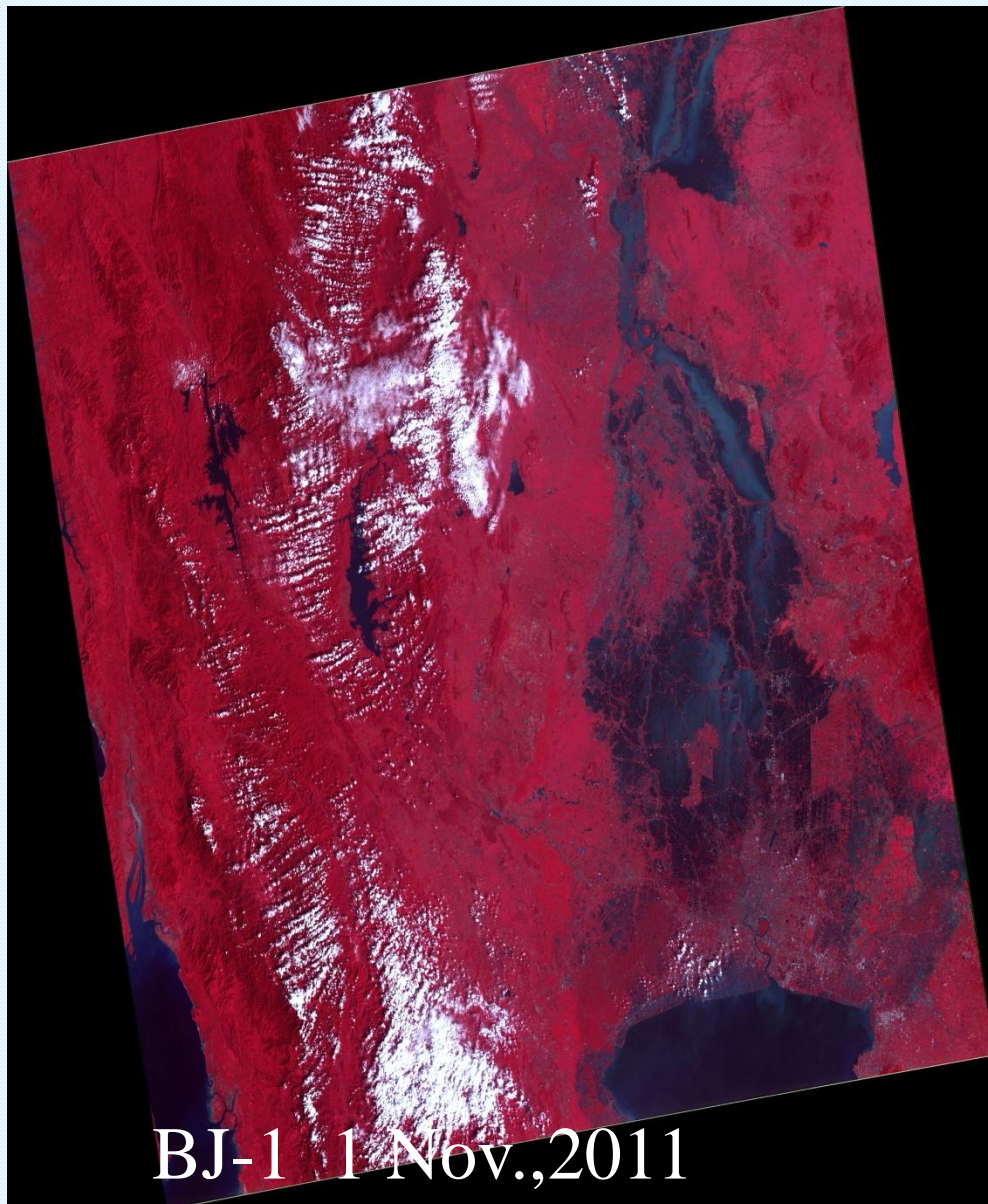
- Build up a national baseline imagery database
- State-Specific disaster risk reduction plans for selected states
- Climate-change focused programme viz. sea-level rise
- Capacity building using Asian resources
- Emergency communication plans and capacity
- Networking with Asian Space organizations/ programmes through ESCAP RESAP mechanism, typhoon committee, Sentinel Asia and Charter

Flood in Thailand and South East Asia

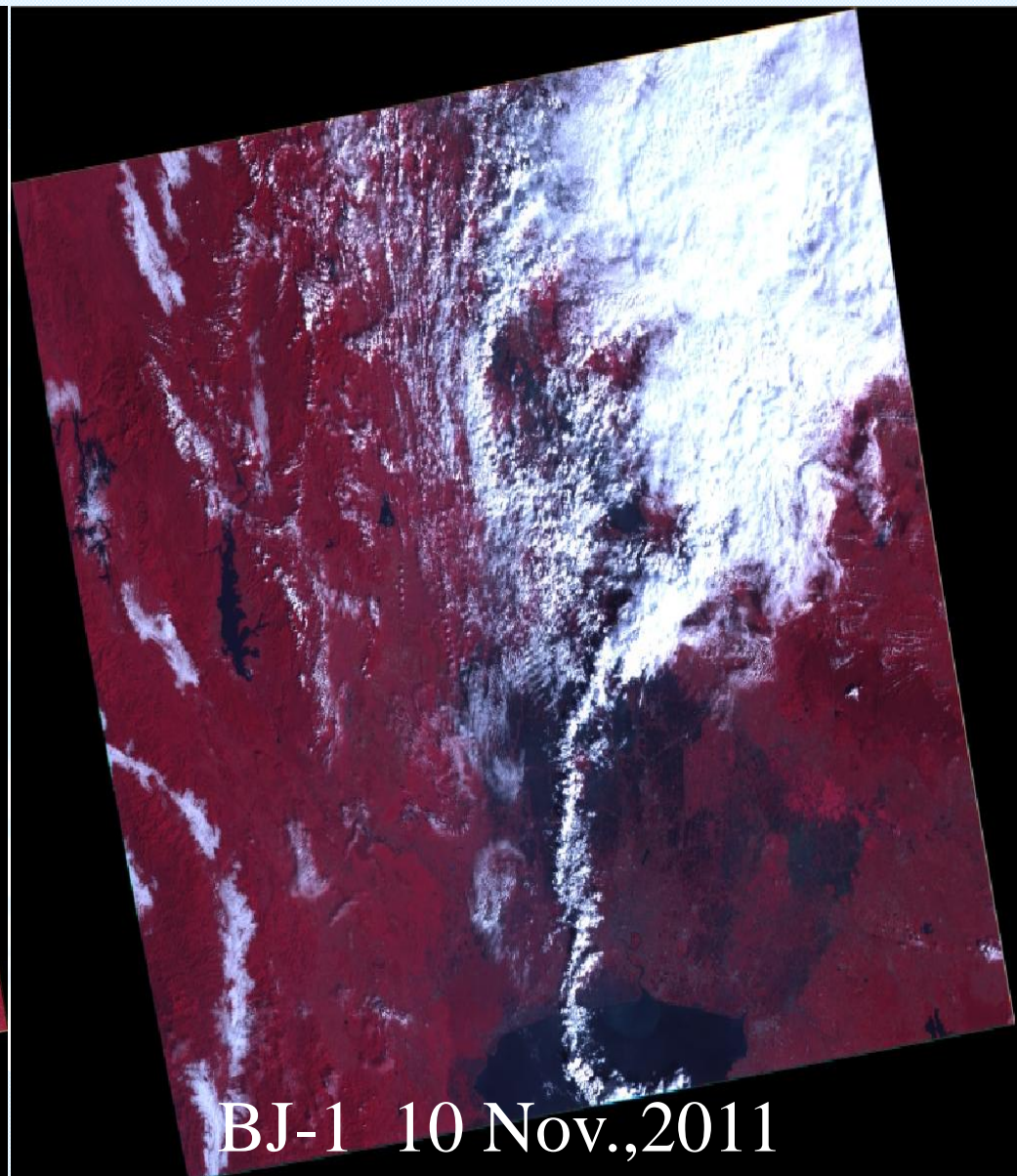
- **Working with the regional satellite-based disaster information monitoring network Sentinel Asia, the International Charter Space and Major Disasters – supported by a dozen major world space agencies, the United Nations Institute for Training and Research (UNITAR), United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)**
- **Enabled Thailand's Geo-informatics and Space Technology Development Agency (GISTDA), to access a number of valuable near real-time imagery from optic and microwave on-board sensors with resolution from 0.6 meter to 250 meter in panchromatic and multi-spectral bands, to support the flooding monitoring and the risk management in Thailand.**



Economic and Social Commission for Asia and the Pacific



BJ-1 1 Nov.,2011



BJ-1 10 Nov.,2011

- ESCAP has joined the Post Disaster Needs Analysis led by WB in Thailand for supporting the disaster recovery and for future disaster preparedness
- ESCAP also disseminated satellite imagery to the end-users in Cambodia, Myanmar and Viet Nam that suffered from the serious flood.



Regional Cooperative Mechanism on Disaster Monitoring and Early Warning, Particularly Drought

- **Aims:** Provide space-based technical tools, focused on drought, and eventually incorporate other types of disasters, beginning with floods.

Priority Cooperation Areas:

- Establishing the **Standards and Procedures** for data sharing and integration
- Harmonization of **modeling systems** for drought monitoring, including integration of multi-satellite and platform data
- Creation of a regional drought vulnerability **database** as part of the National Drought Profiles
- Continued **capacity building** activities, especially to make use of available satellite resources for monitoring and early warning

Asia Pacific Disaster Report 2011

- To be launched with UN ISDR in 2012, followed by the first APDR 2010.
- Focus on the emerging socio-economic impact of disasters as well as best practices and lessons learned from national and regional efforts.
- Highlight the role of champions at the regional, national and community levels in promoting disaster risk reduction.
- Continue to focus on the need to reduce vulnerability amid increasing exposure to disasters.
- Effects of disasters mainly dwell on lives lost and property damage.
- Linked to ongoing global events and publications that focus on social and economic aspects.



Typhoon Committee and the Panel on Tropical Cyclones

- Typhoon Committee and the Panel on Tropical Cyclones are regional bodies jointly established **ESCAP** and the World Meteorological Organization (**WMO**).
- To promote measures to **improve tropical cyclone warning systems** in the north-western Pacific Ocean, and in the Bay of Bengal and the Arabian Sea, respectively.
- To enhance the effectiveness of collaboration on DRR related to typhoons and tropical cyclones, in particular the **socio-economic impacts** of such disasters.
- To develop activities under three substantive components, namely **disaster risk reduction, hydrology** and **meteorology**, as well as in the areas of training and research.
- **Urban Flood Risk Management** project of the Typhoon Committee is implemented and seeks further utilization of space-based technology.



- Asia - Pacific is the most disaster prone, as well as the fastest growing region in the world.
- Information and communication technology (ICT) and space technologies are not only mighty tools for disaster risk reduction, but also a key driver to the inclusive and sustainable development.
- ESCAP's work is aimed at enhancing the region's emerging knowledge society by promoting regional cooperation, access to information, capacity building, and disaster resilience. ESCAP also works to bring the benefits of technological advances to all.

Thank you for your kind attention.