DANUBE WATER PROGRAM
IAWD
Smart policies, strong utilities, sustainable services

2021 DANUBE WATER CONFERENCE

WORLD BANK WATER SECURITY INITIATIVE

18 OCTOBER, 14:00 – 15:15

Water is essential

Climate change

Demography

Water sustains the planet

Water is a vital factor of production

Water is the essence of life

But...

Water is in crisis

Consumption patterns and pollution

Too much

Too polluted

Too little

Technologies and practices

… AND PRESSURES AND EXTREMES ARE INCREASING

Consumption patterns and pollution

Population growth and urbanization

Climate change

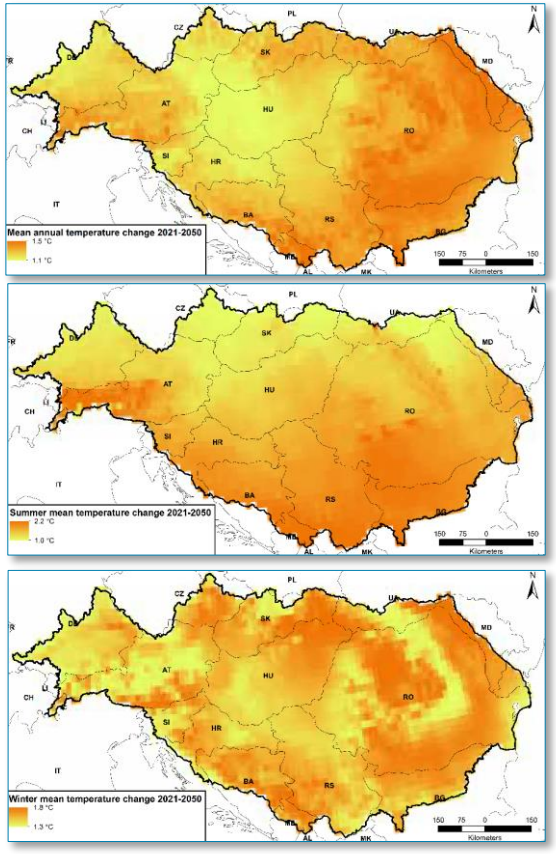
By 2030, demand for water is expected to exceed supply by 40%

The 2030 Water Resources Group Report

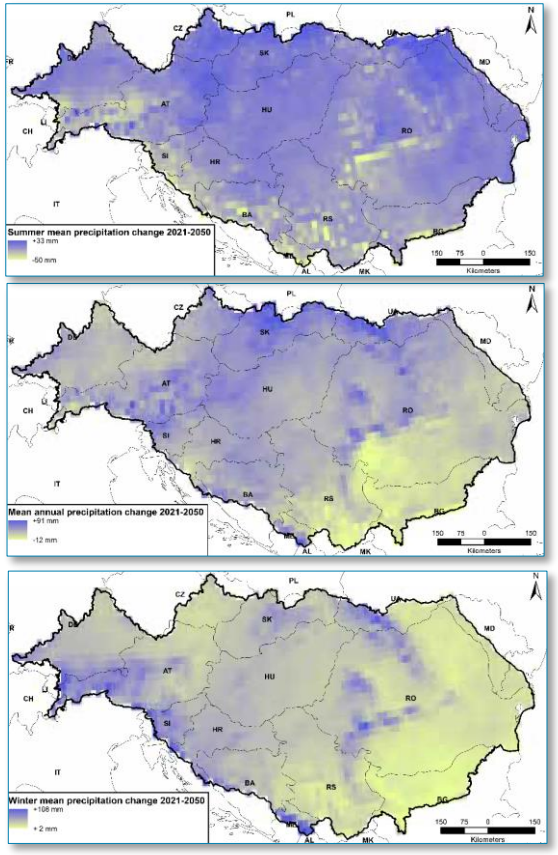
ALSO THE DANUBE REGION IS AFFECTED

Example: Climate change

Change of mean annual, summer and winter **temperature 2021-2050**



Change of mean annual, summer and winter **precipitation 2021-2050**

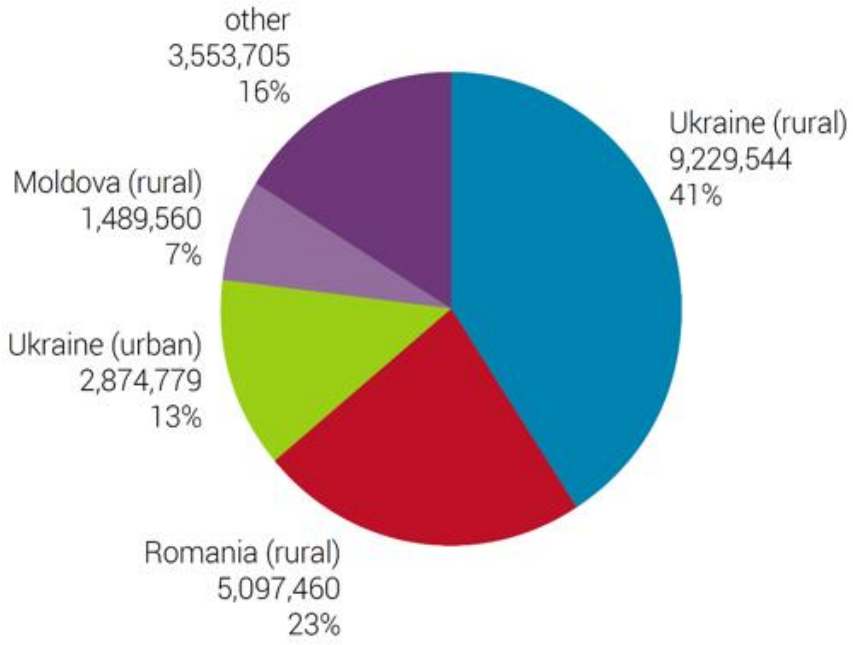


- **Increase of annual mean temperature** until 2050 between 1.1°C and 1.5°C (RCP4.5) / 1.3°C and 1.7°C (RCP8.5)
- **Wet regions** tend to become **wetter** and **dry regions drier**
- Strong **precipitation gradient**: northwest (high) – southeast (low)
- Highly certain **significant changes in seasonality** - wetter winters, drier summers

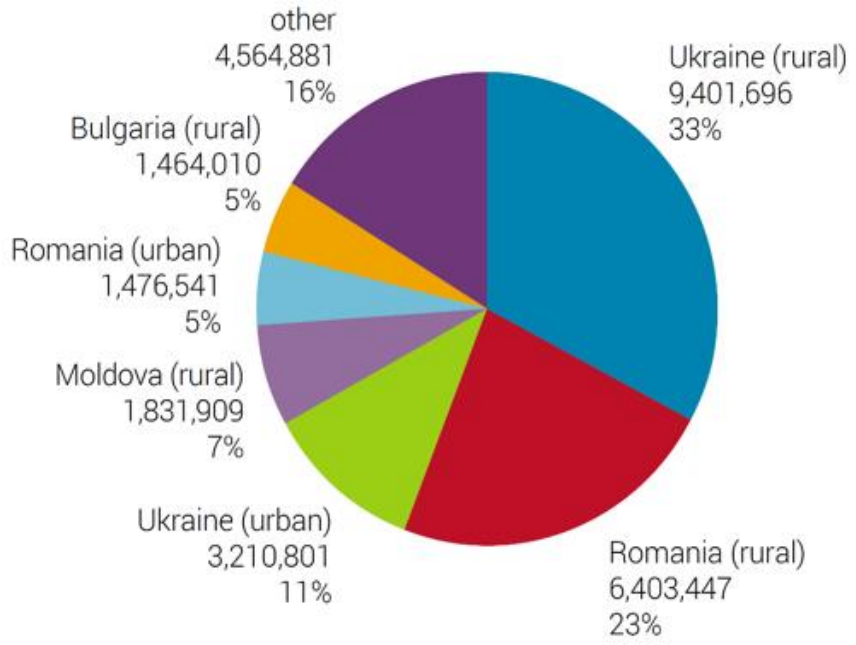
Source: ICPDR Climate Change Adaptation Strategy 2018

WATER SERVICES: REMAINING ACCESS GAP
… IN LOWER INCOME COUNTRIES BUT ALSO ADVANCED ECONOMIES

Population without piped water



Population without flush toilets



Source: Review of Rural Water and Sanitation Services in Seven Countries of the Danube Region, World Bank, 2018

WATER IN THE ECONOMY – SOME FIGURES

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EU's **water-dependent sectors** (OECD 2020):

- Generate EUR 3.4 trillion, or 26% of EU's Gross Value Added
- Employ around 44 million people, 24.2% of total employment
- Include 16.3 million enterprises

However, **water-related risks** increasingly affect stability and economic growth, public finances, poor and vulnerable social groups and the environment (EIB):

- Droughts caused EUR 86 billion damages over last 30 years
- Costs of floods amounting to EUR 150 billion in 2002-2013 (largest source of GDP losses from natural disasters)
- Annual damages could multiply by four between 2014 and 2050 (from EUR 5.5 billion to EUR 23 billion)

High economic value of water but also significant climate-related risks and investment needs

WORLD BANK
WATER SECURITY DIAGNOSTICS INITIATIVE

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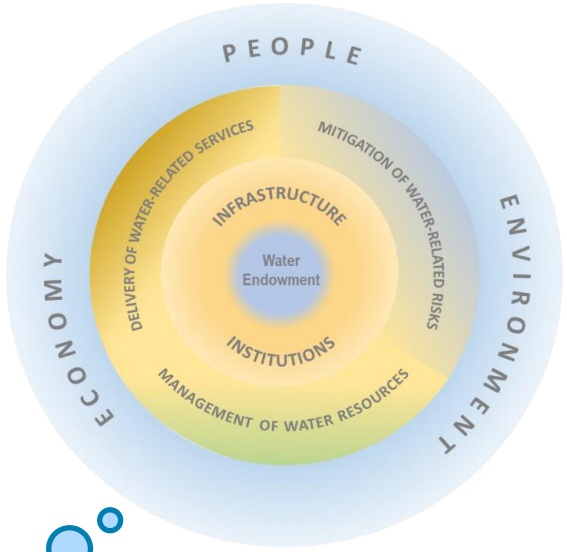
About the **World Bank Water Security Diagnostics Initiative**

- Launched in 2017
- Best use of World Bank's technical experience, instruments, and financial resources to produce **studies that contribute to discussions with senior policy makers** beyond line ministries
- Create **narrative on "Water Writ Large"** in a country or region
- Diagnostic reports that dive deeper into **water challenges in countries** to elaborate recommendations for reforms and investments
- Water governance studies for more mature water sectors where challenges are well understood, and **sector architectural reforms are required**

Water Security Diagnostics Framework



What is "Water Security"?

As defined by Grey and Sadoff (2007),
"the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies."

"How governments respond to a water crises, maintain their water infrastructure and regulate users can be just as threatening to water security as a drought or flood."

Paul Reig, Senior Manager, WRI

Entry points for action: The three 3 I's:

INFORMATION

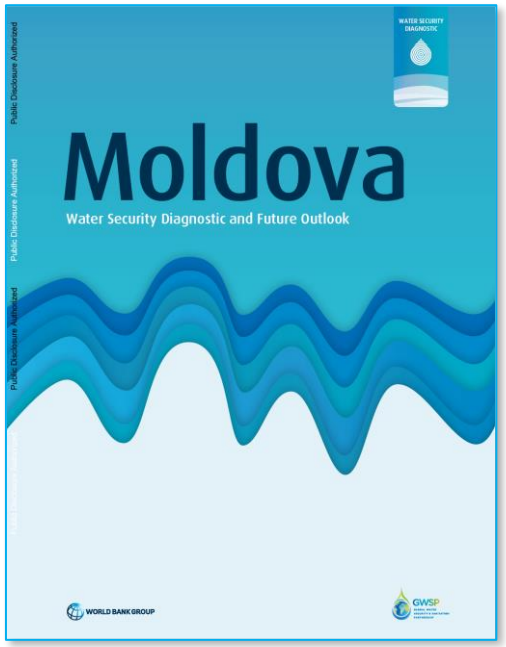
INSTITUTIONS

INVESTMENTS

WATER SECURITY DIAGNOSTICS

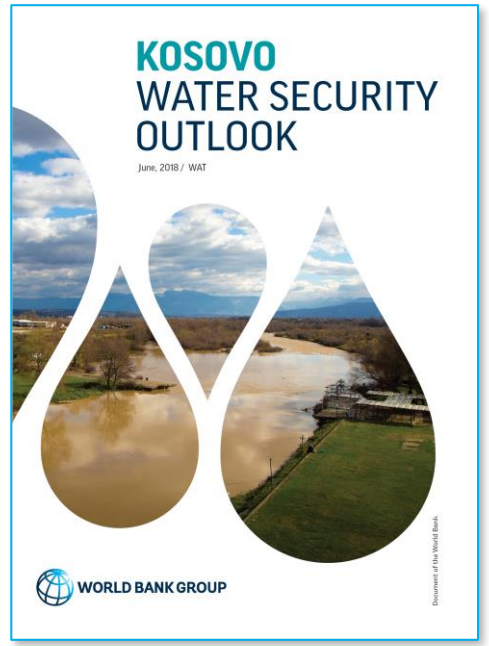
Examples for already published World Bank studies

Various water security diagnostics delivered at country and regional levels, meeting growing demand for water security analytics



LINK Moldova Study

LINK Romania Study



LINK Kosovo Study

https://www.worldbank.org/en/topic/water/publication/water-security-diagnostic-initiative#3

Water Security Diagnostics
TYPICAL REPORT STRUCTURE

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1. Current Water Security Outcomes
- Economic outcomes – water in the economy
- Social outcomes – who is most vulnerable?
- Environmental outcomes – including ecosystem services

2. The Water Endowment
- Water quantities and quality
- Surface and groundwaters and their links
- Within and between year variability
- Dependence on upstream riparians

3. Water Sector Architecture
- Infrastructure – public & private
- Institutions – legal frameworks, policies, governance including civil society, sector finance, political economy factors

4. Water Sector Performance

Management of Water Resources
- Water resource planning and allocation
- Reservoir and irrigation operations
- Flood and drought management
- Data, information, modelling & forecasting
- Environmental management

Delivery of water-related services
- WASH service performance – urban & rural
- Irrigation & drainage service performance

Mitigation of water-related risks

5. Future water security
- Scenarios, trajectories
- With and without intervention

6. Recommendations
- Resource management
- Service delivery
- Risk mitigation and building resilience

DANUBE WATER SECURITY DIAGNOSTICS

Building on previous analytical work conducted in the frame of the **Danube Water Program**

Danube Water Security Diagnostics

- Work launched in 2021
- Delivered in the frame of the Danube Water Program
- Supported by IIASA and consortium
- Broad sector analysis, building on existing work
- Identification of current and potential future water security “hot spots”
- Recommendations for action
- Lighter and more in-depth country analyses / profiles
- Danube Regional report

Thank you for your attention!