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SVENSKA ARALSJÖSÄLLSKAPET
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WATER USE AND MANAGEMENT - AGRICULTURE AND SANITATION

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- **Introduction**
- Uzbekistan is an **arid country** with limited water resources
- Agriculture depends heavily on irrigation
- Water management is critical for:
  - Food security
  - Economic stability
  - Environmental sustainability

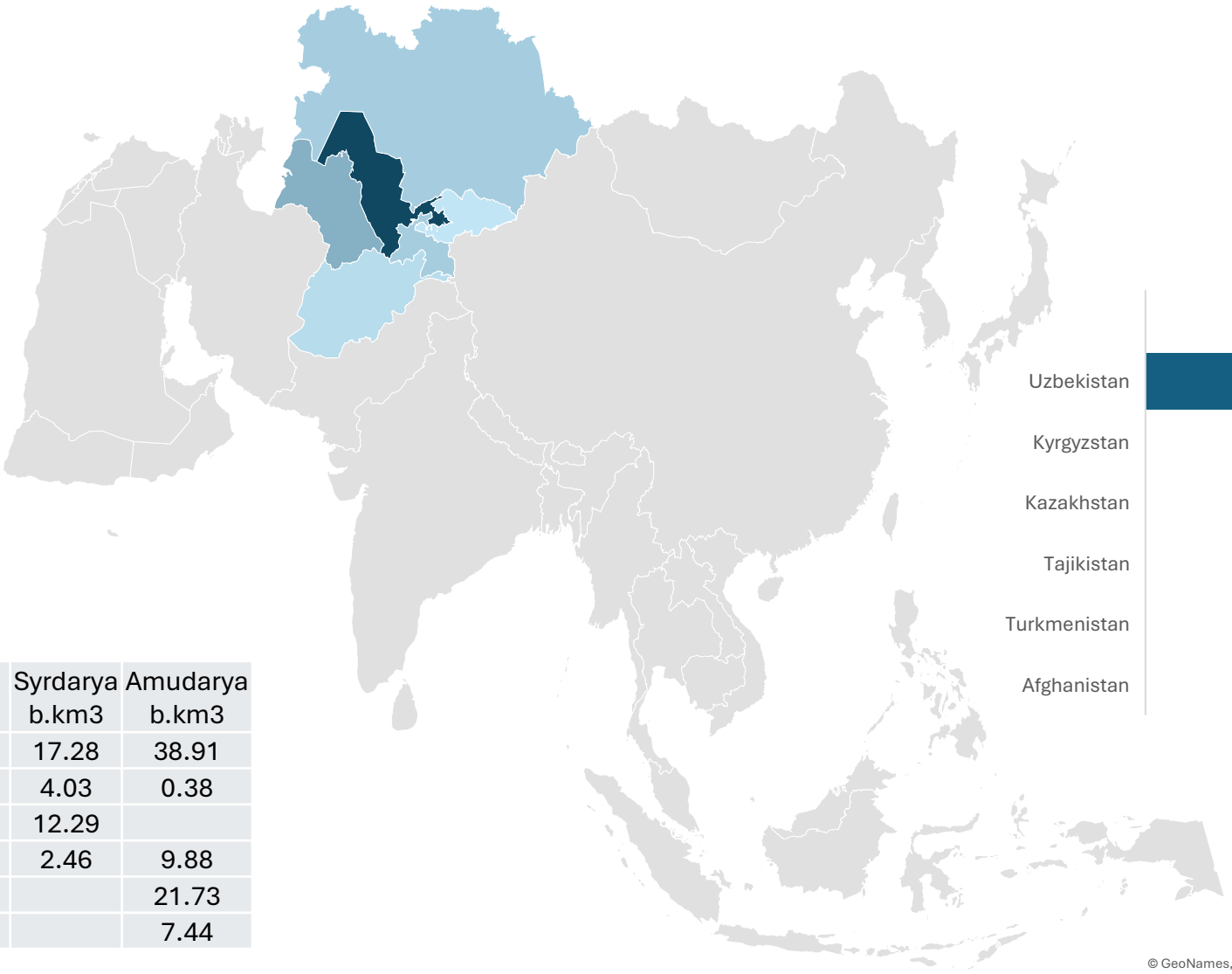
Water Resources in Uzbekistan

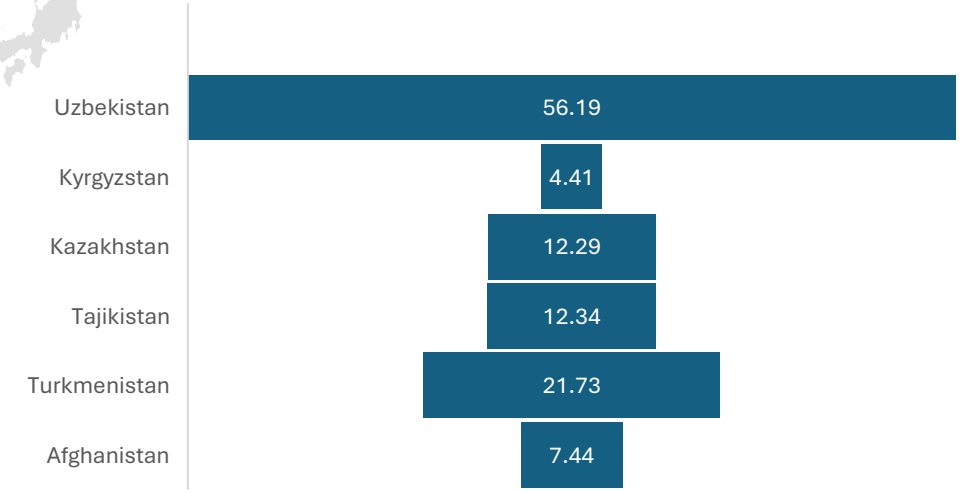
Major sources:

- **Amu Darya**
- **Syr Darya**
- Internal rivers and streams
- Groundwater reserves

•Total annual water flow: **116 billion m^3**

CA water consumtion

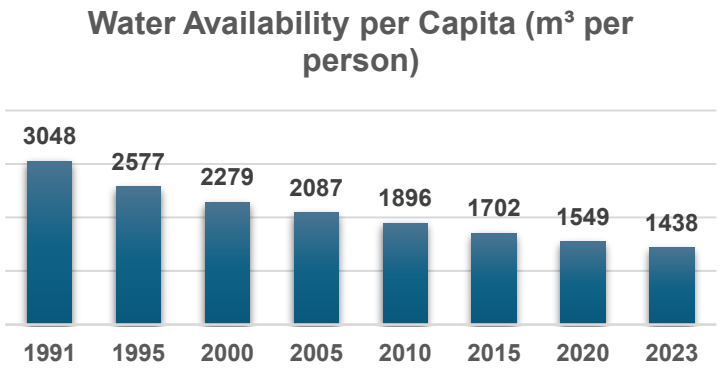




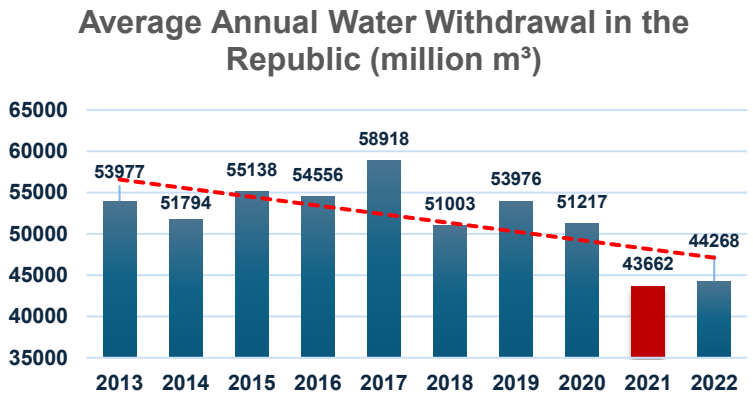
Countries	Syrdarya b.km3	Amudarya b.km3
Uzbekistan	17.28	38.91
Kyrgyzstan	4.03	0.38
Kazakhstan	12.29	
Tajikistan	2.46	9.88
Turkmenistan		21.73
Afghanistan		7.44

Water Resources and Challenges in Uzbekistan

Over the past 30 years, per capita water availability has decreased from 3,048 m^3 to 1,438 m^3, or by 53%.



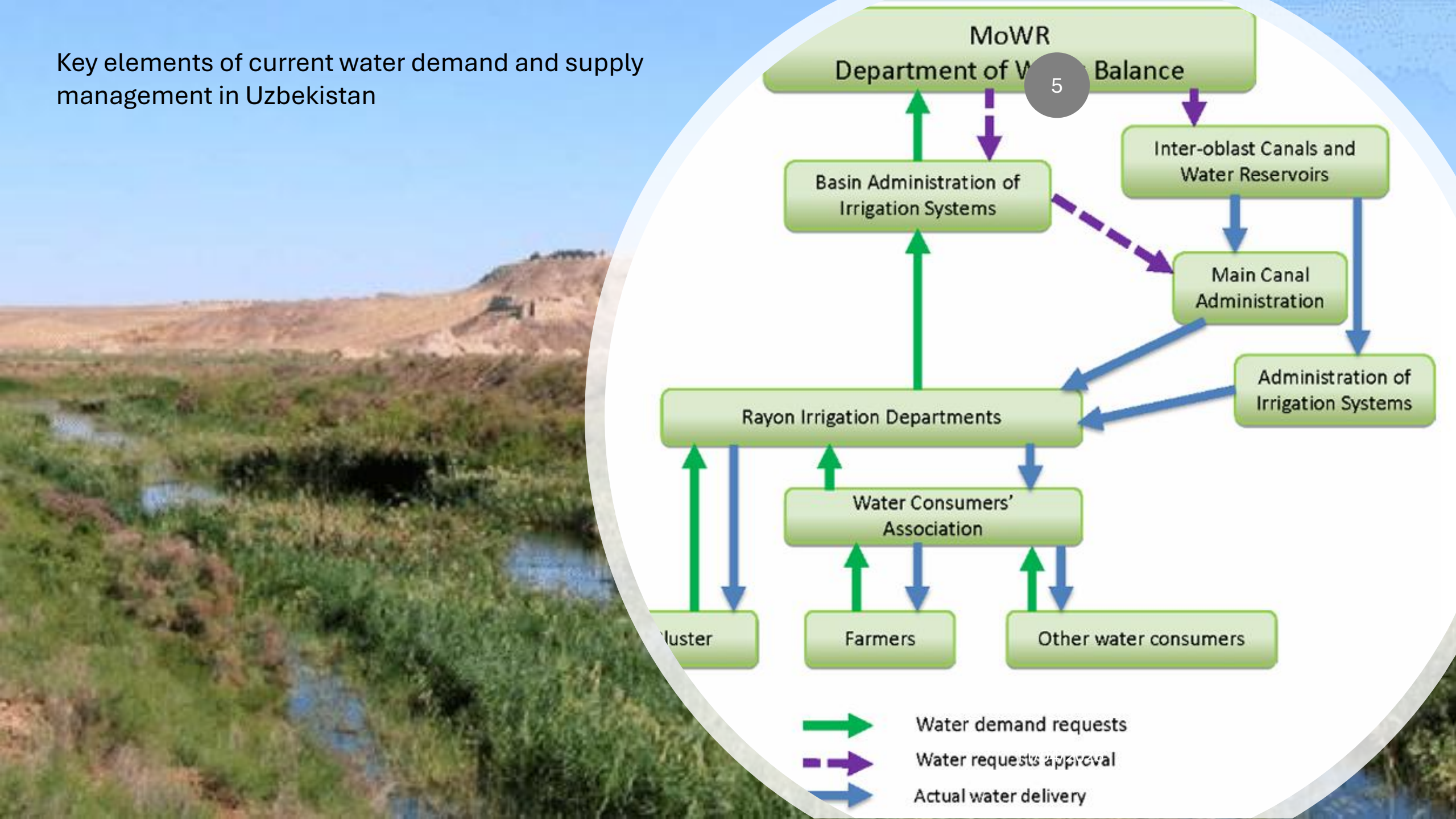
Over the past 10 years, the level of water supply has averaged 91% of demand, while in 2021 and 2022 it was 77% and 78%, respectively.



Water Use by Sector

- Agriculture: **90%**
- Municipal: 4–5%
- Industry: 1–2%

Key elements of current water demand and supply management in Uzbekistan



Key Challenge (until 2016)
Low efficiency of water use, especially in irrigation
Outdated technologies and high water losses

Reform Background
After gaining independence in **1991**, Uzbekistan initiated reforms in:

- Water sector
- Agricultural sector

Objectives of Reforms
•Increase **agricultural production**
•Improve **rural incomes**
•Ensure stability of the agricultural economy

Water Sector Reforms in Uzbekistan – Step 1 (2017)

Institutional Reforms and Decentralization

Key Institutional Changes

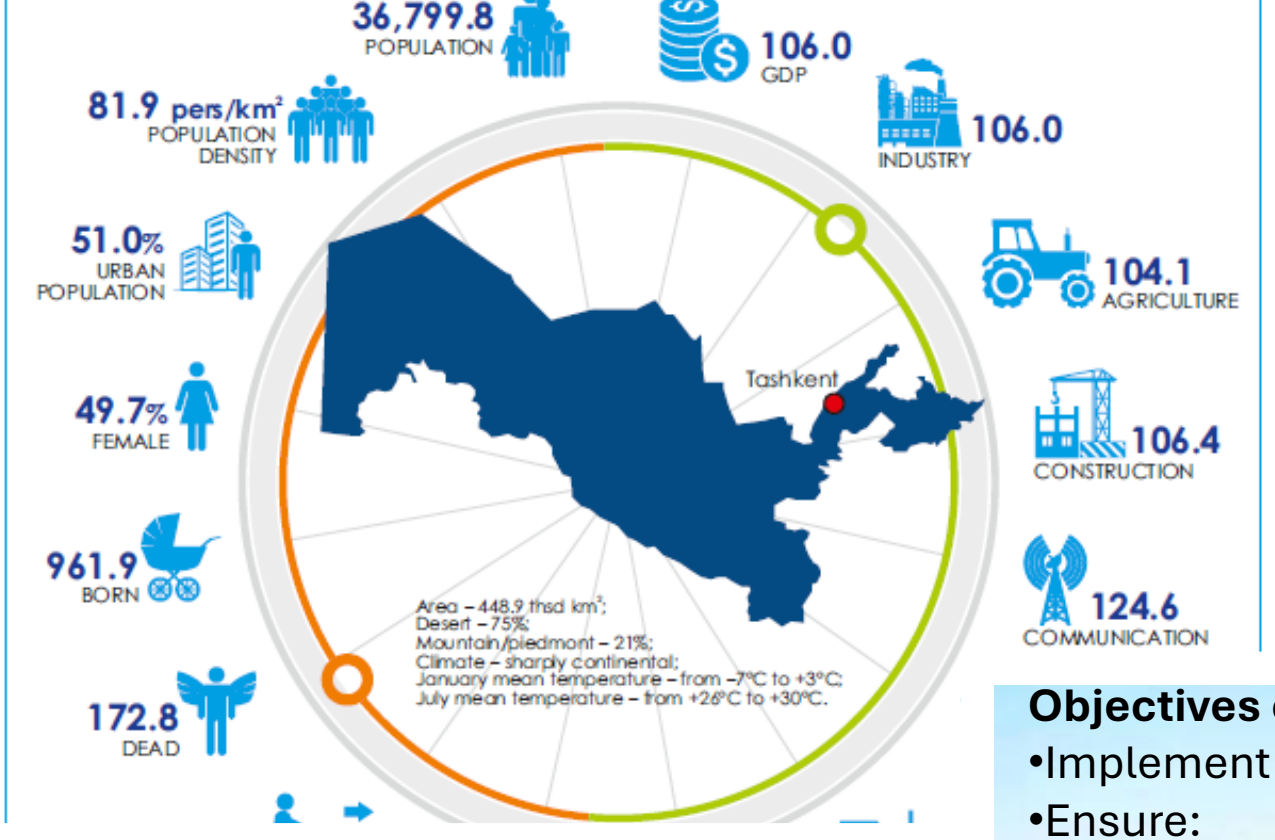
- Establishment of **Information-Analytical Resource Center (IARC)**
- Creation of **3 new Basin Administrations of Irrigation Systems (BAIS)**
- Formation of **152 Rayon Irrigation Departments (RIDs)**

Role of RIDs

- Improve **water demand planning**
- Maintain **local irrigation systems**
- Monitor **water use**
- Support **water productivity improvements**

Objectives

- Strengthen coordination between:
  - Water management
  - Agriculture
  - Local administration
- Improve direct interaction with **water users (farmers)**



Water Sector Reforms in Uzbekistan – Step 2 (2018)

Institutional Separation and Policy Reform

Key Reform (2018)

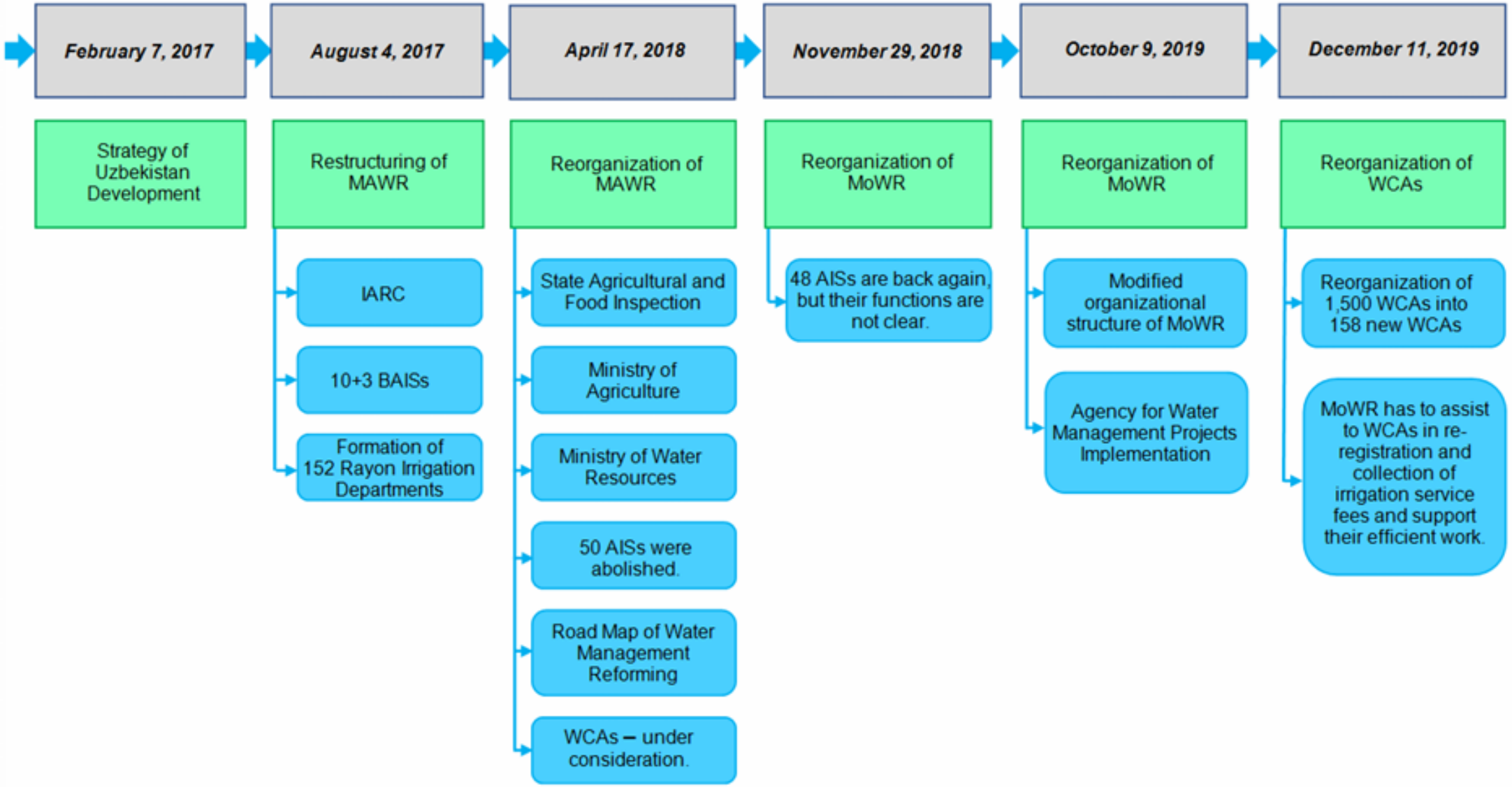
- **Separation of water and agricultural sectors**
- Establishment of:
  - **Ministry of Water Resources of Uzbekistan (MoWR)**
  - **Ministry of Agriculture of Uzbekistan**
- Based on Presidential Decree **№ UP-5418 (April 17, 2018)**

Structural Changes

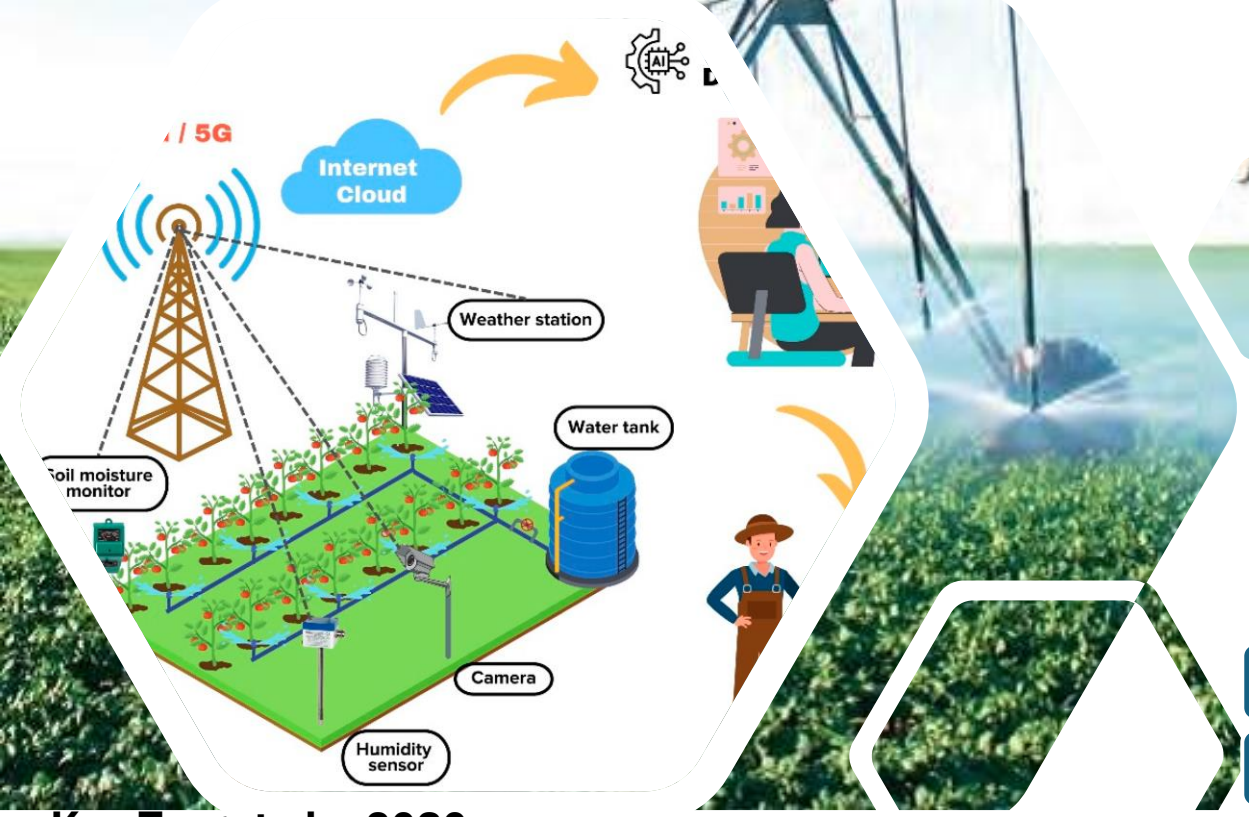
- Development of a **Roadmap for water sector reform**
- Attempted abolition of **50 Administration of Irrigation Systems (AIS)**
- Later **reinstatement of AIS (November 2018)** due to:
  - Missing operational link between BAIS, RIDs, and WCAs

Objectives of Reform

- Implement a **unified national water policy**
- Ensure:
  - Rational use of water resources
  - Water protection and safety
  - Prevention of water-related risks
  - Promotion of water-use culture



The whole process of water reforms in Uzbekistan during 2017-2019



Strategic Development and Modernization

Key Policy Document
Presidential Decree **№ UP-6024 (July 10, 2020)**
Approval of the **Water Sector Development Concept (2020–2030)**
Developed by the **Ministry of Water Resources of Uzbekistan** with international partners

Purpose of the Concept

Establish a **long-term vision for water sector development**

Promote:

- Efficient water use
- Investment attraction
- Innovation and scientific development
- Digitalization and modern technologies

Key Targets by 2030

Increase irrigation efficiency: **0.63 → 0.73**
Reduce poorly irrigated land: **560 → 190 thousand ha**
Decrease saline land: **–226 thousand ha**
Reduce energy use (pumping): **–25%**
Expand water-saving technologies:

- **2 million ha total**, including **600,000 ha drip irrigation**

Introduce:

- **Smart Water monitoring systems**
- Automation at **100 key facilities**

Implement **50 public-private partnership (PPP) projects**

Early Results (2020)

Despite **20% water reduction**, supply reached **32.5 billion m^3**
280 million m^3 water saved
Improved irrigation on **300,000+ hectares**

Compost mulch

Straw mulch

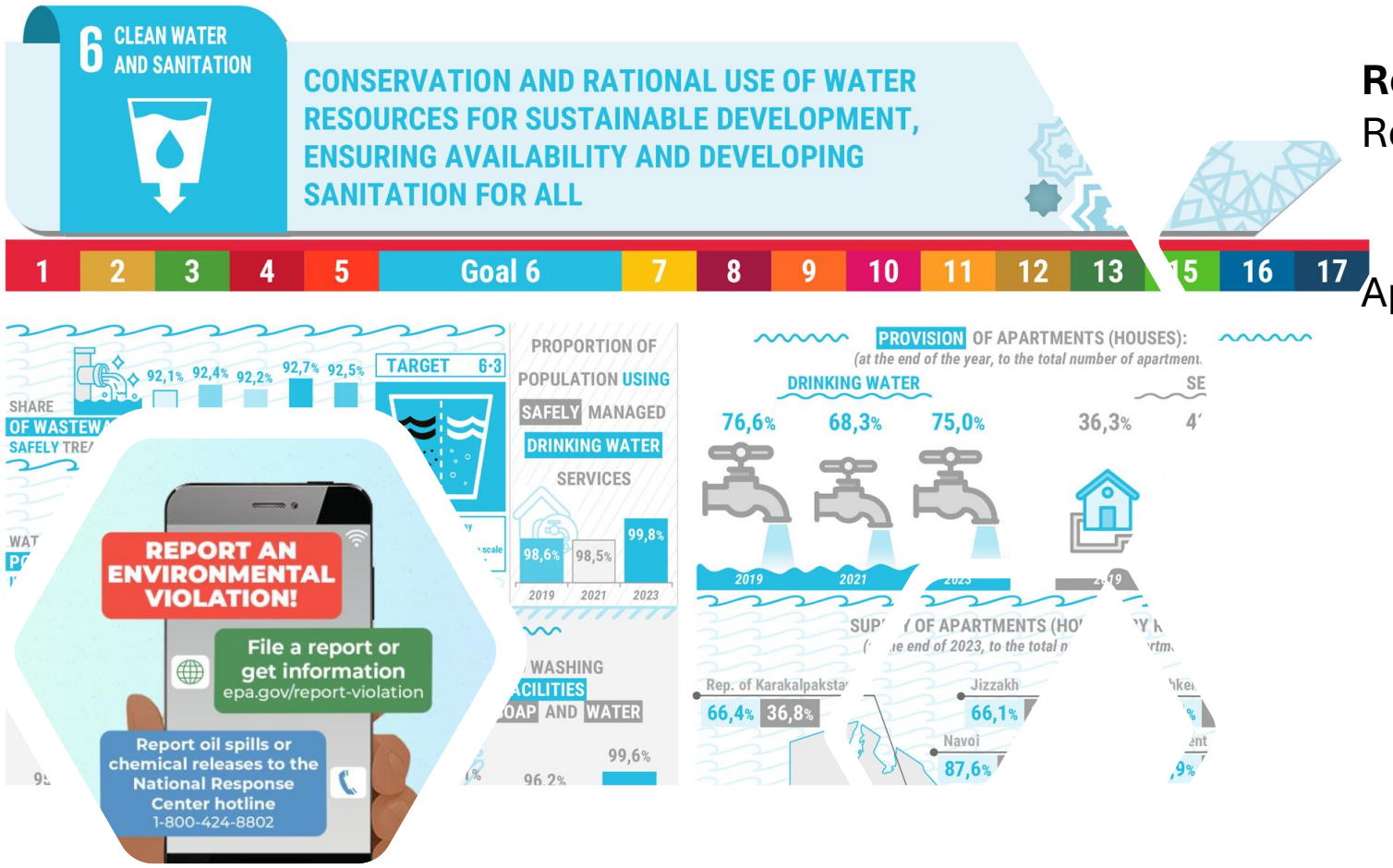
Bark mulch

Newspaper mulch

Plastic mulch film

Key Technologies

- Irrigation using **short furrows**
- **Pulsed irrigation (surge irrigation)** technology
- Furrow irrigation with **plastic film lining**
- Furrow irrigation with **straw mulching**
- **Alternate furrow irrigation** method
- Irrigation using **flexible pipes**
- **Step-by-step (tiered) irrigation** method
- Irrigation with **reverse flow in furrows**
- Use of **portable irrigation trays/channels**
- Application of **hydrogels** for water saving
- **Laser land leveling** technology
- **Sub-irrigation method**



Legal Basis

Based on Article 74 of the **Administrative Responsibility Code of Uzbekistan**

Covers:

- Misuse of water resources
- Unauthorized hydraulic activities
- Actions affecting water bodies

Regulatory Framework

Regulation on:

- **Submission, review, and incentivization** of citizen-reported water violations

Applies to violations related to:

- Water use
- Water consumption rules

Reporting Mechanism

Citizens can record violations using:

- Mobile devices
- Video/photo equipment

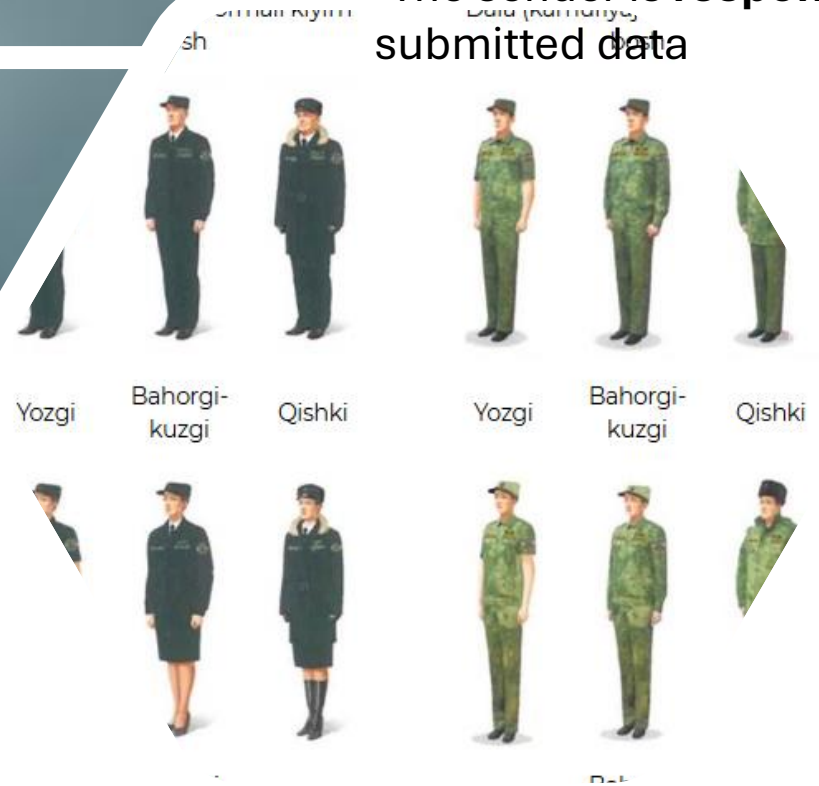
Submitted materials:

- Photos
- Video recordings

Reporting Water Violations: Procedure (Chapter 2)

Recording and Submission

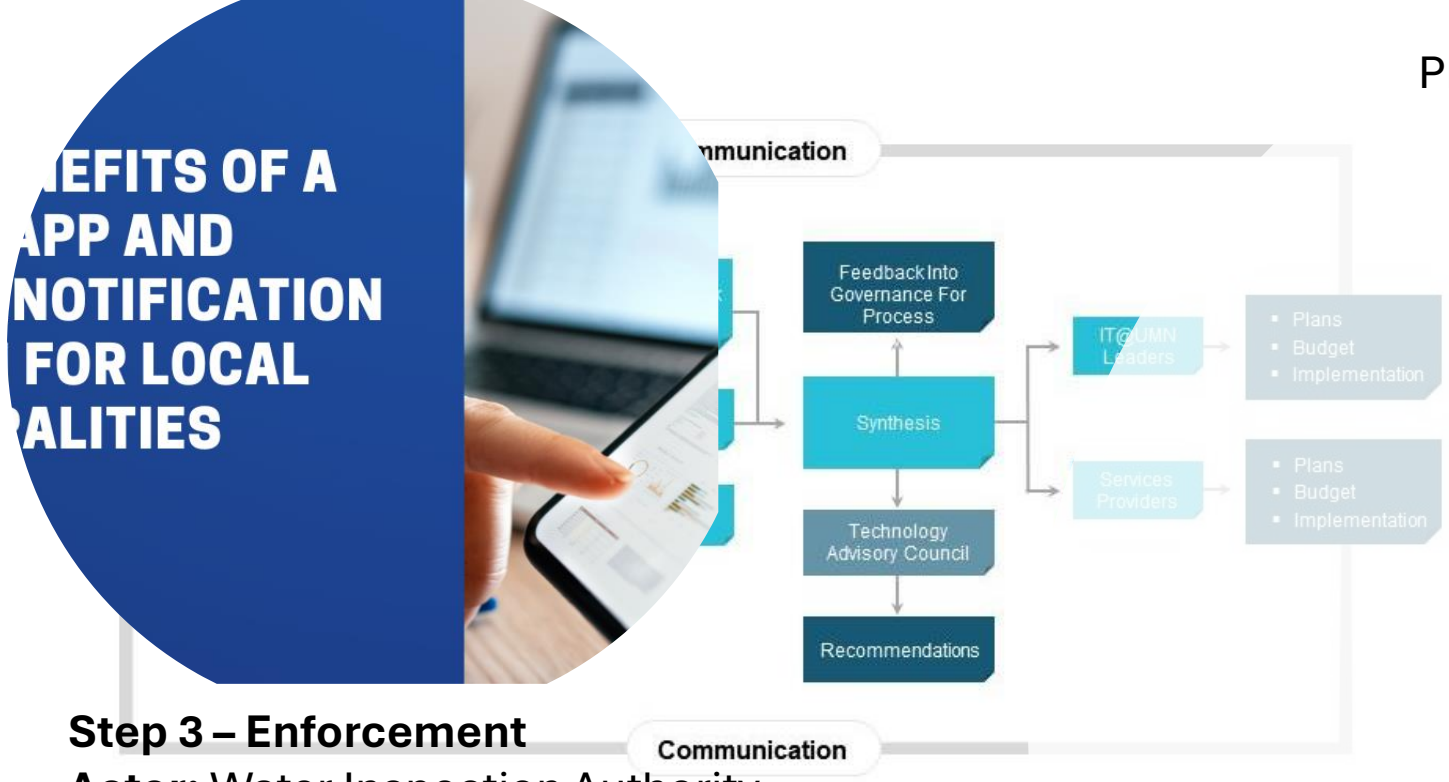
- Citizens record violations using:
  - Mobile devices
  - Video/photo equipment
- Materials must be submitted within **48 hours** via:
  - Official platform: **v-nadzor.gov.uz**
- The sender is **responsible for the accuracy** of submitted data



Required Content of Evidence

Submitted photo/video must clearly show:

- The **violation itself**
- Information about the **violator** (if available)
- **Location, date, and time** of the incident



Step 1 – Submission
Actor: Citizens
•Submit photos/videos of violations of water use rules
Deadline: Within **48 hours** after detection

Step 2 – Review
Actor: Water Inspection Authority
•Receive submitted materials
•Investigate the violation
•Identify the offender
Deadline: Within **10 days**

Step 3 – Enforcement
Actor: Water Inspection Authority
•Issue administrative protocol or penalty via **E-administrative system**
•Send fine notification:
- SMS
- Postal mail
- Direct delivery

•If necessary → transfer case to **court or authorized body**
Deadline:
- 5 days (penalty decision & notification)
- 3 days (if transferred to court)

Step 4 – Incentives & Feedback
Actors: Water Inspection Authority & Ministry of Water Resources
•Provide **financial rewards** to reporting citizens
•Inform citizens about results of their submission
Deadline: Within **15 days after fine collection**

Thank you for your attention!