



World Meteorological Organization
Working together in weather, climate and water

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Statements of the national hydrological service of Russia

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Organization, role and main tasks

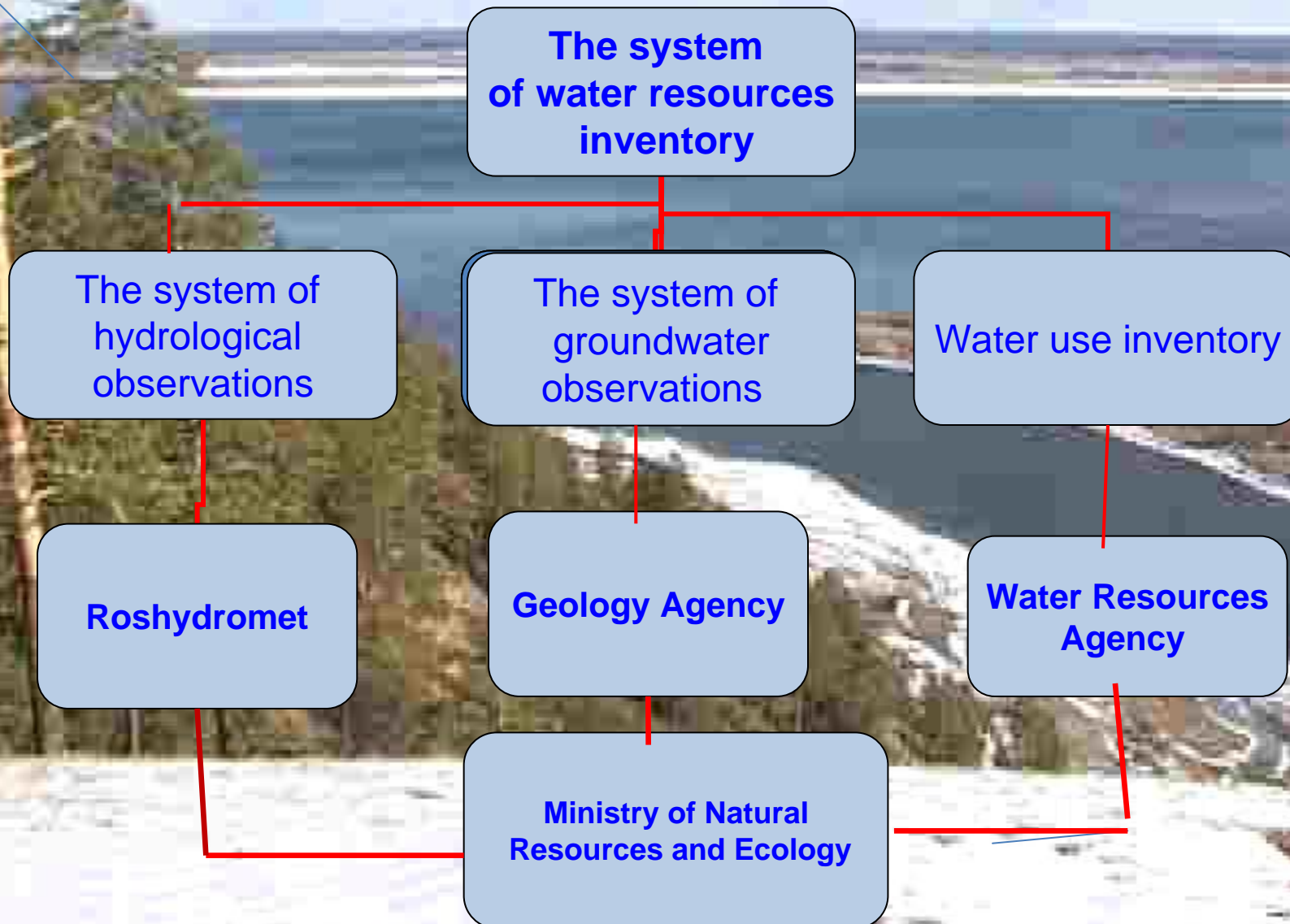
Show briefly the organisation of your NHS

Hydrological service of Russia is part of the Federal service for hydrometeorology and environmental monitoring (Roshydromet). Twenty three large regional branches of Roshydromet operating within the territory of Russian Federation perform monitoring of a wide range of environmental parameters including hydrological observations. Organization of regional branches is based on the so-called “basin principle”, which means that any region generally includes large river basins or their large parts. Russian hydrological service comprises three major components: data acquisition subsystem (hydrological network), data collection subsystem and a subsystem of data processing and generation of information products. Hydrological observations are made in accordance with single specified programs and techniques throughout the whole Russian territory. Methodological guidance for the hydrological service is provided by the State Hydrological Institute.

Mention here 3 main tasks and their users (policy, society, research, etc.)

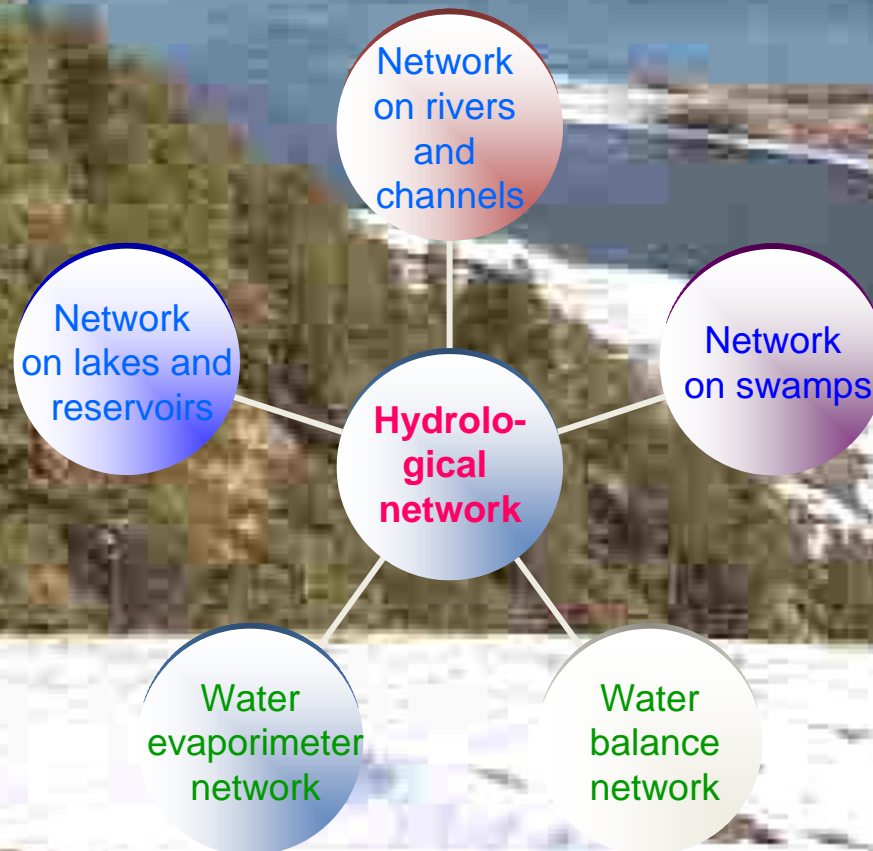
- Current and future assessment of water resources and hydrological regime of water bodies (hydrological monitoring) including evaluation of their changes under climate variations and anthropogenic impacts (users: policy makers, economists, scientists).
- Hydrological forecasting and monitoring of hazardous hydrological events (users: policy makers, economy, emergency services, society).
- Hydrological validation for projection, construction and operation of various engineering constructions on water bodies of the country (users: economy, society).

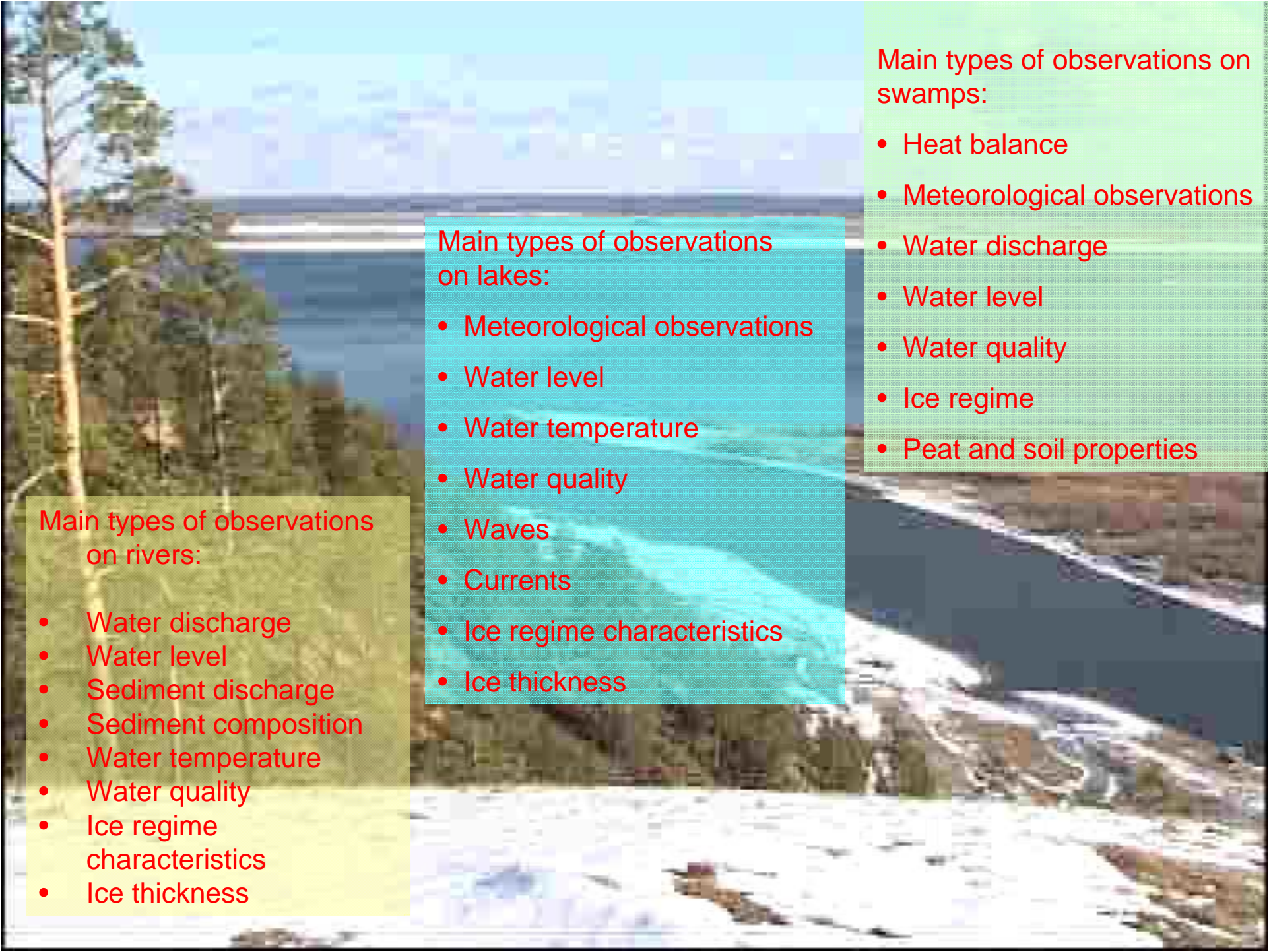
The system of hydrological observations is the main source of information on the surface water.



Hydrological network is the main part of surface water inventory. Hydrological observation data are required for many branches of the national economy, scientific purposes, environmental requests and others. Therefore, the requirements for this information are diverse with time.

Main components of hydrological network





Main types of observations on swamps:

- Heat balance
- Meteorological observations
- Water discharge
- Water level
- Water quality
- Ice regime
- Peat and soil properties

Main types of observations on lakes:

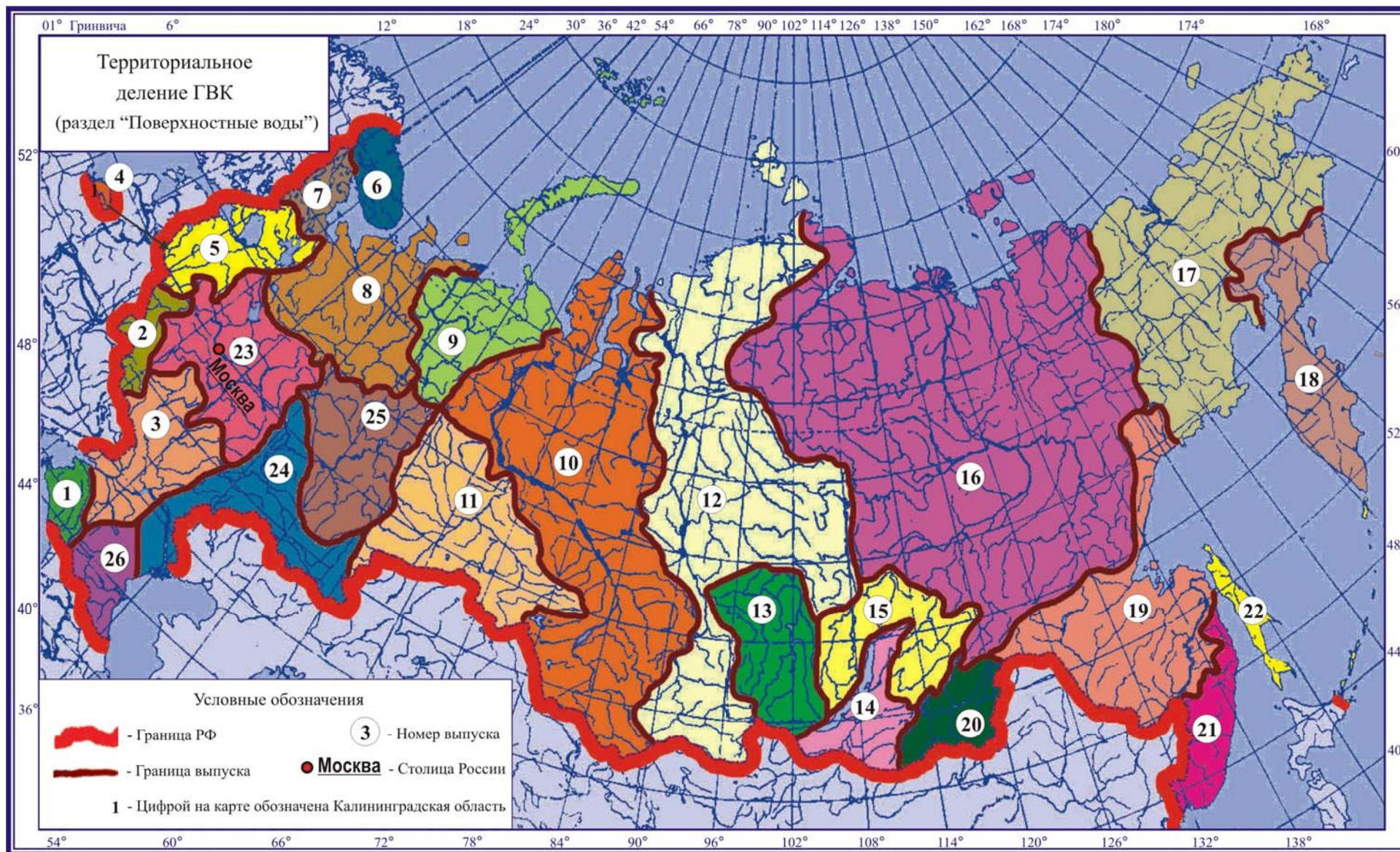
- Meteorological observations
- Water level
- Water temperature
- Water quality
- Waves
- Currents
- Ice regime characteristics
- Ice thickness

Main types of observations on rivers:

- Water discharge
- Water level
- Sediment discharge
- Sediment composition
- Water temperature
- Water quality
- Ice regime characteristics
- Ice thickness

Dynamic of hydrological network

Number of stations						
Rivers		Lakes	Swamps		Evaporation	Water balance stations
Total	Discharge		Stations	Posts		
1986						
4161	2664	514	6	15	302	8
2011						
2731	2185	354	3	8	138	4



Biggest success

Tell briefly the biggest success of your service within the last 5 years (only 1 case).

The greatest success is associated with implementation in the period from 2009 to 2011 of a hydrological part of the project «Modernization and technical re-equipment of Roshydromet's organizations» at the expense of the World Bank's loan. Within the framework of this project, a complex hydrological observing system was established in the Kuban', Ussuri and Oka river basins.

What makes you happy at work?

This system increased the accuracy and reliability of hydrological observations in these river basins through installation of automated complexes, decreased time of data transmission from observation points to data collection centres down to real time scales, and increased lead time of dangerous flood forecasts by 1 to 3 days and flash flood warning lead time from 30 minutes up to 3-6 hours.

Biggest failure

- **Tell briefly the biggest failure of your service within the last 5 years (only 1 case).**

The deepest decline of the Russian hydrological network occurred in the period from 1991 to 2002 after collapse of Former Soviet Union.

- **What makes you unhappy at work?**

The number of regular hydrological stations decreased by 30% on average throughout the whole territory and by 50% in some individual regions. The specialized hydrological network including stations for measuring evaporation from water, land and snow surface, water balance and swamp observation stations, sustained very grate damage. The main reason behind this decay was the break-up of the Soviet Union and the consequent economic collapse.

Expectations

What are your main expectations :

At the national level

Implementation of the second stage of the project «Modernization and technical re-equipment of Roshydromet's organizations» in the period 2012-2014. During this period hydrological network in the Volga basin, the largest in the European Part of Russia, will be completely modernized. It is quite an urgent problem because the Volga basin is prone to hazardous floods, there is a large multireservoir system operating in this basin which requires provision of reliable hydrological forecasts. The largest water economy complex take place within Volga river basin.

At international level (possible assistance from WMO and member countries)

Initiation under the auspices of WMO of a large-scale international hydrological project on assessing changes in water resources and hydrological regime of large rivers of RA VI over the last 25-30 years (under financial support of WMO and RA VI countries)