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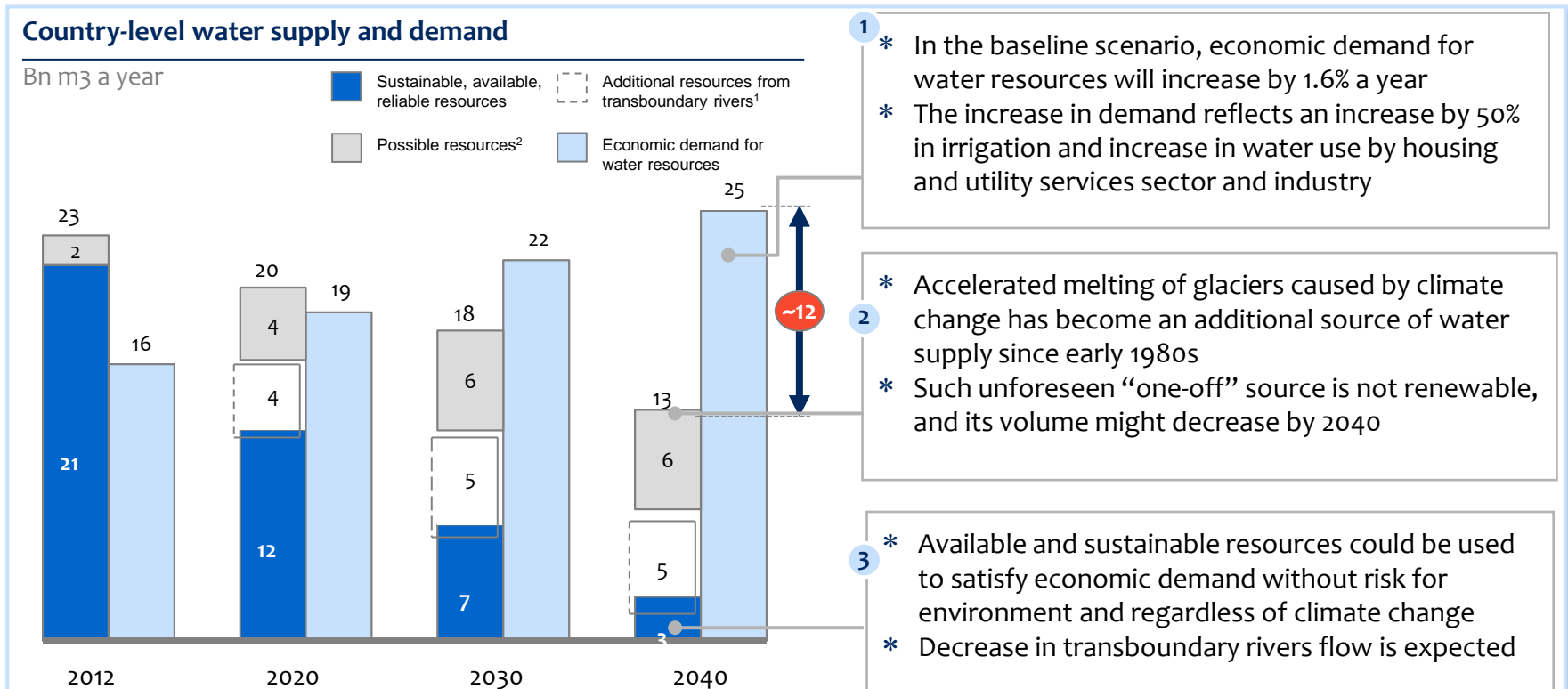
State Programme for Water Resources Management and Kazakhstan's Transition to Green Economy

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Concept for Transition of the Republic of Kazakhstan to Green Economy

- Approved by Decree of the President of the Republic of Kazakhstan No. 577 of 30 May 2013 as a tool to ensure sustainable development of the country
- **Green Economy (GE)** is defined as that with high living standards for the population and environmentally-friendly and efficient use of natural resources
- Seven key areas for transition to green economy:
 1. **Sustainable use of water resources**
 2. Sustainable and productive agriculture
 3. Energy saving and enhanced energy efficiency
 4. Development of electric power sector, increasing the share of renewable energy
 5. Sustainable waste management
 6. Air pollution abatement
 7. Conservation and efficient management of ecosystems
- Establishment of the national Council for Transition to Green Economy (chaired by the Prime-Minister of the Republic of Kazakhstan)

Water stress in Kazakhstan: by 2040, deficit will amount to about 12 bn m3 and will become a major impediment to future growth



Water stress has been growing and it might become a major limitation for economic development (opportunity cost is expected to amount to USD 7-8 bn a year) and an environmental threat if no drastic measures are taken to enhance water use efficiency and increase water supply volumes

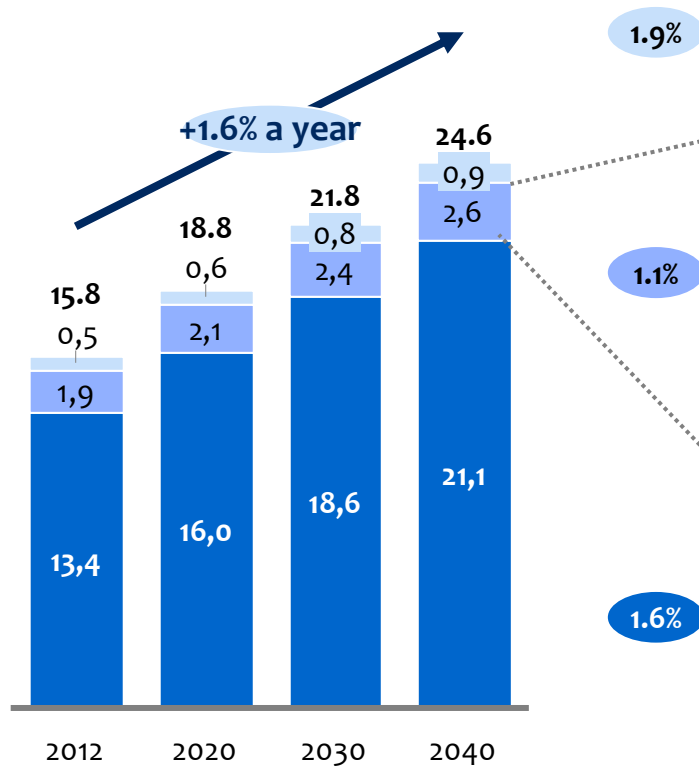
¹ Difference between two scenarios: a) countries limit increase in water use as per agreements and 2) countries use amounts above standards. Glacier runoff stability has been called into question; water availability could go down considerably in 2040.

Source: Water Resources Committee – General Chart, UNDP, Charting Our Water Future (2010), analysis performed by a working group.

Water consumption will go up by 56% by 2040 in baseline scenario if no measures to enhance water use efficiency are taken

Water Use Increase Rate¹

Bn m³ a year



Water Use in the Housing and Utility Services Sector

- * Increase in water consumption given average annual population growth by 1%
- * Share of urban population will go up to 73% which will result in increase by 35% of water consumption by population

Water Use by Industrial Sector

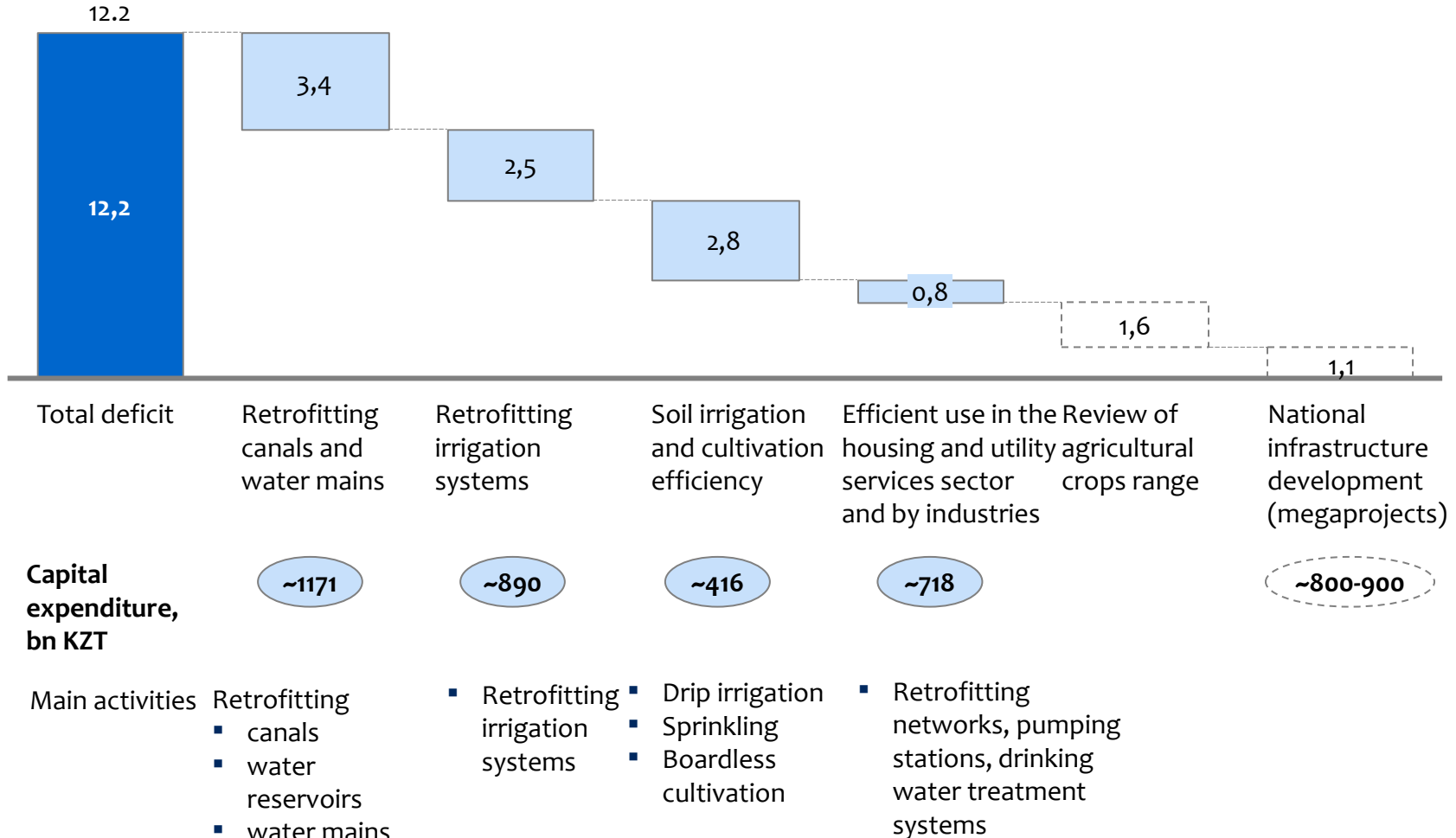
- * Water use by industrial sector will go up by 35% by 2040 in response to increase in output by 4% a year
- * The largest increase in water consumption is expected in oil and gas production and processing sector, mining sector, transport, and electric power generation

Water Use by Agriculture

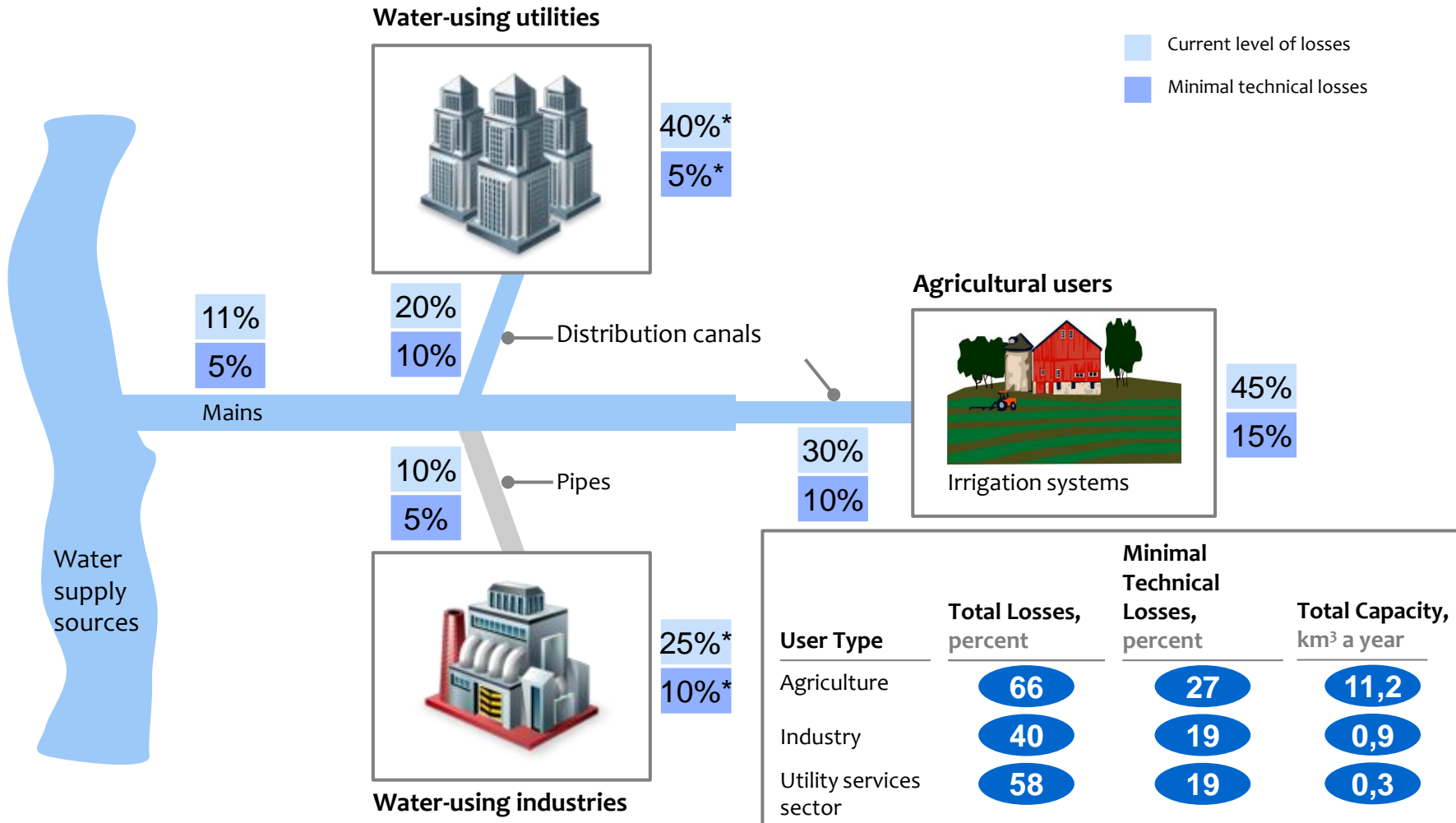
- * Water use by agriculture will grow due to increase in total irrigated areas to 2.1 mln ha by 2040

Projected water deficit could be reduced by 9.5 bn m³ by improving water use efficiency and renovating water infrastructure

Water saving, bn m³ per year



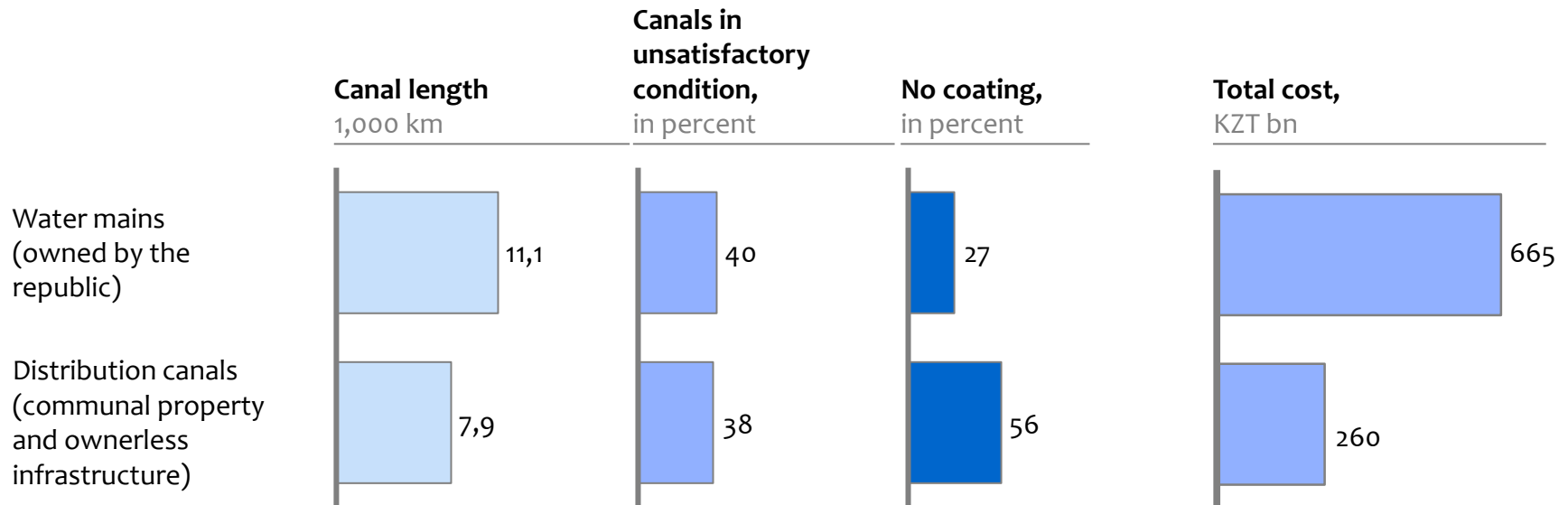
All three key user groups could potentially reduce losses and enhance water use efficiency



* For municipal and industrial users, “home-stretch” losses include inefficient water use

Poor quality of infrastructure requires additional investment

Length and condition of canals



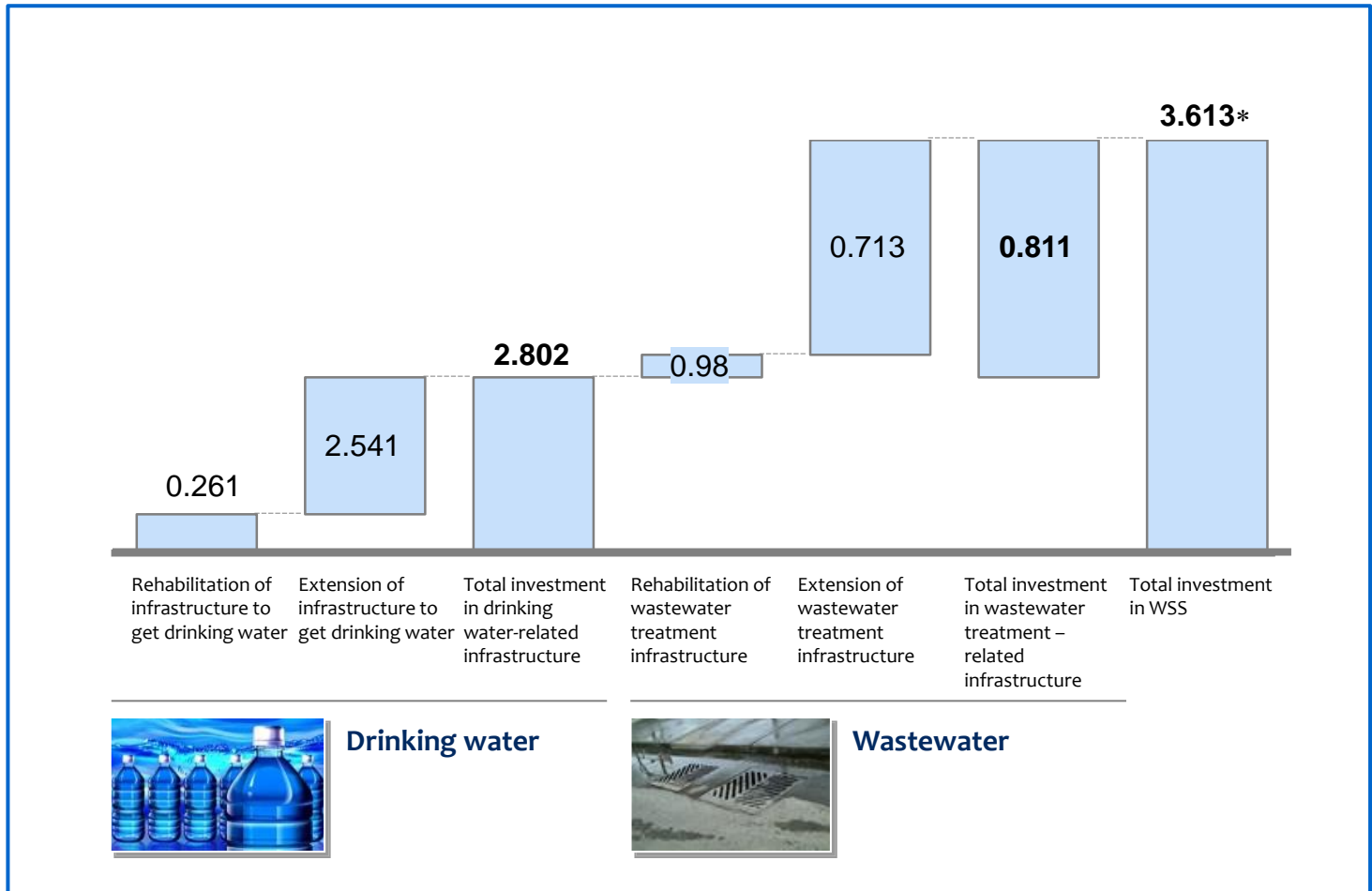
- * 40% of water supplying infrastructure requires retrofitting worth about KZT 925 bn (USD 6.2 bn)
- * Transferring the infrastructure into management by proposed national operators or external companies should be considered so that facilities and canals are maintained in a satisfactory condition

Required investment in drinking water supply and municipal wastewater treatment infrastructure

Total investment, 2014-2040, KZT tln

Key assumptions and targets

- * 100-percent coverage of urban population by water supply and wastewater treatment by 2020
- * Rural population coverage by water supply at 80% and by wastewater treatment by 20% by 2020 (coverage by water supply at 100% and by wastewater treatment by 50% in 2040)
- * 60% of water supply facilities and 70% of wastewater treatment facilities should be retrofitted



Sustainable Use of Water Resources

Thus, limited water resources and expected water stress could become a major impediment to future growth in Kazakhstan

The Concept for transition to GE provides for measures and mechanisms to:

A) Reduce water stress:

- Water saving in agriculture which currently uses 2/3 of abstracted water (will use 6.5-7 bn m³ by 2030)
- Enhancing water use efficiency in the industrial sector (by 25%) and in the community amenities sector (by 10%), meaning water saving at some 1.5-2 bn m³ and 100 mln m³ a year, respectively, by 2030

B) Enhance availability and reliability of water supply (by 4.5-5 km³ a year):

- Improving the sharing & allocation of transboundary rivers flow (negotiations, agreements)
- Constructing water reservoirs to manage the flow
- Sustainable use of ground water resources
- Rehabilitation and development of irrigation mains, water supply from water-abundant to water-scarce regions in the country
- Water resources pollution abatement & control

C) Improve water resources policy and management framework nationally and at basin level:

- Water use limits, water prices and tariffs, new requirements and standards, etc.
- **Development of the State Water Resources Management Programme until 2040 with clear goals, objectives, implementation stages, and financing**

State Programme for Water Resources Management in Kazakhstan

Approved by Decree of the President of the Republic of Kazakhstan No. 786 of 4 April 2014 as a tool to address the above challenges and issues

The Programme's main goal is to ensure water security to Kazakhstan by enhancing water resources management efficiency

Goals:

1. Secure water supply to the population, environment, and economic sectors through water saving measures and by increasing the amount of available water resources
2. Enhance water resources management efficiency
3. Ensure conservation and protection of aquatic ecosystems

Sources and amounts of financing

- Estimated amounts in 2014-2040: KZT 8.2 tln, of which KZT 5.4 tln from the republican and local budgets and KZT 2.8 tln out of extrabudgetary funds.
- Estimated amounts of financing from the republican and local budgets until 2020 are KZT 3.3 tln and they will be adjusted as budgets are drawn up for the period concerned

Programme Targets

Targets (by 2020):

1. Reduce water use per unit of real GDP by 33% versus 2012 level
2. Ensure additional surface water resources (some 0.6 km³)
3. Share of households and other water users with permanent access to centralized drinking water supply systems is at least 100% in urban areas and at least 80% in rural settlements
4. Share of water users with access to sanitation systems is at least 100% in urban areas and at least 20% in rural settlements
5. Satisfy the annual water demand of 39 km³ for maintaining ecosystems (environmental flow) and navigation

Respective targets by 2040 have also been set

Changes in Water Sector Management in Kazakhstan to Enhance Efficiency, Consistent with Best International Practices

To-date

WR Committee

- State water policy making
- Transboundary negotiations

-
- Water resources control and regulation

-
- Infrastructure construction

State Programme for WRM

MoEnv&WR

- State water policy making
- Transboundary negotiations

WRC

- Water resources control and regulation

National water companies

- Infrastructure planning, construction and management

The State Programme's Key Management Decisions and Economic Tools

- Establish an inter-agency Council to coordinate water resources management
- Strengthen the functions and powers of basin inspectorates
- Set up two national companies for water infrastructure management
- Set up a full-fledged water department or water institute in a University, and respective training programmes
- Identify and eliminate **subsidies** impeding enhancement of water use efficiency, especially in agriculture
- Increase tariffs for all user categories to encourage efficient water use and recover investment in system renovation

Implementation of the State Programme will be a major contribution to the implementation of Kazakhstan's Development Strategy and transition to Green Economy

Thank you!