

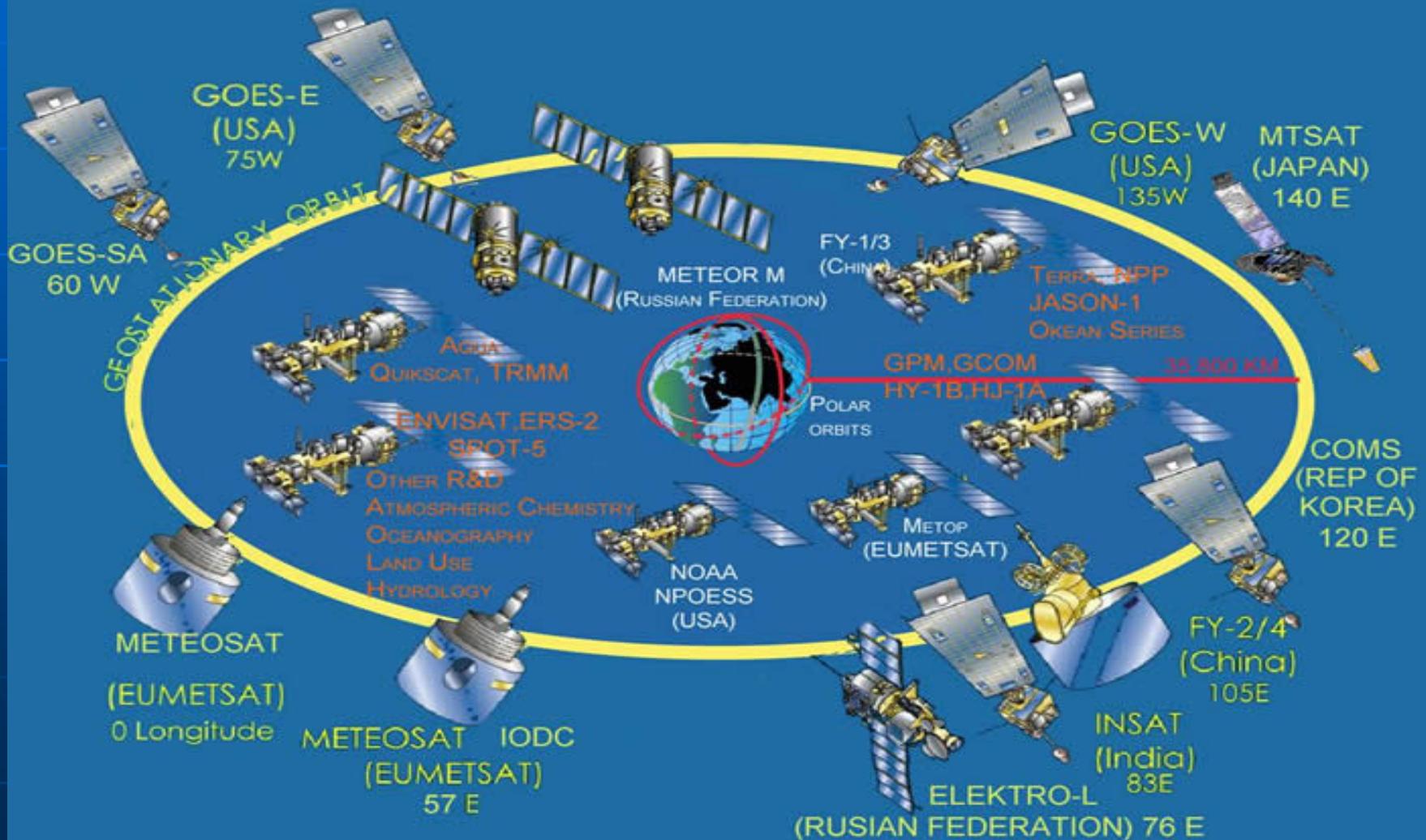
SATELLITE INFORMATION IN ECONOMY MANAGMENT

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ARMSTATEHYDROMET



Global network of meteorological satellites



Use of satellite data and products

- Operative hydrometeorology
forecasting
- Monitoring
disaster, ecology, global climate
- Recherche
ecology, global climate

Satellite information use in Weather Forecasting

- Nowcasting and Very Short Range Forecasting
- Forecasting for Aviation, Marine and Land transport
- Prediction of hazardous weather
- Data for Numerical Weather Prediction

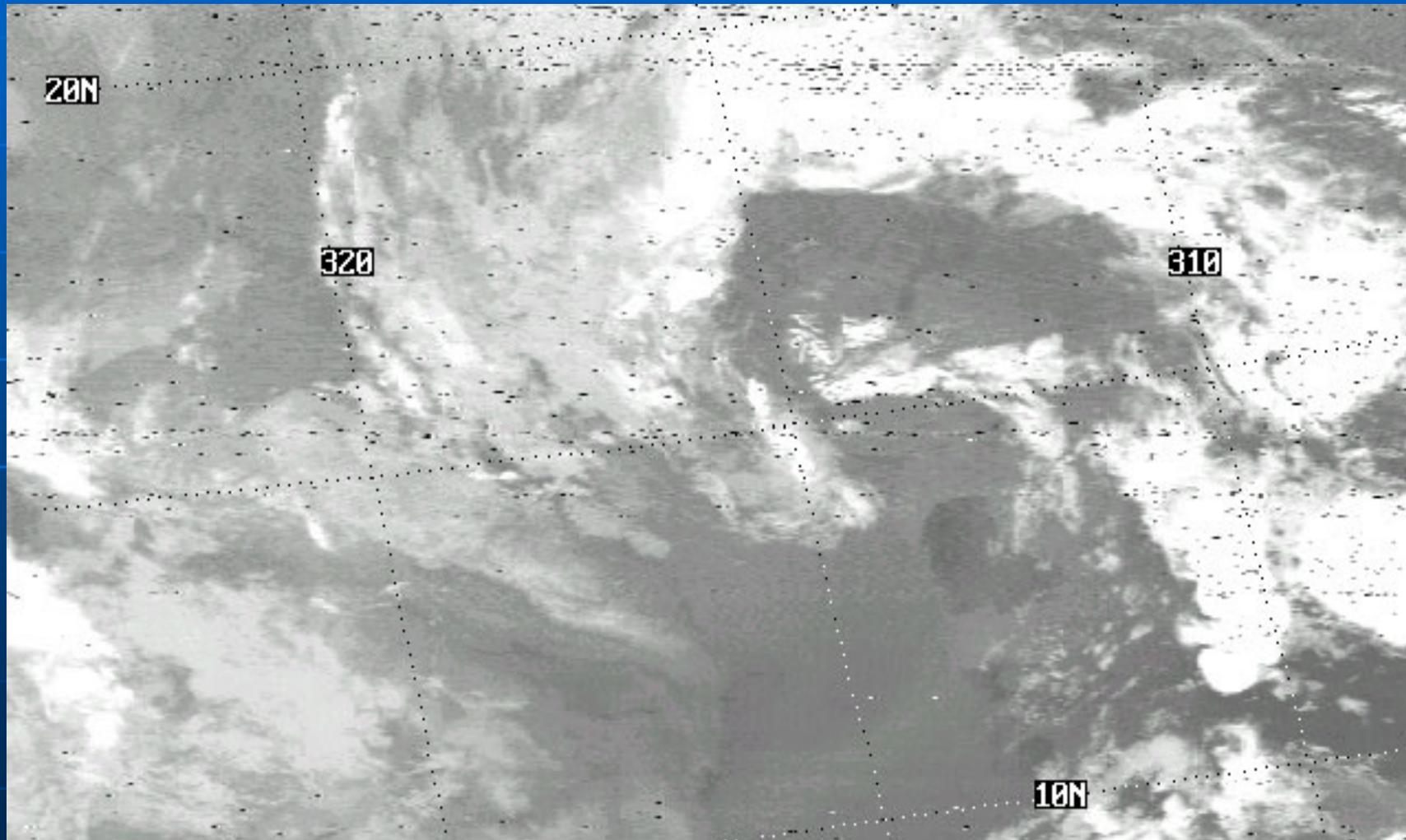
Satellite information use in Armstatehydromet

Data used for weather forecasting

- EUMETSAT - www.eumetsat.org
- EUMETCast – EUMETSAT's data distribution system
- SRC of Space Hydrometeorology PLANETA
<http://sputnik.infospace.ru>

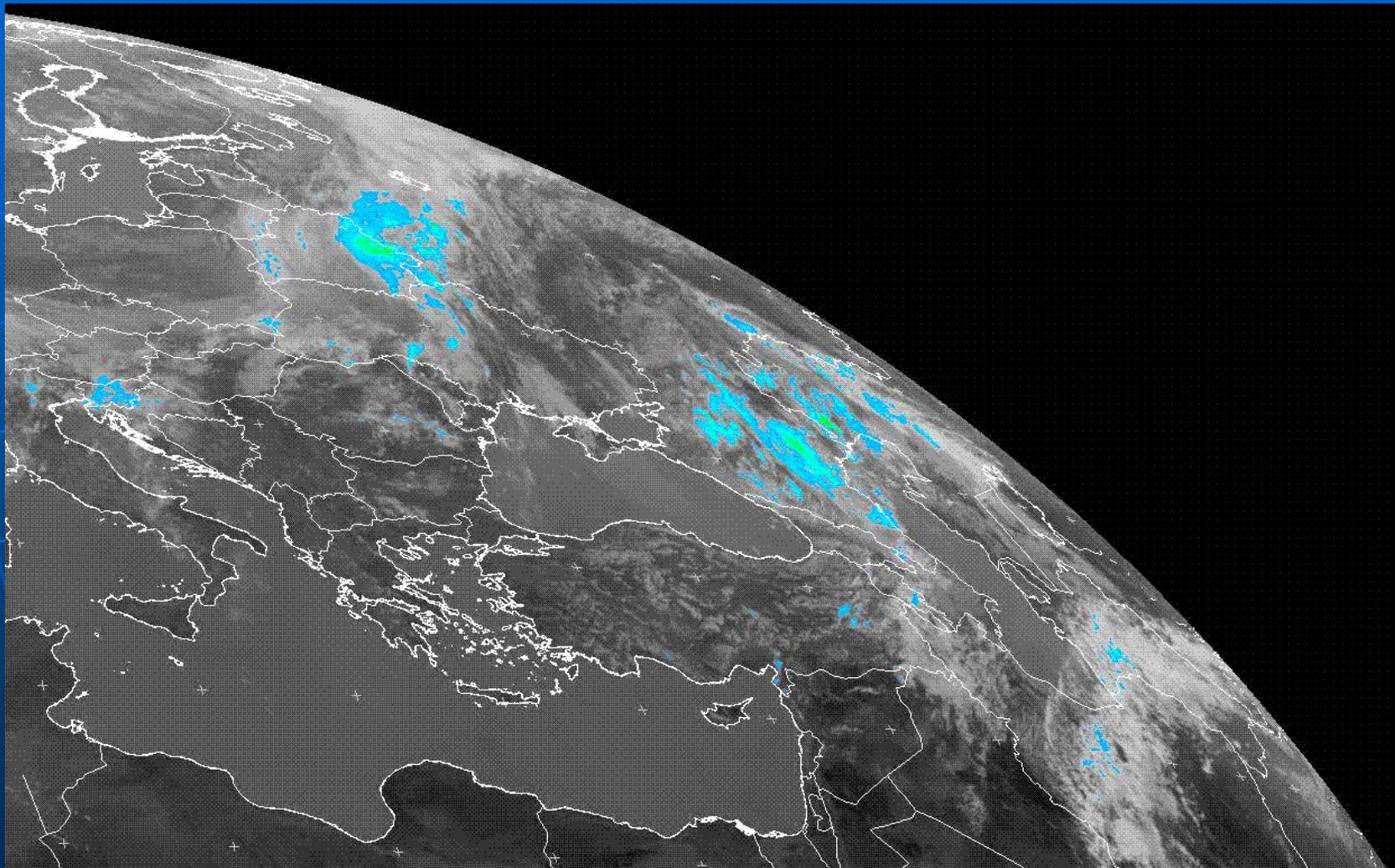
Image from Polar-orbiting satellites *NOAA*

Tecnavia "Skyceiver View"



Satellite image from EUMETSAT

www.eumetsat.org

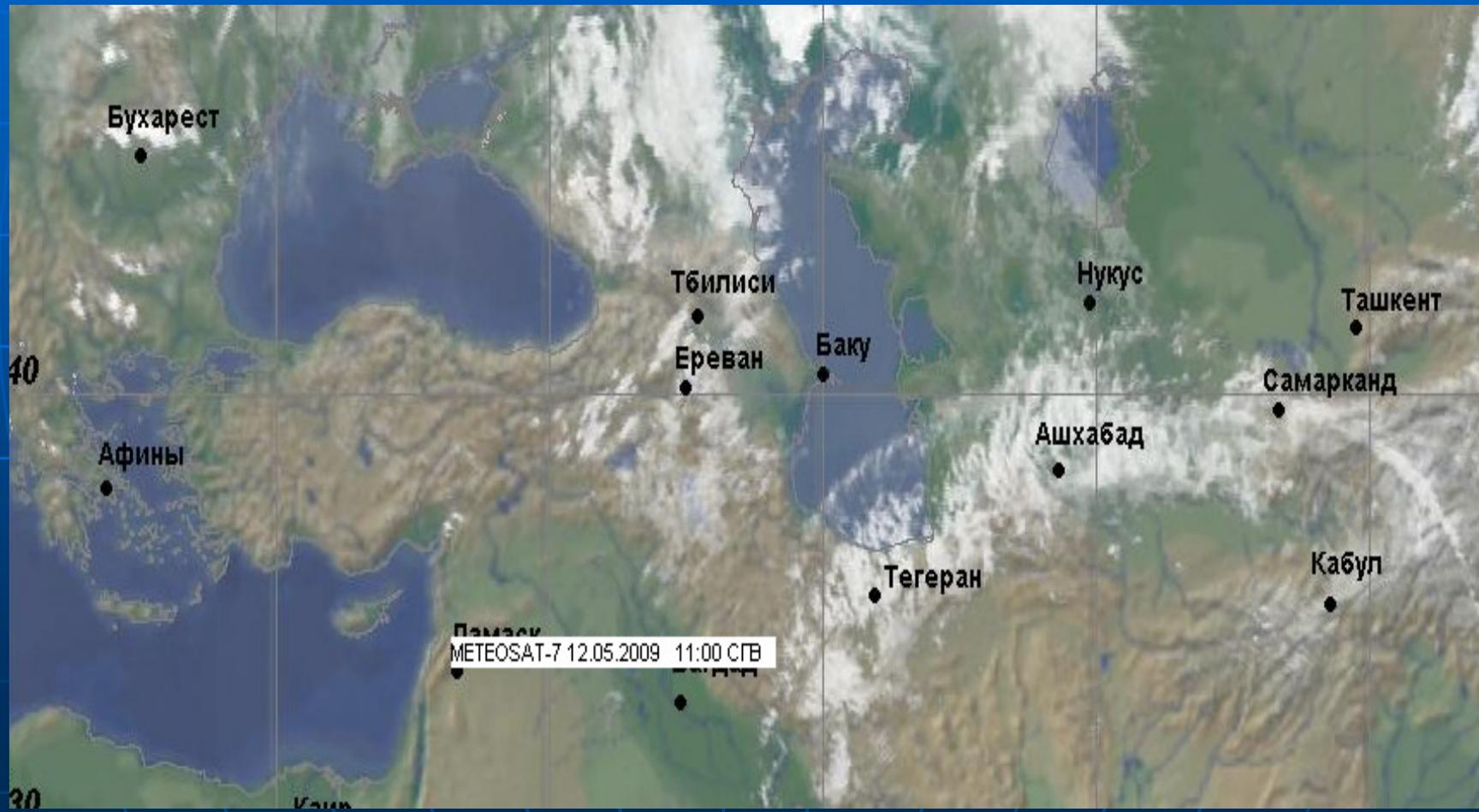


MPEF MPE 2009-05-12 09:00 UTC

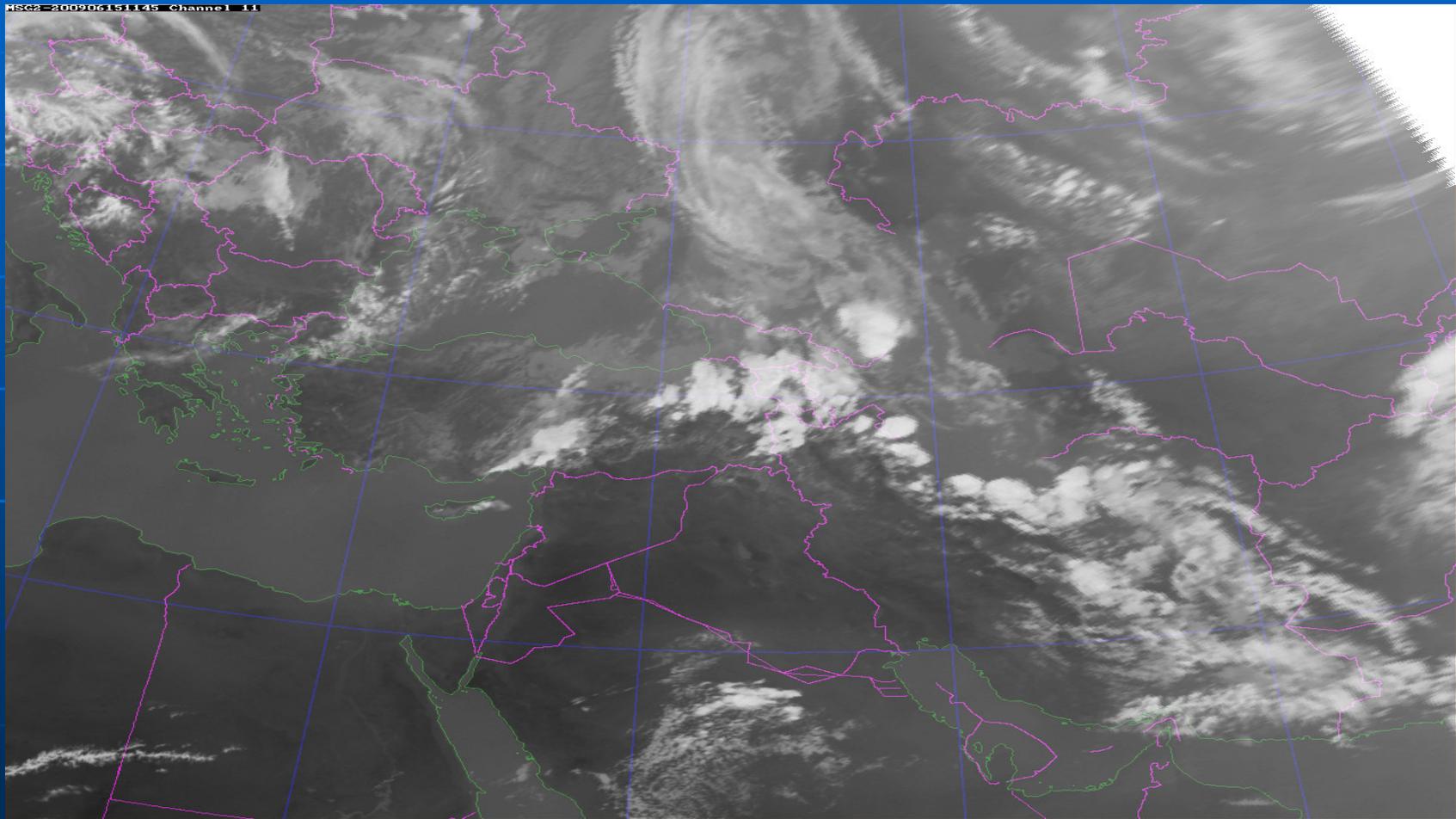
 EUMETSAT

Satellite image from Scientific Research Center of Space Hydrometeorology "Planeta"

<http://sputnik.infospace.ru>



Summer convection on satellite image



Observing the Atmosphere

- Clouds
- Precipitation
- Dust and Aerosols
- Volcanic Ash Plumes
- Stratospheric Ozone and Dynamics

Satellite information use in Armstatehydromet

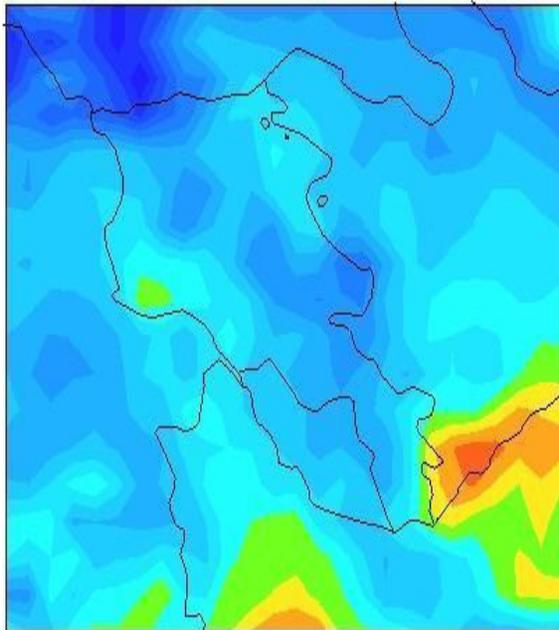
Data used for climate monitoring in Armenia

*For climate monitoring Armstatehydromet with
Eumetsat and Meteorological division of Germany
(DWD) perform project using satellite information*

CM-SAF

Monthly solar radiation derived from SM-SAF

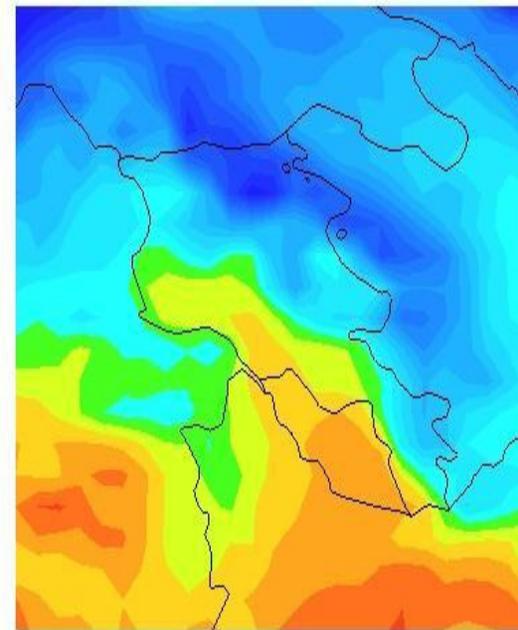
Incoming Solar radiation Jan 2006 Armenia



SIS W/m²

28.1 38.1 48.1 58.1 68.1 78.1

Surface Incoming Solar Radiation for July 2006 in Armenia

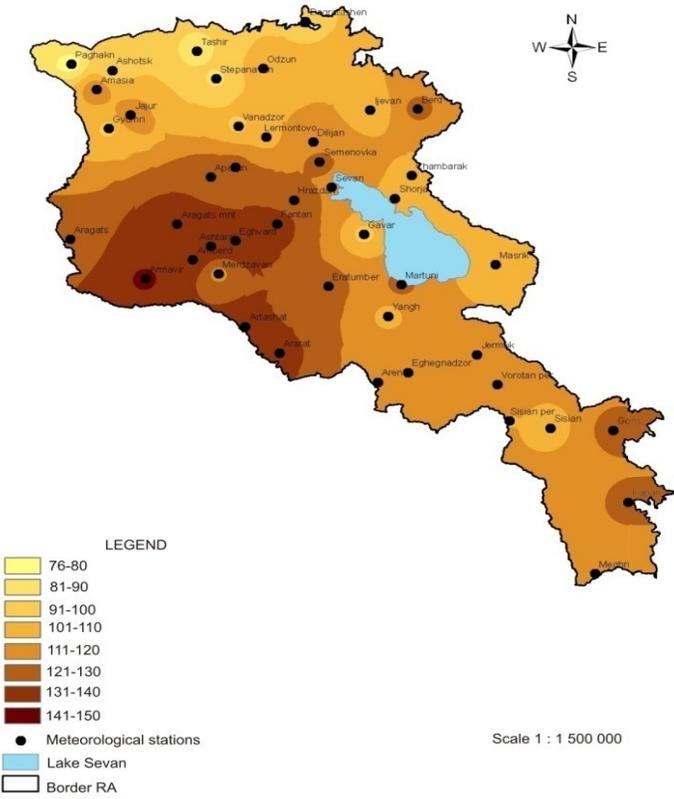


SIS W/m²

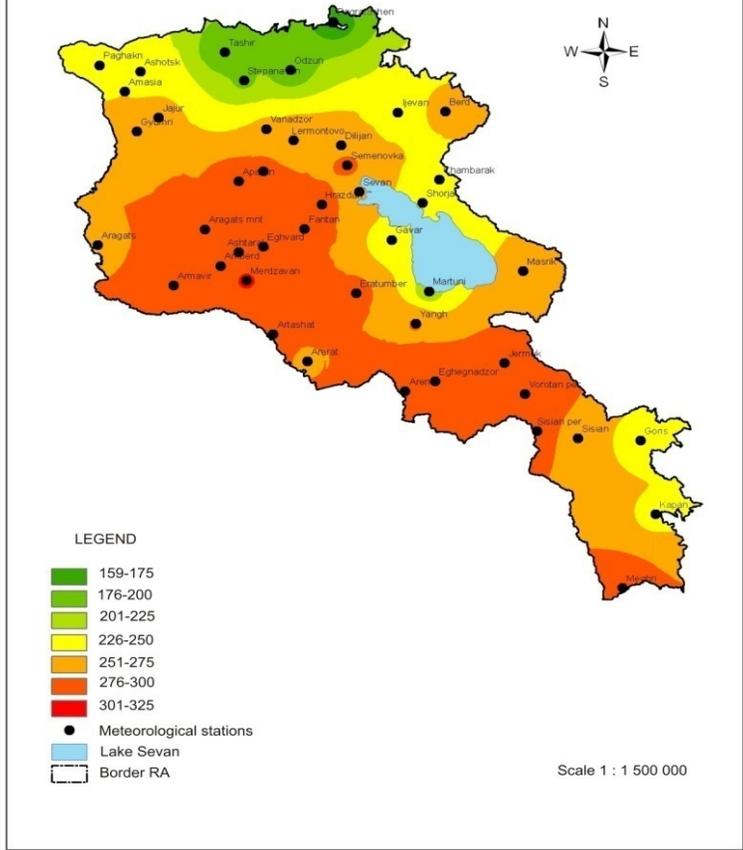
149.7 169.7 189.7 209.7 229.7 249.7 269.7 289.7 309.7 329.7

Interpretation of satellite data with observed data

Solar radiation in January 2006 for Armenia



Solar radiation in July 2006 for Armenia



Observing the Ocean and Land Surface

- Sea Surface Temperatures
- Forest Fires
- Vegetation Mapping
- Drought and Crop Yields
- Snow and Ice
- Floods

The Most Observed and Hazardous Phenomena

- Hail
- Frost
- Strong wind
- Heavy Rain
- Flooding





**Tornado on slopes of mountains Pambak,
June 6-th 2005**



Size of a hailstones dropped out in village Hovtamegh



Aghstev 2007 april 30



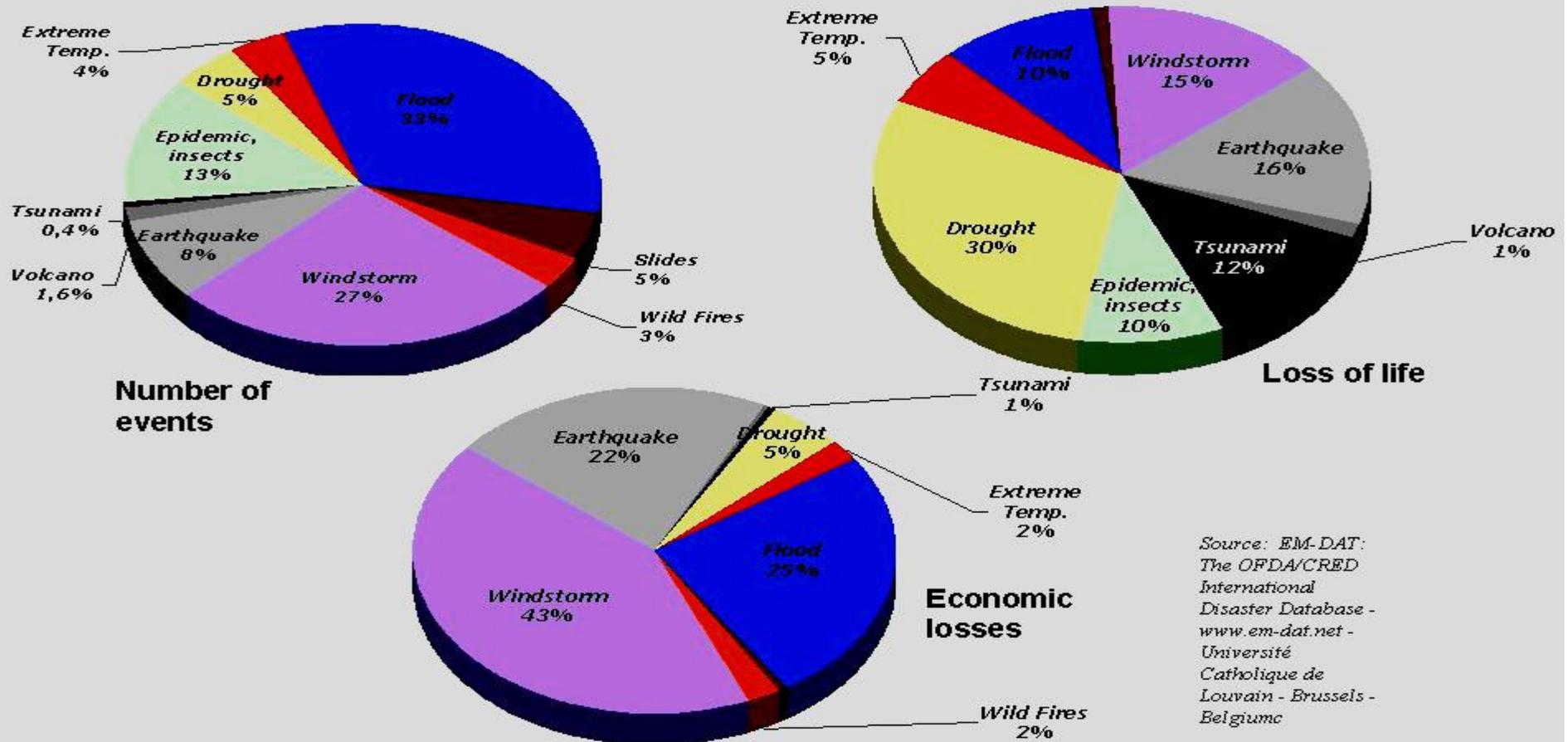


Disaster risk reduction

- Disaster risk reduction is at the core of the mission of the World Meteorological Organization (WMO), and the National Meteorological and Hydrological Services of its 188 members. WMO through its scientific and technical programs, its network of Global Meteorological Centers and Regional Specialized Meteorological Centers, and the NMHSs, provides scientific and technical services. This includes observing, detecting, monitoring, predicting and early warning of a wide range of weather-, climate- and water-related hazards.

- **Every year, disasters related to meteorological, hydrological and climate hazards cause significant loss of life, and set back economic and social development by years, if not decades. Between 1980 and 2005, nearly 7500 natural disasters worldwide took the lives of over 2 million people and produced economic losses.**
- **Of this, 90 % of the natural disasters and 75 % of economic losses were caused by weather, climate water related hazards such as droughts, floods, windstorms, tropical cyclones, extreme temperatures, land slides and wild fires, or by health epidemics and insect infestations directly linked to meteorological and hydrological conditions**

Global distribution chart



With increasing population pressure throughout the world and the need for increased agricultural production there is a definite need for improved management of the world's agricultural resources. To make this happen it is first necessary to obtain reliable data on not only the types, but also the quality, quantity and location of these resources. Satellite technology has been and always will continue to be a very important factor in the improvement of the present systems of acquiring and generating agricultural and resources data.

Today about three-quarters of all natural disasters are related to weather, climate and water and their extremes..

Progress in the meteorological and hydrological sciences shows that the impacts of natural hazards can be reduced through prevention and preparedness

Thank you for attention