

Regional Space Applications Program and its efforts on disaster management

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UN ESCAP

- Regional arm of the UN Secretariat in the Asia-Pacific
 - The biggest of five UN regional commissions
 - 62 Member States & Associate Members
 - Population about 60% of world total
 - **The first UN commission with substantive space applications programme**
 - Started with Regional Remote Sensing Programme in 1983
 - Expanded into regional programme on GIS and remote sensing for development in late 1980's
 - Further developed into Regional Space Application Programme to cover major application fields of space technology
 - **Priorities have been adjusting along with new UN mandates**
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RESAP – first phase

- Initiated by first Ministerial Conference on Space Applications for Development, 1994, Beijing, China
 - Objective : Promote applications of emerging space technologies for development through regional cooperation
 - At regional level
 - Focused on awareness, networking and human resource development focused capacity building
 - Established a three-level network
 - Intergovernmental Consultative Committee (ICC)
 - Regional Working Groups on major space applications fields
 - Regional information service and education and training network
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Second Phase of RESAP...

- Continued by second Ministerial Conference on Space Applications for Sustainable Development, 1999, New Delhi, India
 - **Capacity building at technical, policy and institutional levels**
 - **For operational utilization of space technology in priority fields**
 - Implementation at regional level
 - Operational models, methodologies and institutional experiences
 - In priority fields of disaster management, crop monitoring and assessment, land and water resources management, soil erosion, family planning, community e-centers, ...
 - Third Ministerial Conference prepared for November 2007
 - Strategy and Action Plan developed
 - Thematic approach
 - Priorities of disaster management, environment and natural resources management, education and health development
 - Unfortunately -- Postponed
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Disaster risk reduction as a UN focus

- **World Conference on Disaster Reduction, Jan. 2005, Kobe, Japan**
 - **A major world summit organized by the United Nations**
 - **ESCAP supported JAXA in organizing a workshop**
 - **Report of the UN Secretary-General on progress toward the implementation of the Millennium Development Goals, 2005**
 - **Call for establishing a “worldwide early warning system for all natural hazards building on existing national and regional capacities”**
 - **First Asian Conference on Disaster Reduction, Sept. 2005, Beijing, China**
 - **UNESCAP as a co-organizer**
 - **Recommended the development of technical supporting systems at regional and sub-regional levels**
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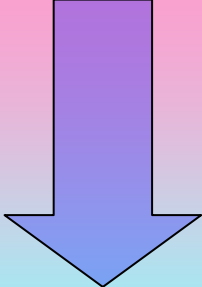
Early warning system

- ❑ **An effective early warning system should be**
 - **People-centred**
 - **Networked**
 - **Integrated with four elements**
 - ❑ **Knowledge of the risk faced**
 - ❑ **Technical monitoring and warning service**
 - ❑ **Dissemination of meaningful warning to those at risk**
 - ❑ **Public awareness and preparedness**
 - ❑ **Major findings of the Global survey of early warning systems**
 - **Considerable progress in developing knowledge and technical tools**
 - **Technologies are available for almost all types of hazards**
 - **Operation in only some parts of the world**
 - **Most developing countries lack basic capacities of equipment, skills and resources**
 - ❑ **Space technology applications may contribute to fill the gaps in all of the four elements**
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ESCAP/RESAP efforts

- Objective : towards a regional space information supporting platform for disaster reduction
 - Affordable and operational access to appropriate space information products and services
 - Effective information management/decision supporting tools
 - Policy studies conducted
 - Framework on space information products and services for disaster management
 - Framework on regional cooperation on space technology supported disaster management
 - Promotion of regional cooperative mechanisms
 - For provision of appropriate space information products and services
 - Harmonization of regional cooperation initiatives
 - A common platform for appropriate products and services
 - Training and education activities
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Role of interim P/S and local service providers

<p>Partners</p>	<p>Technical resources</p>	<p>Remote sensing satellite data</p>		
<p>Major service providers</p>	<p>Application models and Methodology</p>	<p>System-corrected images</p>		<p>Primary P/S</p>
<p>Local service providers (including technical supporting team of end users)</p>			<p>Information extracted Images or thematic maps</p>	<p>Interim P/S</p>
<p>End users from central to field levels</p>	<p>Locally available information</p> <p>User systems and practices</p>	<p>Information extraction by Capable LSP</p>	<p>Other processes by-less capable LSP</p>	
		<p>Decision-making supporting information</p>	<p>Final P/S</p>	
		<p>Used with other information and decision supporting tools</p>		

Positive initiatives supporting institutionalized regional cooperation

- Regional cooperation initiatives
 - Asia-Pacific Regional Space Agency Forum (APRSAF)
 - Sentinel-Asia project
 - A concrete step towards regional space information based disaster reduction supporting system
 - Asia-Pacific Multilateral Cooperation on Space Technology and Applications (AP-MCSTA)
 - Satellite constellation for disaster monitoring
 - First phase: 3 satellites will be launched next year
 - Other initiatives supporting cooperation for disaster management
 - China, India, Thailand and FAO offered to support drought disaster management
 - UN Platform for Space-based Information for Disaster management and Emergency Response (SPIDER)
 - Disaster management communication of ITU
 - International Charter on Space and Major Disasters
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Regional cooperation on space technology for disaster management

- ❑ Cooperation is a **MUST** : no any country may develop an operational system to support effective disaster risk reduction
- ❑ Based on existing and planned regional and national initiatives
- ❑ To create a scientifically sound, diplomatically acceptable and politically relevant

Harmonized platform

- ❑ Supporting less capable countries' affordable access to relevant space information products and services, and decision supporting tools
 - ❑ For operational use of space technology in disaster reduction
 - Risk assessment, preparedness
 - Monitoring and early warning
 - **Response and mitigation**
 - Community resilience
 - ❑ Including cross-boundary infectious diseases, like avian influenza
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Modalities of the mechanisms

- ❑ Explore commitments of both contributory and beneficiary countries/organizations
 - ❑ Networking information providers, local service providers and disaster management authorities
 - ❑ Developing operational application models
 - ❑ Development of relevant products and services
 - ❑ Extension of national services to less capable countries
 - ❑ Development of service delivery channels
 - ❑ Development of relevant policies to ensure sustainability in service provision side, and effective uses of such services at beneficiary side
 - ❑ Institutionalized sub-regional/regional arrangement
 - ❑ Assisting institutional arrangement at national level
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ESCAP cooperates with Sentinel Asia

- ❑ Identifying national capacities in using space technological and other information and communication technological tools for disaster risk reduction
 - ❑ Recommendation of national policy frameworks for effective adoption of such technical tools
 - ❑ Identifying national needs for relevant space information products and services, and their possible delivery channels
 - ❑ Development of end-user network for enhanced regional cooperation to better address these issues through institutional arrangement at regional levels.
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Thank you for attention

For more information, please contact

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