

ECONOMIC AND SOCIAL COUNCIL

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INVITED PAPERS

**AN OVERVIEW OF UNESCAP'S SPACE APPLICATIONS PROGRAMME AND  
ACTIVITIES ON DISASTER REDUCTION**

**Submitted by Information, Communication and Space Technology Division,  
United Nations Economic and Social Commission for Asia and the Pacific  
(ICSTD/UNESCAP)\*\***

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\*\* Prepared by Mr. Wu Guoxiang, Chief, Space Technology Applications Section,  
Information, Communication and Space Technology Division, United Nations  
Economic and Social Commission for Asia and the Pacific (ICSTD/UNESCAP)

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# **An Overview of UNESCAP's Space Applications Program and activities on disaster reduction**

*WU Guoxiang  
Chief*

*Space Technology Applications Section, ICSTD,  
UNESCAP*

*17th UN Regional Cartographic Conference for Asia and the Pacific,  
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# UN ESCAP

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- **Regional arm of the UN Secretariat in the Asia-Pacific**
  - **Priorities of ESCAP**
    - **Poverty alleviation**
    - **Emerging social issues**
    - **Manage globalization**
      - **Information, Communication and Space Technology Division (ICSTD) established in 2002**
      - **Space Technology Applications Section**
  - **Regional Space Applications Programme (RESAP)**
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# RESAP – first phase

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- **Initiated by Ministerial Conference on Space Applications for Development, 1994, Beijing**
  - **Objective : Promote applications of emerging space technologies for development through regional cooperation**
  - **At regional level**
    - **Focused on networking, awareness and human resource development focused capacity building**
    - **Established a three-tiered network**
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# RESAP structure...

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- Intergovernmental Consultative Committee (ICC)
    - Legislative body comprising National Focal Points
  - Regional Working Groups on:
    - Remote sensing, GIS and satellite-based positioning
    - Meteorological satellite applications and natural hazards monitoring
    - Satellite communication applications
    - Space science and technology applications
  - Regional information service and education and training network
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# Second Phase of RESAP...

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- Initiated by 2<sup>nd</sup> Ministerial Conference on Space Applications for Sustainable Development, 1999, New Delhi, India
  - Focused on operational applications of space technology
    - Technical cooperation projects in priority fields
    - Studying on policy frameworks of
      - Convergence of space technology with other information and communication technologies
      - Disaster management products and services
      - Regional cooperative mechanisms
    - Harmonizing regional cooperation initiatives
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# Space Applications in A-P region

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- **Enhanced national capacity**
    - **Most countries set up relevant facilities and capacities**
    - **Many countries established space agencies**
    - **Many countries established space application policies**
    - **Human resources development became normal activities in many universities and research institutions**
  - **Operational applications in many fields**
    - **National programmes and centers**
    - **Application models, products and services**
    - **Operational services by public and private providers**
  - **Space technology development programmes**
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# Regional space capacity supporting disaster management

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- Space infrastructures developed by many countries
    - Earth observation satellites
    - Communication satellites
  - Regional cooperation initiatives
    - Asia-Pacific Multilateral Cooperation on Space Technology Applications
      - Multi-mission small satellite
      - Satellite constellation for disaster monitoring
    - Asia-Pacific Regional Space Agency Forum
      - Sentinel-Asia project
  - National initiatives of China, India, Iran, ...
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# Regional cooperative mechanism on space technology for disaster management

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- ❑ Based on existing and planned regional and national initiatives
  - ❑ To create a scientifically sound, diplomatically acceptable and politically relevant
  - ❑ **Harmonized platform**
  - ❑ For less capable countries' affordable access to space information products and services
  - ❑ For operational use of space technology in
    - Risk assessment; preparedness and risk reduction; multi-hazard national and regional warning and response systems; community based disaster reduction
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# ESCAP's experiences

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- **Successfully established regional mechanisms :**
    - **Asian Development Bank (ADB)**
    - **Mekong River Commission**
    - **Typhoon Committee and Panel on Tropical Cyclones**
    - **Asian Highway & Railway networks**
  - **12 years implementation of the RESAP**
  - **Has been promoting regional cooperative mechanisms since 2002**
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# Mechanisms under development

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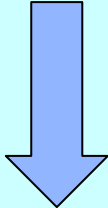
- Sentinel-Asia project
    - Promoted by Japan and supported by many countries
    - Focused on forest fire and flood
  - Regional mechanism on drought disaster management
    - Supported by China and India
  - Small satellite constellation for disaster management
    - Promoted by China
  - Mechanism to be developed
    - Satellite communications for
      - Networking information nodes in a knowledge-based disaster management system
      - Supporting emergency response
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# Modalities of the mechanisms

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- ❑ Explore commitments of both contributory and beneficiary countries/organizations
  - ❑ Networking information providers, local service providers and disaster management authorities
  - ❑ Developing operational application models
  - ❑ Developing relevant products and services
  - ❑ Extension of national services to less capable countries
  - ❑ Developing data policies to ensure sustainability and affordability
  - ❑ Help national/subregional/regional institutional arrangement
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# Role of interim P/S and local service providers

<b>Partners</b>	<b>Technical resources</b>	<b>Remote sensing satellite data</b>		
<b>Satellite operators &amp; major service providers</b>	<b>Application models and methods</b>	<b>System-corrected images</b>		<b>Primary P/S</b>
			<b>Information extracted Images or thematic maps</b>	<b>Interim P/S</b>
<b>Local service providers (including technical supporting team of end users)</b>	<b>Locally available information</b>	<b>Information extracting (Capable LSP)</b>	<b>Other processes (by-less capable LSP)</b>	
	<b>User systems and practices</b>	<b>Decision-making supporting information</b>		<b>Final P/S</b>
<b>End users at central and field levels</b>		<b>Use of the information : Decision supporting tools</b>		

# Third Ministerial Conference

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- To be held on 5-10 February 2007 in Malaysia
    - Discuss major issues on operational use of space technology for assist achieving internationally agreed development goals
      - MDGs, WSIS, WSSD
      - World Conference on Disaster Reduction
    - Recommend strategies and actions at both national and regional levels
  - Disaster management will be a major issue to be addressed
    - Regional cooperative mechanism on use of space technology for disaster reduction will be one major topic to be discussed
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# ***Thank you for attention***

For more information, please contact

*Space Technology Applications Section  
Information, Communication and Space technology Division  
ESCAP*

[wugu@un.org](mailto:wugu@un.org), [escap-stas@un.org](mailto:escap-stas@un.org)

*Phone: +66 2 288 1456*

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