



Indicators of sustainable water use in the KPI system of "smart" sustainable cities

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"Smart" sustainable city

- It is an innovative city using information and communication technologies (ICT) and other means to improve the living standards, efficiency of services and services in cities, as well as competitiveness, while meeting the needs of present and future generations in economic, social, environmental and cultural aspects.





Combining efforts to build "smart" sustainable cities (U4SSC)

U4SSC – this is the UN initiative aimed at:

- **achievement of Goal 11 in the field of sustainable development** "Ensuring the openness, security, resilience and environmental sustainability of cities and human settlements“;
- **Encouraging the use of ICT** to facilitate the **transition to "smart" sustainable cities** and simplify this process.



A decorative banner at the top of the slide. It features a green background with a white world map. A hand is shown holding a green globe, and a line of stylized human figures is walking towards the right.

U4SSC: KPI for "smart" sustainable cities

The purpose of developing international KPIs:

- establishing criteria for assessing the contribution of ICTs to making cities more "smart" and sustainable;
- providing cities with self-assessment tools (measuring the progress of your city).





Principles of KPI

- **Complexity:** A set of indicators should cover all aspects of SSC.
- **Availability:** KPIs must be quantifiable, and data for past and current periods should be available or easily collected.
- **Autonomy:** KPIs in one area should be autonomous or almost independent, i.e., avoid partial overlapping of KPI whenever possible.
- **Simplicity:** The concept of each indicator should be simple and accessible to the understanding of the city's stakeholders.
- **Timeliness:** This refers to the ability to represent the KPI on issues arising in the formation of SSC.





Structure of KPI

54 key indicators + 37 additional indicators

20 "smart" + 32 structural + 39 sustainable

132 data collection points

Economy

- ICT Infrastructure
- **Water supply and sanitation**
- Drainage
- Power supply
- Transport
- Government sector
- Innovations
- Employment
- Waste
- Building
- Urban Development

Environment

- Air quality
- **Water supply and Sanitation**
- Waste
- Quality of the environment
- Public spaces and nature
- Power Engineering

Society and Culture

- Education
- Health care
- Culture
- Living conditions
- Social integration
- Security
- food security





ECONOMY

ICT - key indicators

"Smart" water meters
The proportion of the introduction of "smart" water meters.

Control over water supply through ICTs
Percentage of water systems controlled by ICT.

Monitoring of sewage / storm water systems using ICTs
Percentage of sewage / storm water systems controlled by ICT.

Infrastructure - Key Figures

Basic water supply
Percentage of households with access to basic water supply.

Sewage collection
Percentage of households receiving wastewater collection services.

Supply of drinking water
Percentage of households receiving delivery services for safely managed drinking water.

Loss of water in water supply
Percentage of water losses in the water supply system.

Sanitation in households
Percentage of households with access to basic sanitation facilities.





ENVIRONMENT

Environment - Key Indicators

Drinking water quality

Percentage of households covered by an audited water safety plan.

Waste water treatment

Percentage of processed wastewater.

Water consumption

Consumption of water per capita.

Fresh water consumption

Fresh water consumption.

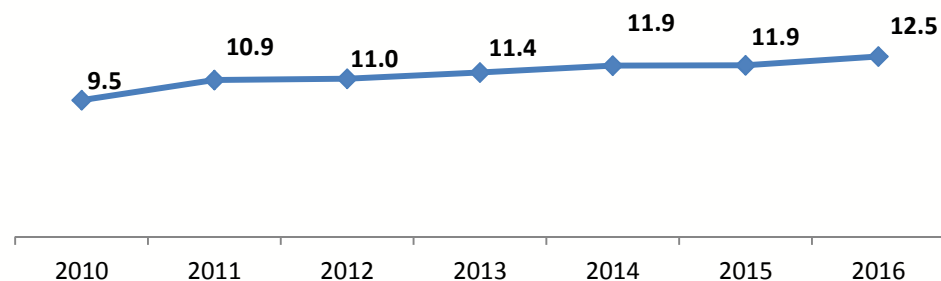




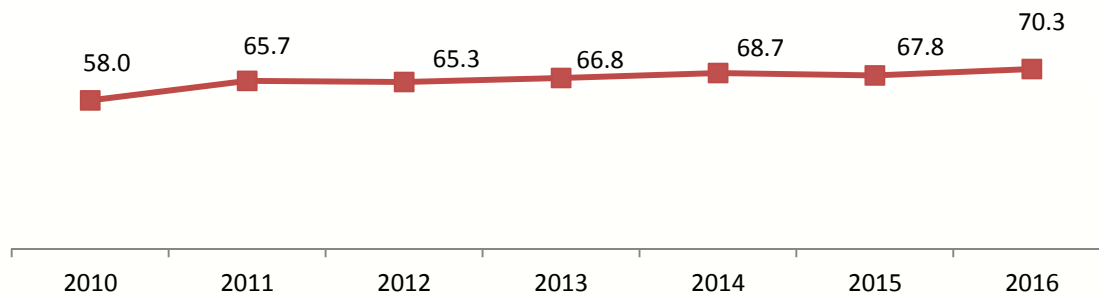
Infrastructure - Key Figures

In the statistics system of the Republic of Kazakhstan - the indicators of the Green Economy, the ecological quality of life

Population with sustainable access to safe drinking water, mln.people



Households connected to the water supply system, %

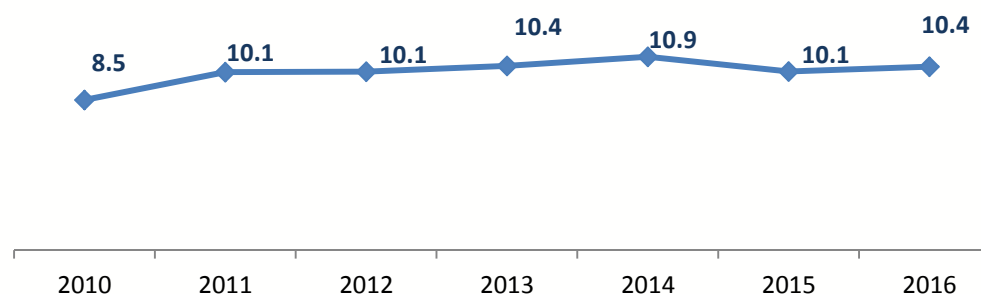


Source: stat.gov.kz

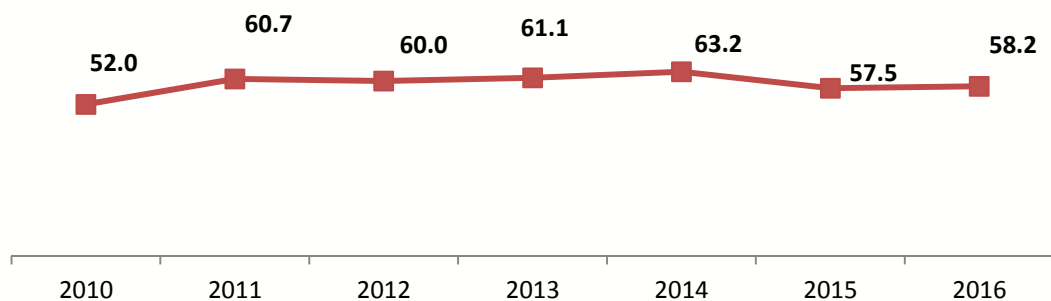
Infrastructure - Key Figures

In the statistics system of the Republic of Kazakhstan - the indicators of the Green Economy, the ecological quality of life

Population with access to sewerage services, mln.people



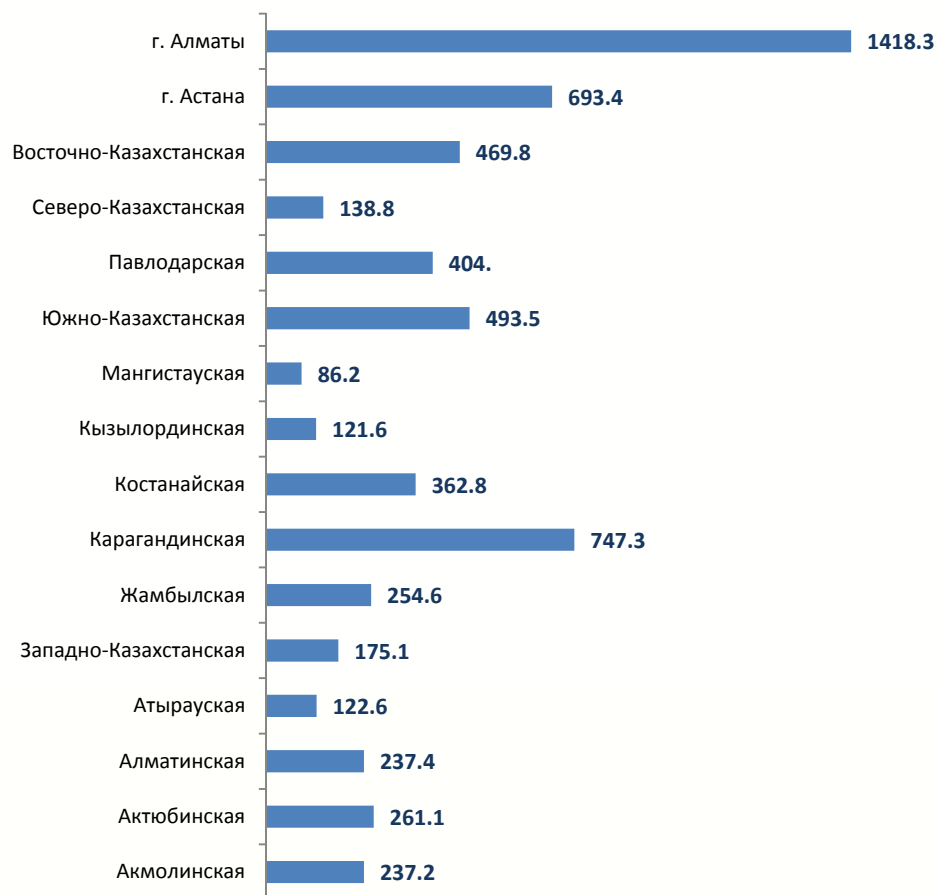
Households connected to sewerage, %



Source: stat.gov.kz

Infrastructure - Key Figures

Number of consumers connected to sewerage services among the population (million people), 2017.



Share of the population connected to sewerage services (%), 2017



Source: stat.gov.kz



In June 2018, Astana joined the initiative of sustainable cities and entered the international club of "smart" cities in the world

