The experience of Kazakhstan on formation of water statistics

AT Epbaeva - Head of production statistics and the environment

Geneva 2015.
The current system of water monitoring

- Statistics of water resources in Kazakhstan is conducted by a number of competent authorities:

  - КС МНЭ
  - КВР МСХ
  - КГН МИИР

  - КГСЭН МЗ
  - Казгидромет
  - Статистика водных ресурсов РК

- The main purpose of monitoring - to obtain information necessary for assessment and review of water resources and associated problems.
Monitoring water resources

- Committee on Water Resources of the Ministry of Agriculture generates statistics on water abstraction, the use of water, and sanitation in the Republic of Kazakhstan
- Committee on Statistics of the Ministry of National Economy of Kazakhstan generates statistics on water supply, sewerage and individual networks in the Republic of Kazakhstan
- Hydrometeorological Service "Kazgidromet" under the Ministry of Energy of the Republic of Kazakhstan, generates statistics on the status and quality of surface waters
- Committee on Geology and Subsoil Use of the Ministry of Investment and Development of the RK generates statistics on the status and quality of groundwaters in the RK
- Committee of State Sanitary and Epidemiological Supervision of the Ministry of Health produces statistics on the quality of drinking water in the RK
The interaction between government agencies and the exchange of data

- Statistical committee of the Ministry of National Economy is the authorized body for the development and implementation of state policy in the field of state statistics.
Data sources

National statistical supervision

Departmental statistical supervision

Data from administrative sources
Data collection methods

- On paper
- Online
SC MNE

VC-1 "Report on the water supply system, sewerage and separate networks"

- The circle of respondents: All legal entities and (or) their structural and subdivisions with primary or secondary activities "The collection, processing and distribution of water", "sewage system" according to the codes of the General Classification of Economic Activities - 36, 37.

CWR MA

2-TP (Water Facilities) "Report on water abstraction, use of water and sanitation"

- The circle of respondents: Water users, who use water for agriculture, industrial, household needs and hydropower.
Condition and quality of surface waters

- Kazhydromet permanently monitors the condition and quality of surface waters in Kazakhstan.
- Hydrological observations are carried out on 302 gauging stations (GSs), including 258 rivers, 35 lakes (LGs) 9 Marine (MGs) as well as 3 nautical meteorological stations (NMGSs), observing 155 rivers, 16 lakes, 6 reservoirs, 3 canals and 2 seas.
- 55 rivers cross the borders of Kazakhstan (China - 24 rivers, Russia - 20 rivers, Kyrgyzstan - 9 rivers and Uzbekistan - 2 rivers).

On main waterways, there are 33 gauging stations in operation.

- Main types of observations:
  - the level and temperature of the water, ice phenomena - 302 GS;
  - water consumption measurement- 243 GS;
  - roughness of the sea, salinity and wind-surges - 9 MGs;
  - water sampling for chemical analysis - 214 GP;
  - meteorological observations - 131 GP.
Map of gauging stations

- Каспийское море
- Аравское море
- Сырдарья
- Иртыш
- оз. Балхаш
ЕЖЕДНЕВНЫЙ СЕЛЕВОЙ БЮЛЛЕТЕНЬ № 70
7 сентября 2005 г., среда.

В прошедшие сутки в горах Закаспийского Алая температурный фон повысился в среднем на 0,5-1 °C. Ночная температура оставалась в 6 час утра на высоте 40-70 м. Максимальная температура воздуха на высоте 3000 м составила 17 °C, минимальная – около 8 °C. На бассейнах рек Закаспийского Алая продолжается низкое накопление водности, немного увеличилась водность на реке Туркестан. Небольшая влажность в низине еще сохраняется на реке Тудыр.

ПРОГНОЗ ВАЖНЕЙШИХ ГИДРОЛОГИЧЕСКИХ ЯВЛЕНИЙ

В ближайшие сутки на горных реках Алматинской области возможен незначительный накопления водности.

ПРОГНОЗ ПОГОДЫ ПО ГОРАМ

на 8 сентября

Закаспийский и Джуарская Алатау

Кыргызский вулкан, гром.

Температура на 2000 м: около 10-10 °C, днем 10-20 °C.
3000 м: около 4-6 °C, днем 10-12 °C.

Таласская Алатау

Местами кратковременный дождь, гроз.

Температура: ночью 10-15 °C, днем 22-27 °C.

Закатский Алтай и Табышкын

Местами кратковременный дождь, гроз.

Температура: ночью 2-10 °C, днем 22-25 °C.

Адрес: 050022 г. Алматы, пр. Альма, 32
Data on groundwater resources is produced on an annual basis, based on the results of geological exploration, by the Committee of Geology and Subsoil Use of the Ministry for Investment and Development.

Monitoring of groundwater quality analysis is carried out by the “Information Analysis Center” of the Committee of Geology and Subsoil Use.
The country is roughly divided into 8 pools of water:
1) Aral-Syr Darya;
2) the Balkhash-Alakol;
3) Irtyshksy;
4) Ishim;
5) Nur-Sarysu;
6) Tobol-Turgai;
7) Ural-Caspian;
8) Shu-Tallasky.
Map of water basins
Collection and use of water

• Data on water abstraction and use of water (surface and underground), is formed once a year on the basis of departmental monitoring 2-TP (Data on water use) "Report on water abstraction, use of water and sanitation".

• This form is submitted by water users, who use water for agriculture, for industrial purposes, household needs and hydropower.

• According to the results of the monitoring, figures are published:
  - Water abstraction and categories of water quality;
  - Water abstraction for use, recycling and reuse;
  - The use of water according to category of needs;
  - Discharge of sewage, coal mines and drainage waters;
  - Discharge of pollutants into surface water bodies.
• Collection of "Environmental protection and sustainable development of Kazakhstan"
• Bulletin "On the water and sewerage facilities in the Republic of Kazakhstan"
• Bulletin "The main indicators of water abstraction, the use of water and sanitation in the Republic of Kazakhstan"
• National report on the state of the environment in the Republic of Kazakhstan
• Law of the Republic of Kazakhstan "On state statistics" from March 19, 2010 № 257-IV

• Methodology of indicators for environment statistics
Quality of the submitted data

- Methods of data editing (according to this method, the thresholds are analyzed).
- At all stages of data entry and processing, are provided Format Logic (FLC) and Arithmetic Logic (AL) controls are considered.
- Feedback is received from the respondents (according to paragraph 4 of Article 13 of the "Law on State Statistics of the Republic of Kazakhstan" in the case of distortion, errors, errors in the production of statistical information to validate the primary statistical data from respondents require additional information).
- Revision of statistical forms is conducted annually.
Joint order between the CS MNE and ME for the exchange of data on environmental statistics (from August 6, 2012 №202).

In 2013, a working group for the implementation of SEEA in Kazakhstan was formed.

In 2015, a working group for the implementation of green economy indicators was formed.

In the framework of the Kazstat project, together with international experts, workshops were organized with the participation of government officials responsible for maintaining the water statistics.

In the second half of the following year, together with the OECD it is planned to conduct a workshop on environmental indicators in the framework of which, water resources will also be discussed.
There are still gaps in the data

- In calculating the index of exploitation of water resources, the long-term average annual renewable fresh water for the past 14 years (must be 20 years) was used.
- Observation of evaporation is carried out by individual weather stations, there is no method for the calculation of the national total evapotranspiration.
- Monitoring groundwater inflow is not conducted.
- Monitoring of groundwater outflow is not conducted.
• SC MNE - [www.stat.gov.kz](http://www.stat.gov.kz)
• CGSU MID - [www.geology.gov.kz](http://www.geology.gov.kz)
• CWR MA - [www.mgov.kz](http://www.mgov.kz)
• Kazhydromet - [www.kazhydromet.kz](http://www.kazhydromet.kz)
• MH - [www.mzsr.gov.kz](http://www.mzsr.gov.kz)
Thank you for your attention

- Questions ???