Introduction of FENGYUN Meteorological Satellite data reception in Tajikistan

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CONTENT

• 1) SWAP
• 2) FY-2H\FY-4A
• 3) Tajikistan Monitoring System
In 2009, a system for receiving satellite products was provided from the CMA to the TajikHydromet. In 2012, the system was completely updated, CMA installed 3 new computers and a receiver (HTD RSEA-100). From 2012 to 2015, everything worked and the weather forecaster department actively used for forecasting. After some time, it stopped receiving data from the satellite, large trees grew around the satellite dish and built tall apartment buildings, preventing the satellite dish from receiving data. In 2017, engineers from CMA changed the location of the satellite dish and updated the program, data began to flow.
3. How we can get satellite data?

CMACast

broadcast

China

receive

Tajikistan

receive
As part of the Hydrometeorological Services Modernization project, in 2016 – 2018, 54 Weather Stations were automated and 16 automated Hydrological stations.
AWS System Project of Tajikistan

Iridium Satellite → GPRS Tower → Observer Station → Automatic Weather Stations → DATA CENTER

DATA CENTER

Automatic Weather Stations

Observer Station
Logical layout of Network configurations by model equipment
Logical layout of connections of computer and network equipment

Scheme of connection computer and network equipment

- Tajik Hydromet Office
- Firewall
- Switch
- System Unit
- System Unit
- Internet
- Communication operator (manual data)
  - Server UNIMAS
- Server
- Server
- www.meteo.tj
Screenshot from the Interface with parameters

Central Data Acquisition Centre

Atmosphere pressure, wind speed, air temperature
Calibration of meteorological and hydrological instruments (sensors)

Until 2018, we sent for calibration to other countries for calibration of meteorological and hydrological instruments (sensors).

Thanks to the modernization project, everything necessary was acquired and the employees were trained for two weeks so that we ourselves could calibrate our devices that we have, as well as a certificate that the sensor was calibrated.
NHMS staff training process

Barometer Calibration
The resources used for the preparation of weather forecasts

1) Ground-based data (52 meteorological stations);
2) SYNOPTIC map:
   - Surface map
   - The ring map
   - Absolute topography;
   - Relative topography;
3) Predictive maps
   - Forecast maps of SC below 400MB
   - Field pressure and geopotential height
   - Field humidity (at-700)
   - Field of winds (at-200), etc.
4) Meteograms NWP:
   - KMA
   - JMO
   - KMO
   - ECMWF
   - COSMO-CA, etc.
5) Satellite information:
   - EUMETSAT
   - FY-2H (China) online
   - FY-4A (China) online
Products COSMO
Thank you for your attention!

2019-2021 – Year of the Tourist