Role of Asia Pacific Space Cooperation Organization in Developing Tools and Applications using Geo-referenced Disaster Risk Management Information System in the Asia-Pacific Region

Bangkok, Thailand. February 20-22, 2013

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Sequence of Presentation

- **Introduction**
- **Remote Sensing Monitoring of Dust and its Applicative Demonstration in the Arid and Semi-arid Areas**
- **Evaluation of Different Remote Sensing Techniques for Drought Study**
- **Development and Demonstration of Applications of Compatible GNSS Terminals for Emergency Management and Disaster Rescue**
- **Conclusion**

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Introduction

Initial APSCO Projects

- APSCO Data Sharing Service Platform and its Application Pilot Project,
- APSCO Applied Remote Sensing Satellite,
- Asia Pacific Ground Based Optical Space Objects Observation System,
- Applications of Compatible Navigation Terminal System,
- Research on Atmospheric Effects of:
  - Ka Band Rain attenuation Modeling,
  - Ionosphere Modeling using Radio Wave Propagation and Solar activity,
  - and
- Education and Training Activities.

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Remote Sensing Monitoring of Dust and its Applicative Demonstration in the Arid and Semi-arid Areas

- Background
- Methodology

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Background

- **Dust comes from arid and dry regions where high velocity winds are able to remove mostly silt-sized material, deflating susceptible surfaces.**
  - **In the Middle East, dust has been a historic phenomenon, and recently, the problem is dramatically increased.**
  - **In East Asia, dust is a seasonal meteorological phenomenon which affects much during the springtime.**

Background

- **Dust is transported through the troposphere, and it can:**
  - **produce strong local radiative forcing**
  - **decrease visibility and cause a variety of health problems**
  - **contaminants including croplands, aquifers…**

    be correlated to significant loss of economic activity

Methodology

he spatial distribution of dust in Asia and

earch on remote sensing monitoring of dust.

radiation characteristics of dust particles in

rry out the research on dust inversion

emote sensing images of dust centers in Asia

ıt image preprocessing.

dust distribution thematic map in Asia and

ant research results.