

# **The need for reliable information on water resources and water uses to support decision-making in the ECE region**

**Annikka Lipponen**  
**UNECE Water Convention secretariat**



# Why information on the status of water resources is necessary?

- Information **basis for decision-making** and policy development
- Helps to **guide management** efforts — accurate identification of pressure sources, determining suitability of waters for use etc.
- Verifying **effectiveness of measures** taken
- Increased **efficiency in allocating funds**
- In shared waters, comparable information across the basin is needed to **form a comprehensive picture** of the situation
- Provides evidence to **inform inter-sectoral and transboundary dialogue** (e.g. agricultural and energy policies impact on waters)

# About the priority indicators for production and sharing under SEIS on water quantity

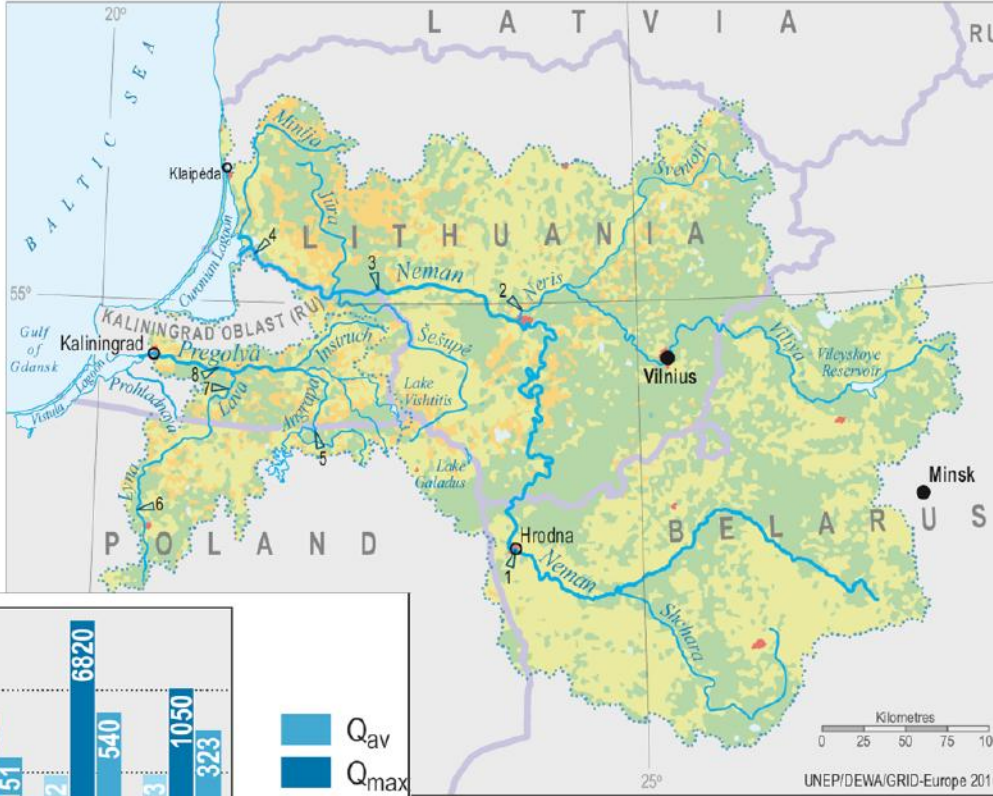
- Renewable freshwater resources
- Freshwater abstraction
- Total water use

Give indications about:

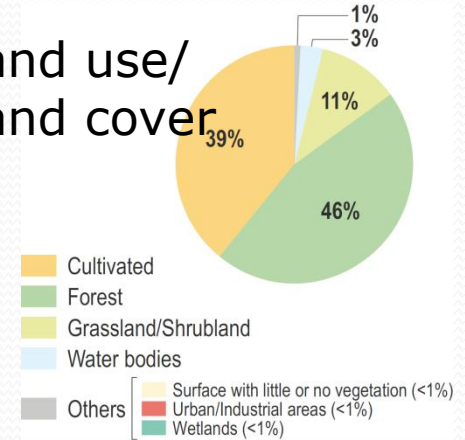
- resource base and the degree of its development, possible scarcity
- water intensity of the economy
- impact on water resources and on the environment more broadly
- corresponding wastewater treatment needs

# Example: water resources & the context of their use

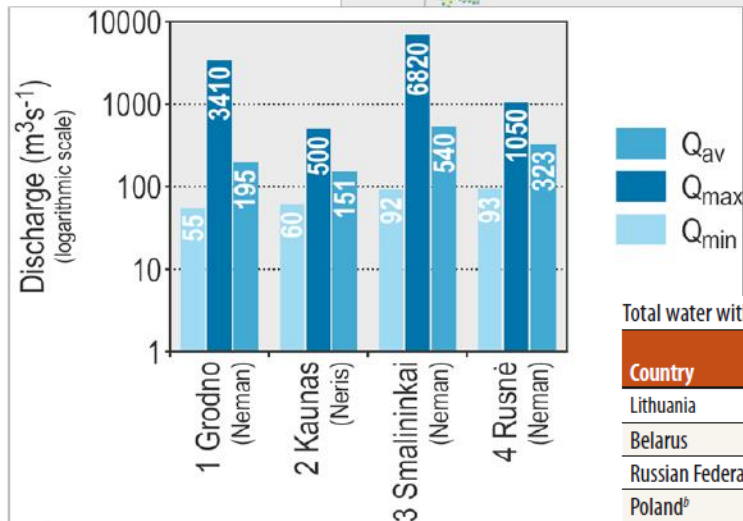
## Neman



## Land use/ Land cover



## Discharge

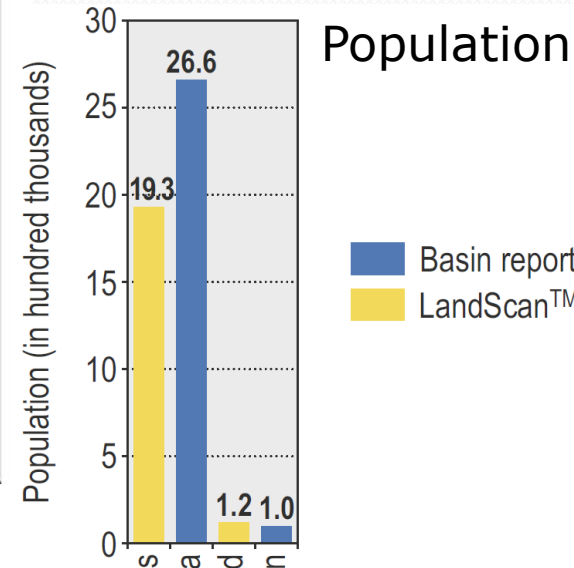


## Withdrawal

Total water withdrawal and withdrawals by sector in the Neman Basin

Country	Total withdrawal $\times 10^6 \text{ m}^3/\text{year}$	Agricultural %	Domestic %	Industry %	Energy %	Other %
Lithuania	2 629.7	55.3	22.6	16.2	0.1	5.8
Belarus	412.6	15.6	68.0	15.1	0.2	1.1
Russian Federation	12.07 <sup>a</sup>	1.3	44.8	53.9	-	-
Poland <sup>b</sup>	6.4	-	78	22	-	-

## Population



# Various actors behind quantitative information on water resources and their use

- Hydrometeorological services
  - Basis for planning: Water resources, variability, trends
- Water and environment authorities at different levels (also groundwater)
- Ministries responsible for activities using water: agriculture, energy, industry etc.
  - Consumptive vs. non-consumptive uses (impacts), seasonality, federal states
- State agencies
- Water service providers/utilities
  - Metering
- Households, water user associations
  - Is the rural use significant in terms of volume?

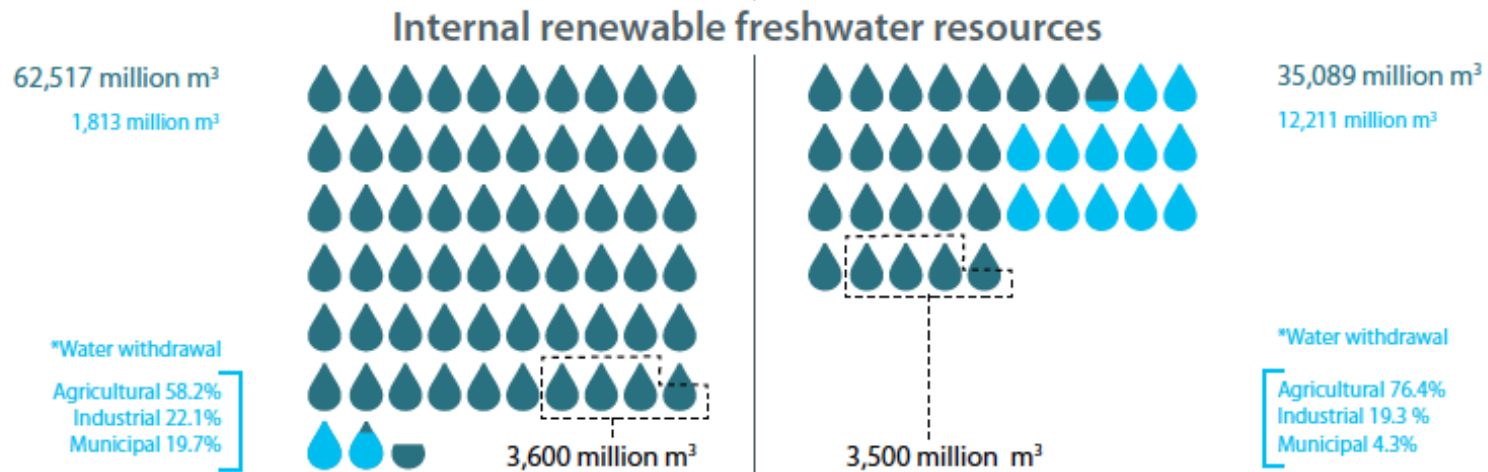
# Indicators Alazani/Ganikh basin

## Spatial dimension: What does a value represent?

- Which basin, water body?
- Surface water, groundwater?
- Season, year?



## For a meaningful comparison: common (international) definitions, harmonized approaches



# Assessments/reporting requirements related to the status of water resources at different levels

- National: according to the legislation and water management issues
- Basin level
- Sub-regional —European Commission, European Env. Agency (EEA)
  - Water Framework Directive
  - Bathing Water Directive etc.
- Regional/pan-European
  - UNECE Water Convention
  - Protocol on Water and Health
- Global, e.g. Global Environment Monitoring System (GEMS) Water , SDGs, System of Environmental-Economic Accounting for Water

## Some complications and limitations

- Diverse definitions of resources, and related assumptions (e.g. about groundwater recharge)
- Risks of double-counting; mismatches at boundaries
- Aggregated national figures hide a great spatial variety of availability and use; pressure on resources may be very local
- Spatial units of resource definition and reporting (basins, aquifers/groundwater bodies vs. administrative regions)
- Also water storage in the stream and diversions may have impacts on downstream uses and the environment
- For policy, for effectively directing measures, important to know uses by different sectors



# Some concluding points

- Good, reliable, harmonized information on water resources and their use is needed to support policy development and decision-making
- Use of international definitions, standards and guidelines supports comparability (across borders, notably) and identification of common challenges
- UNECE is assisting countries on various fronts: information base/statistics, monitoring and assessment, capacity development, transboundary cooperation
- Scale is important: national, disaggregating to a basin level tells much more, cities are important points of abstraction and discharge
- Gradual development step-by-step, iteration to improve over time
- A good communication between data providers and users, important for validation to make information available