

**Regional Space Applications Program  
and  
the Third Ministerial Conference on Space  
Applications for Sustainable Development  
in Asia and the Pacific**

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# UN ESCAP

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- **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**
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# RESAP – first phase

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- ❑ 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
  - ❑ Implementation at national level
    - Satellite based remote sensing and communication application programmes
    - Development of capacities, facilities and institutions
    - Space application infrastructures
    - Initiation of small satellite programmes
  - ❑ At regional level
    - Focused on awareness, networking and human resource development focused capacity building
    - Established a three-level network
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# RESAP cooperation network

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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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- Continued by second Ministerial Conference on Space Applications for Sustainable Development, 1999, New Delhi, India
  - **Focused on technical, policy and institutional capacity building for operational applications of space technology in priority fields**
  - Implementation at regional level
    - Technical cooperation projects
      - 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, ...
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# Second Phase of RESAP...

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- **Implementation at regional level**
    - **Studies on policy frameworks on**
      - **Convergence of space applications with information super high way**
      - **Disaster management products and services**
      - **Regional cooperative mechanisms on disaster management**
    - **Promotion of regional cooperative mechanisms for operational access to space application products and services**
    - **Training and education activities**
      - **Mostly hosted by China, India and Indonesia on the basis of technical cooperation among developing countries**
    - **Harmonization of regional cooperation initiatives**
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# RESAP Implementation at national level

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- **Enhanced national capacity**
    - Almost all countries established facilities and capacities
    - Better awareness on space applications: RS/GIS became normal courses in universities of most least developed countries
    - Many countries established space agencies and formulated relevant policies
  - **Operational applications in many development fields**
    - National programmes and centers
    - Application models, products and services
    - Operational services by public and private providers
  - **Space infrastructures developed by more countries**
    - Earth observation and communication satellites
    - Small satellite programmes
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# Positive initiatives supporting more institutionalized regional cooperation

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- Less capable countries need institutionalized regional cooperation for tangible opportunities to benefit from space applications
  - Regional cooperation initiatives
    - Asia-Pacific Regional Space Agency Forum
      - Sentinel-Asia project
        - Towards regional disaster supporting system
    - Asia-Pacific Multilateral Cooperation on Space Technology Applications
      - Multi-mission small satellite
      - Satellite constellation for disaster monitoring
      - Moving towards Asia-Pacific Space Cooperation Organization
  - Other initiatives supporting cooperation for disaster management
    - China, India and Thailand offered to support drought disaster management
    - Iran offered to host a center for Central and Western Asia
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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

- ❑ Supporting less capable countries' affordable access to relevant space information products and services
  - ❑ For operational use of space technology in disaster reduction
    - Risk assessment, preparedness, early warning
    - **Response and mitigation**
    - Community resilience
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# ESCAP's experiences

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- **Successfully promoted establishment of regional mechanisms**
    - **Asian Development Bank (ADB)**
    - **Asia-Pacific Telecommunity**
    - **Mekong River Commission**
    - **Typhoon Committee and Panel on Tropical Cyclones**
    - **Asian Highway & Railway networks (on-going)**
  - **12 years implementation of the RESAP**
    - **Has been promoting regional cooperative mechanisms since 2002**
  - **Expressed supports of major space-capable countries**
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# Mechanisms under development

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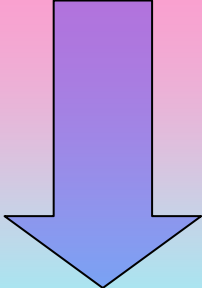
- Sentinel-Asia project
    - Promoted by APRSAF and supported by Japan and many countries
    - Focused on forest fire and flood
  - Regional mechanism on drought disaster management
    - To be contributed by China, India, Thailand, FAO and ...
  - Satellite constellation for disaster management
    - Promoted by China
  - Mechanisms to be developed
    - Communication satellite for
      - Networking information nodes in a knowledge-based disaster management system
      - Supporting emergency response system
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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
  - ❑ Development of relevant products and services
  - ❑ Establishment of service delivery channels
  - ❑ Extension of national services to less capable countries
  - ❑ Development of service policies to ensure sustainability
  - ❑ Help national/subregional/regional institutional arrangement
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# Role of interim P/S and local service providers

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

# Expectations of Sentinel Asia

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- ❑ A workable platform in the region to be jointly supported by national, regional and global initiatives, like GEOSS, SPIDER
  - ❑ Clearer commitments of both contributory and beneficiary parties towards establishment of a harmonized regional space information disaster management supporting system
  - ❑ Enhanced national institutional arrangement in integrating space information with disaster management practices
  - ❑ Improved methodologies towards operational models
  - ❑ A set of appropriate products and services to be provided by major service providers
  - ❑ Enhanced capacity of local service providers in providing operational final P/S to relevant disaster authorities
  - ❑ Experiment on satellite broadband connected information flow among the nodes of the network
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# Third Ministerial Conference

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- 5-10 February 2007 in Kuala Lumpur, Malaysia
    - Review implementation of recommendations of 2<sup>nd</sup> Ministerial Conference
    - Discuss major issues related to space applications for assist achieving internationally agreed development goals
    - Recommend strategy and action plan in future years
    - Adopt the Ministerial declaration, and continue the RESAP
  - Ministerial Conference in two segments
    - Preparation Meeting of Senior Officials, 5-7 February
    - Ministerial Meeting, 8-10 February
  - Side events
    - Exhibition, scientific symposium
    - Roundtable on International Heliophysical Year
    - Roundtable on disaster management
    - Roundtable on Pacific connectivity
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# Major preparation activities

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- 10<sup>th</sup> ICC session in 2004 at Bangalore
    - Roundtable brainstormed evolving role of space applications for achieving internationally agreed development goals
  - 12<sup>th</sup> ICC session cum Ad Hoc Expert Meeting, 17-19 Oct. 2006, Daejeon, Korea, for final review of preparation
    - RESAP should assist developing countries in operational use of space technology for achieving internationally agreed development goals
    - Promoting regional cooperative mechanisms towards regional disaster management supporting system
      - Sentinel-Asia project
      - Drought disaster reduction mechanism
      - Close cooperation with GEO
    - Suggested thematic approach in
      - Disaster reduction, natural resources and environment management, tele-education and tele-health
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# Conclusion

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- ❑ RESAP has been contributed to regional capacity building in space technology applications
  - ❑ New challenge is to assist developing countries better use of such technical tools to achieve internationally agreed development goals
  - ❑ Regional cooperative mechanism approach to enhance institutional capacity for affordable access to space applications
    - Disaster management is the start point
    - ESCAP cooperates with APRSAF for successful development and implementation of Sentinel-Asia Project
  - ❑ Third Ministerial Conference will further promote regional cooperation in space technology applications
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***Thank you for attention***

For more information, please contact

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