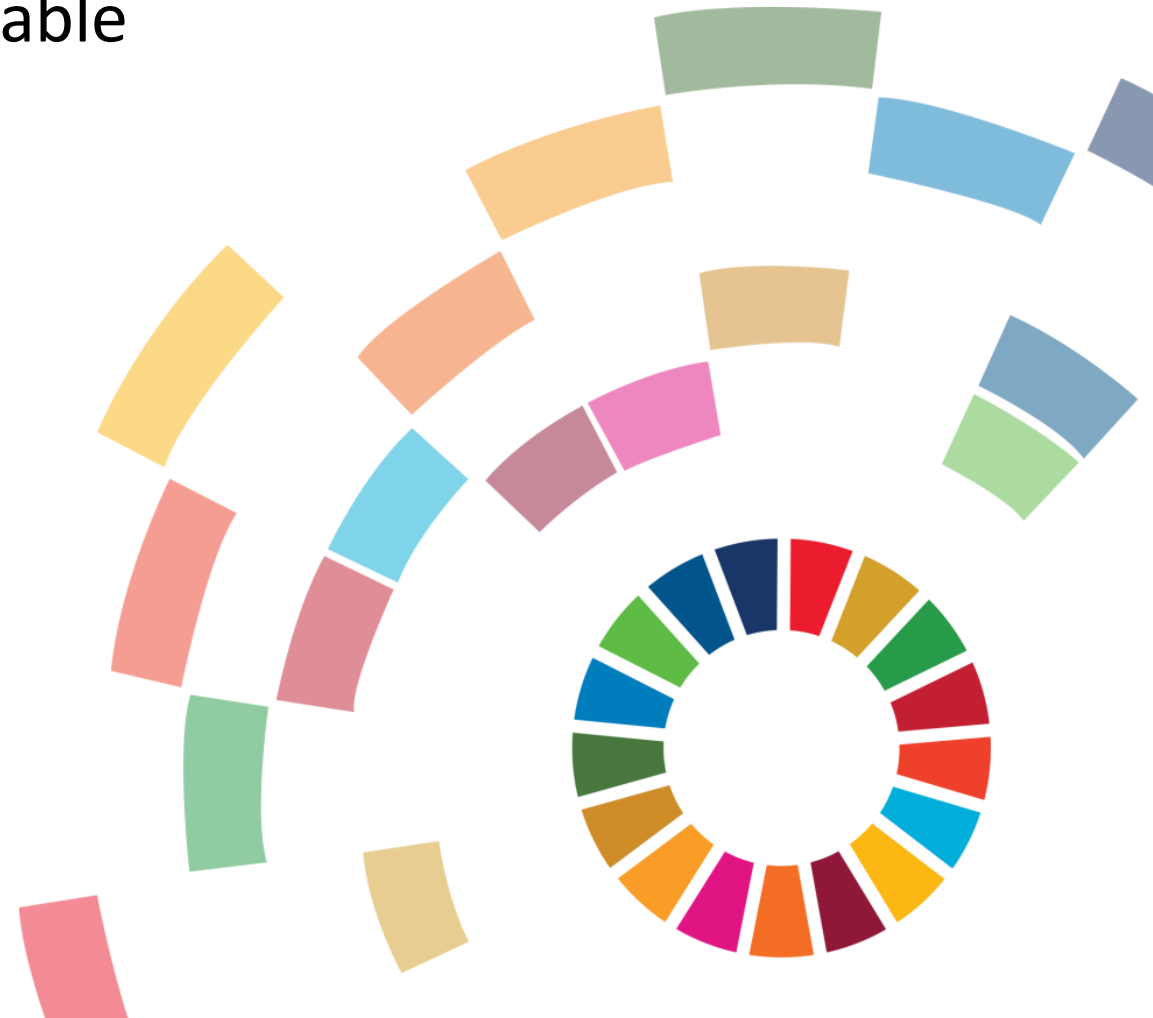


# The status of implementation of Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) in Iranian Space Agency (ISA)

*Ministry of Information and Communications  
Technology of Iran (Islamic Republic of)*



# Main Activity Topics

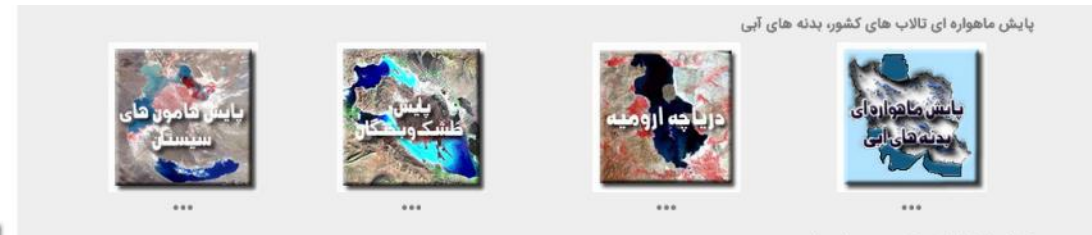
- ☐ Disaster risk reduction and resilience
- ☐ Management of natural resources
- ☐ Connectivity for the 2030 Agenda for Sustainable Development
- ☐ Social development
- ☐ Energy
- ☐ Climate change
- ☐ Activities cutting across all thematic areas

# Satellite Monitoring Activities of ISA

## National center for satellite earth observation

- Main monitoring Activities:

- Fire Monitoring
- Dust & air pollution
- Flood
- Red Tide
- Earthquake
- Drought risk and plant stress
- Subsidence
- Water bodies
- ...



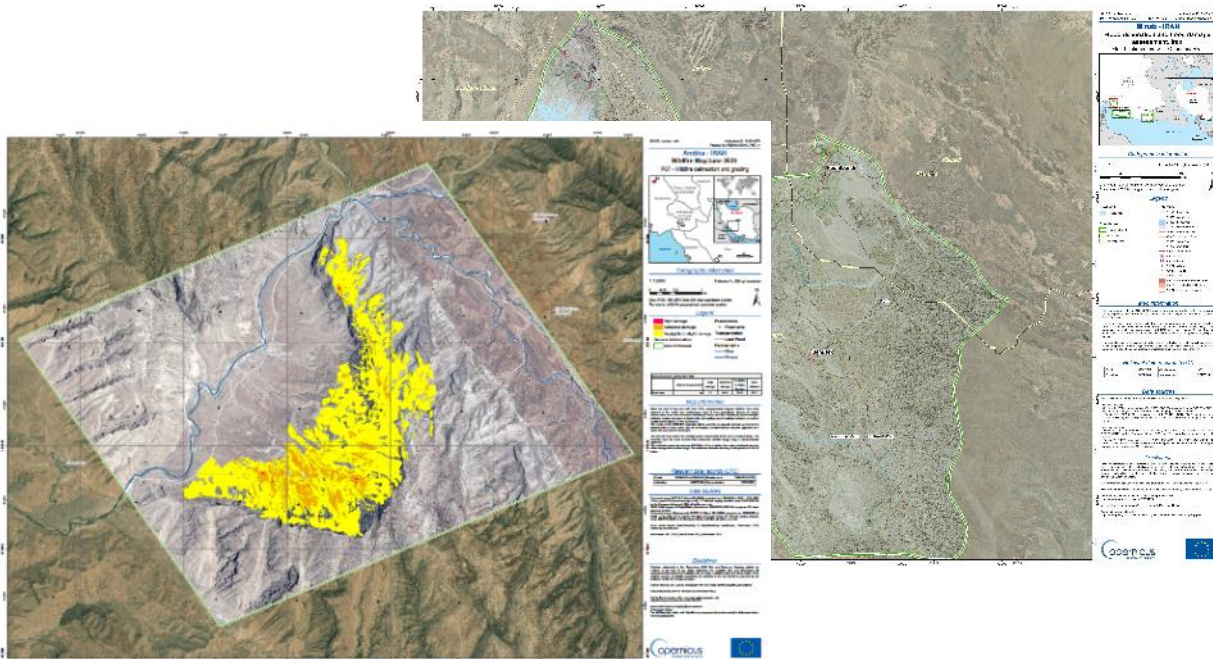
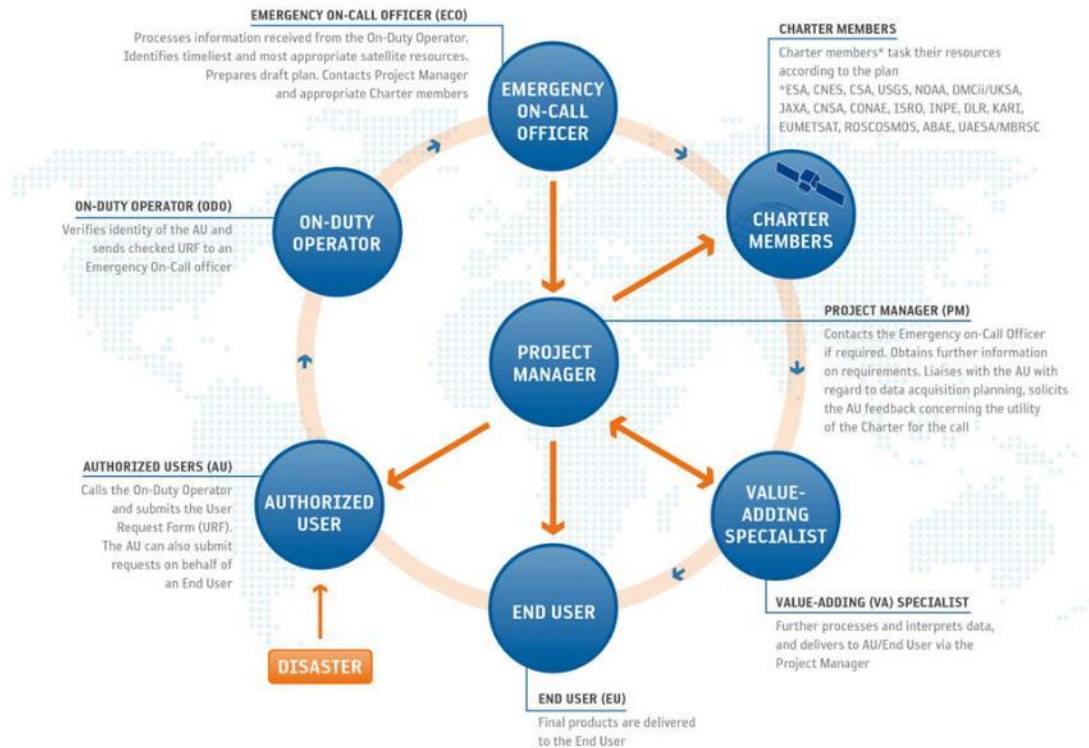


# International Cooperations

- APSCO DSSP
- Copernicus EMS
- International Charter



## Emergency Management Service





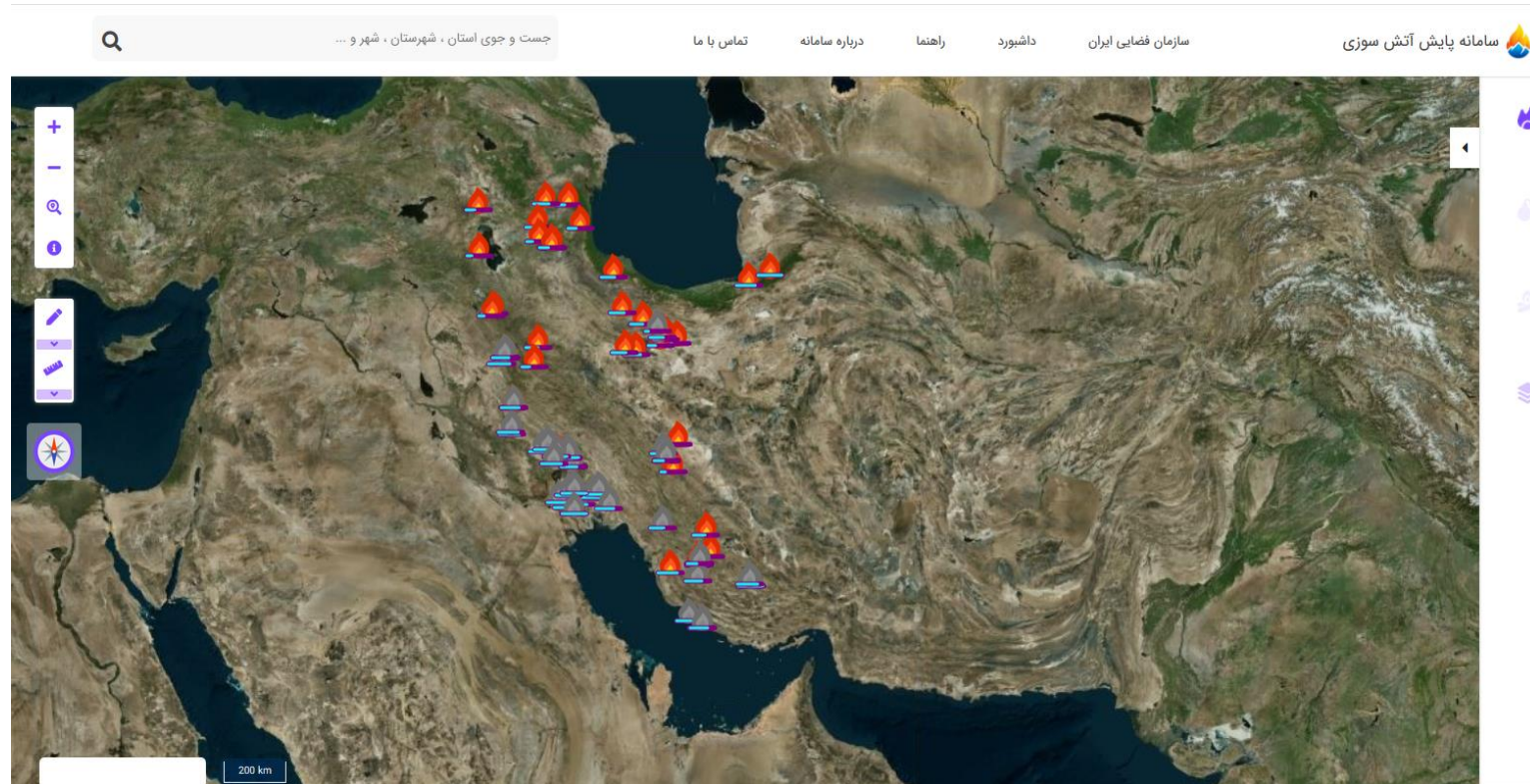


# Disaster risk reduction and resilience

## Fire Monitoring

### National Fire Monitoring and Management System (under development)

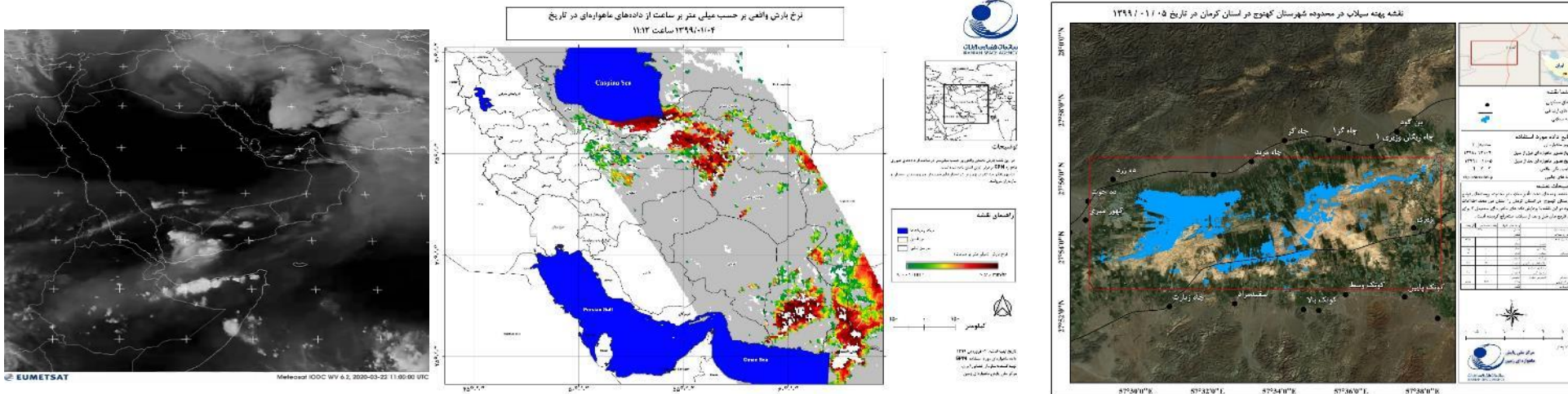
- Main Functions and features:
  - Fire danger rate
  - Active fire detection
  - Burnt area mapping (Landsat-8 & Sentinel-2)
  - Statistical and spatial reports
  - Will be adopted to ecology and fire regimes of Iran.



# Disaster risk reduction and resilience

## Flood Monitoring

- Production of flood warning maps for 10 and 3 days before the flood
- Production of satellite maps of real rainfall rates and volumes in different regions of the country on a daily basis
- Receiving and processing of satellite images to map potential risk, exposure and flood extent in the fastest possible time
- Sharing information with Iranian Red Crescent Society and the National Disaster Management Organization
- Activate the capacity of international cooperation to manage the flood crisis
- Providing satellite flood monitoring products to other users and the general public through social networks and remote sensing information portal of the Iranian space Agency (RS.ISA.IR)

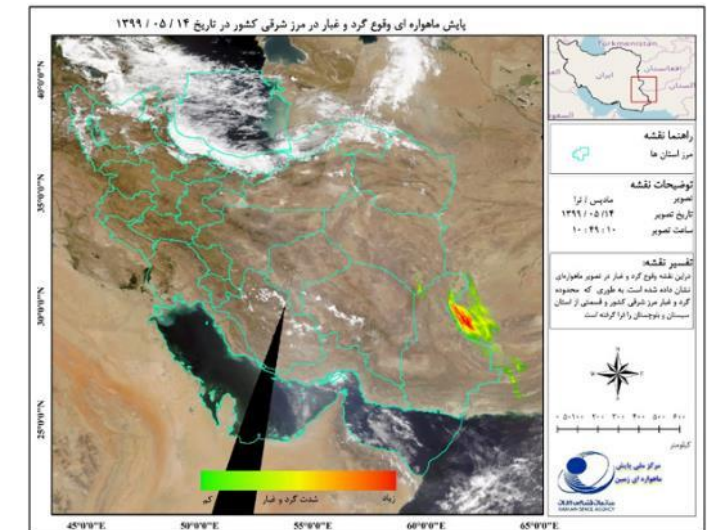
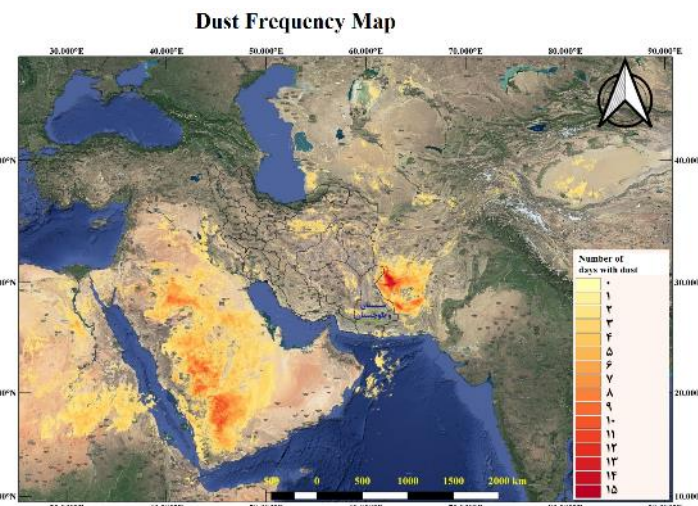
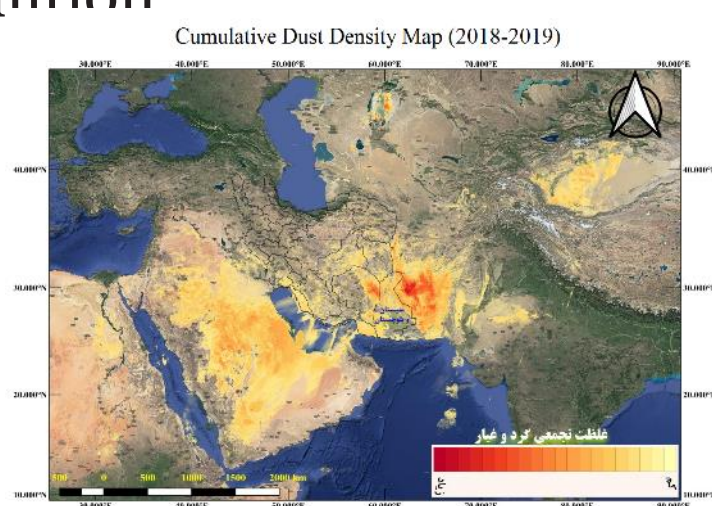




# Disaster risk reduction and resilience

## Dust Monitoring

- Regional dust monitoring and detection
- Detection and tracing dust path
- Identifying main dust sources
- Implementing a web-base system for monitoring and managing dust and air pollution

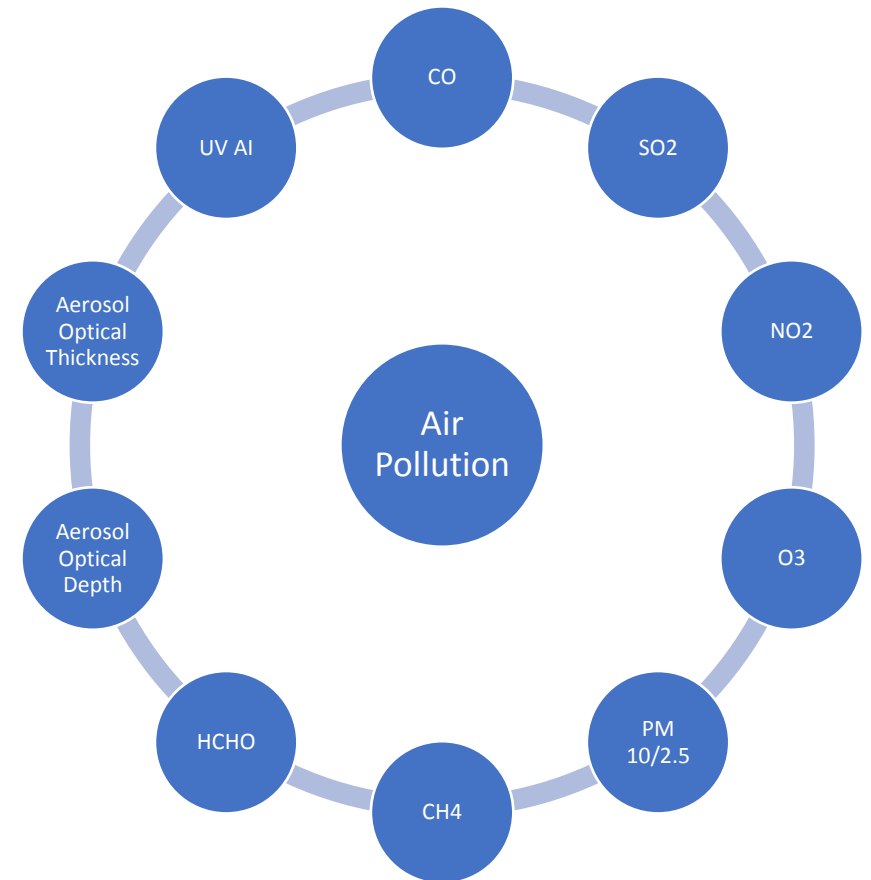
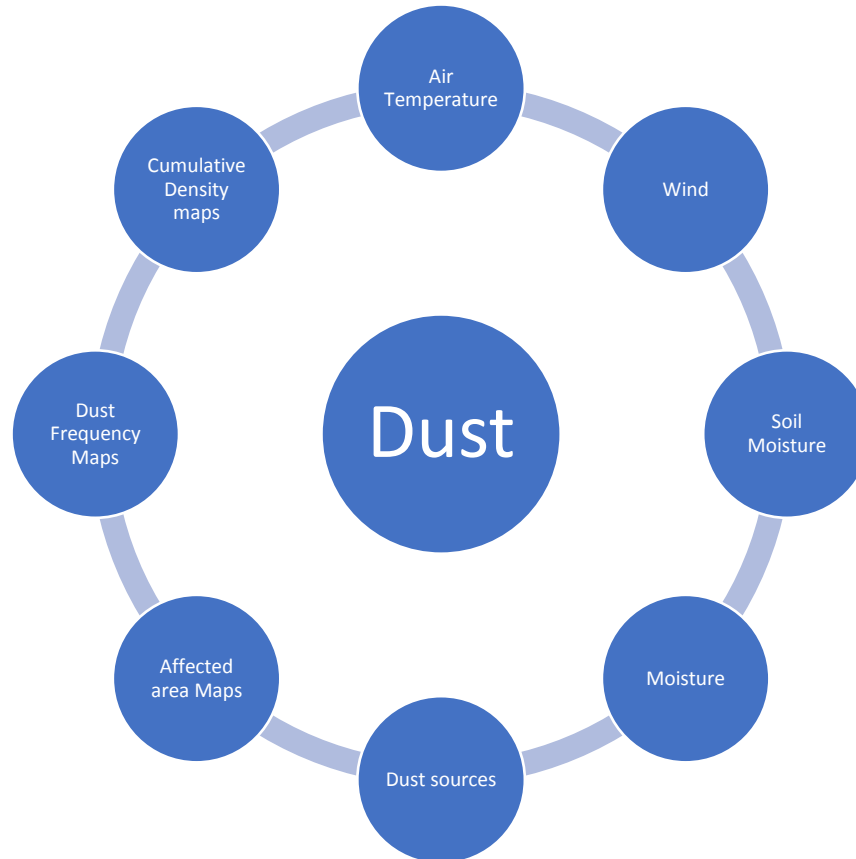




# Disaster risk reduction and resilience

## Dust Monitoring

- Web-based management system for satellite monitoring of dust and air pollution (under development)

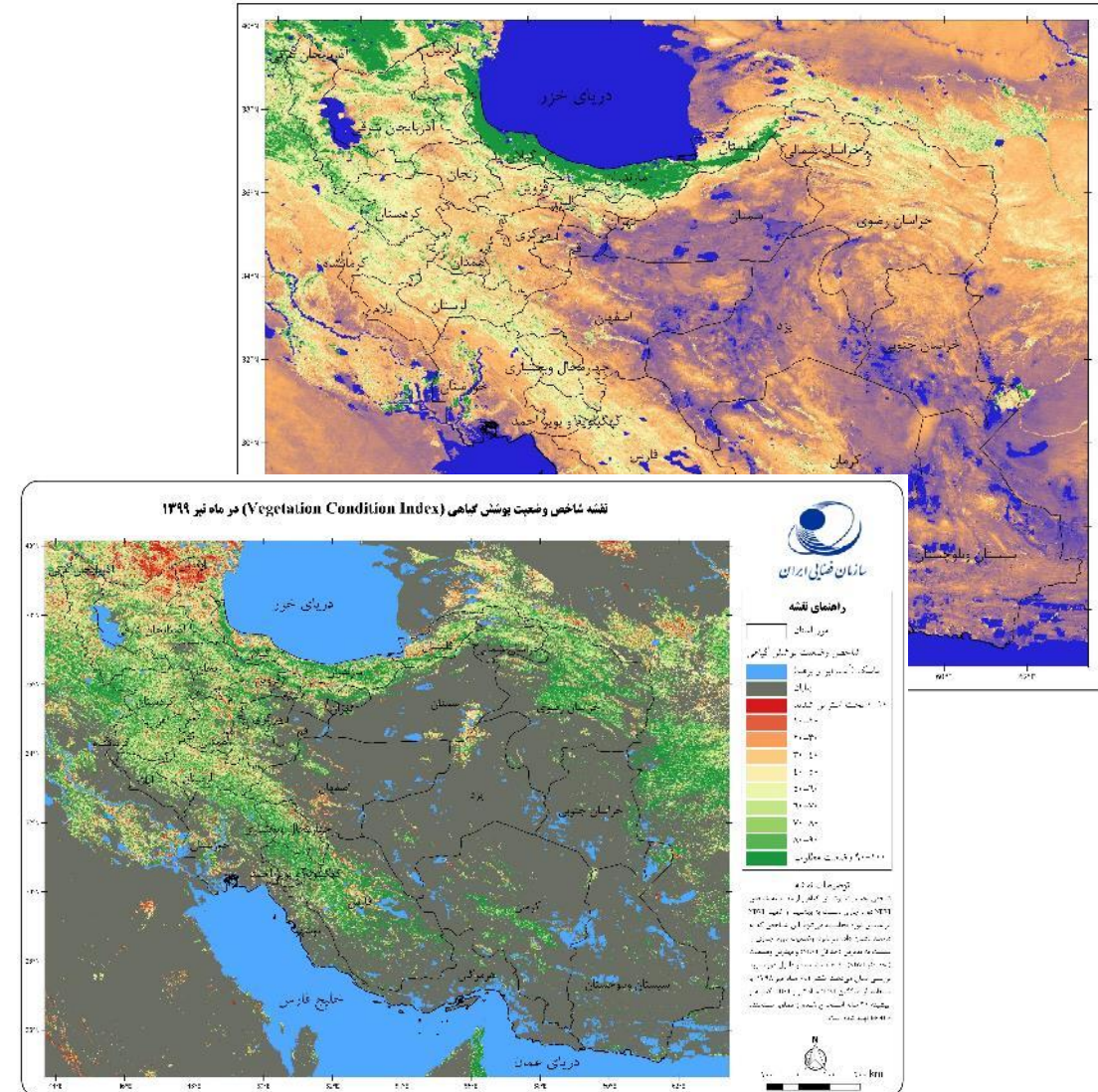


# Disaster risk reduction and resilience

## Satellite monitoring of Drought and plant stress

# Satellite monitoring of Drought and plant stress

- Monthly Assessment of plant stress and drought overall condition using vegetation indices (NDVI& VCI)
- Analyzing/ comparing current condition with prior periods
- Detect and alarm regions with water stress





# THANK YOU

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