



NNGYK
NATIONAL CENTER FOR PUBLIC
HEALTH AND PHARMACY

Hungarian approach to the development and auditing of the WSPs

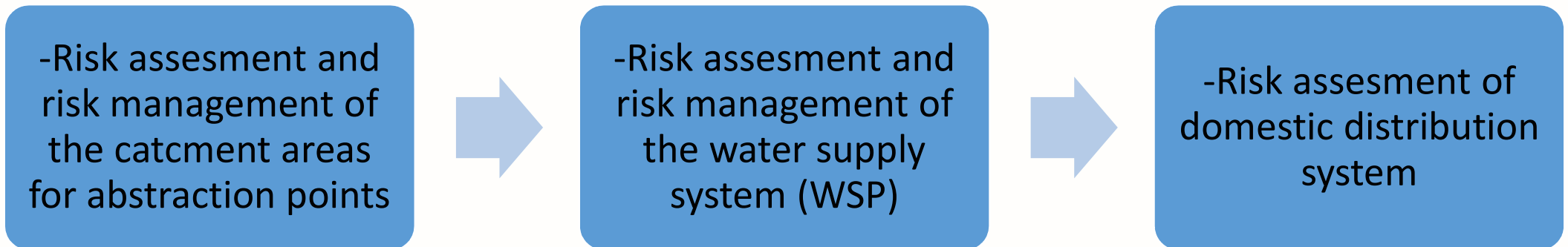
Securing Drinking Water Supply, international workshop, 2023.11.22.

Zsuzsanna Bufa-Dórr

Risk based approach in water quality management

Directive 2020/2184

Risk based approach in the water supply chain on three levels

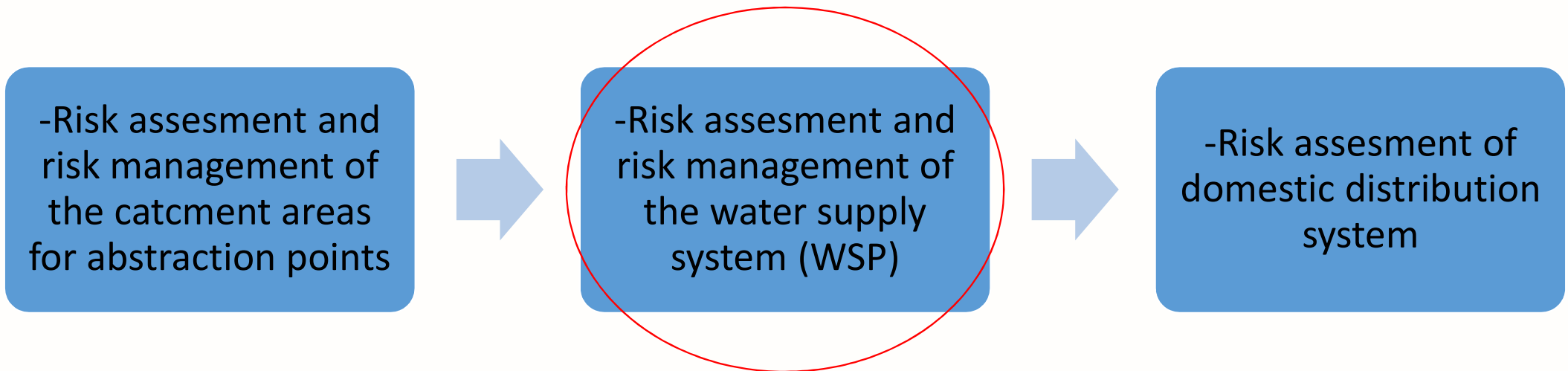


5/2023 (I.12.) Government Decree

Risk based approach in water quality management

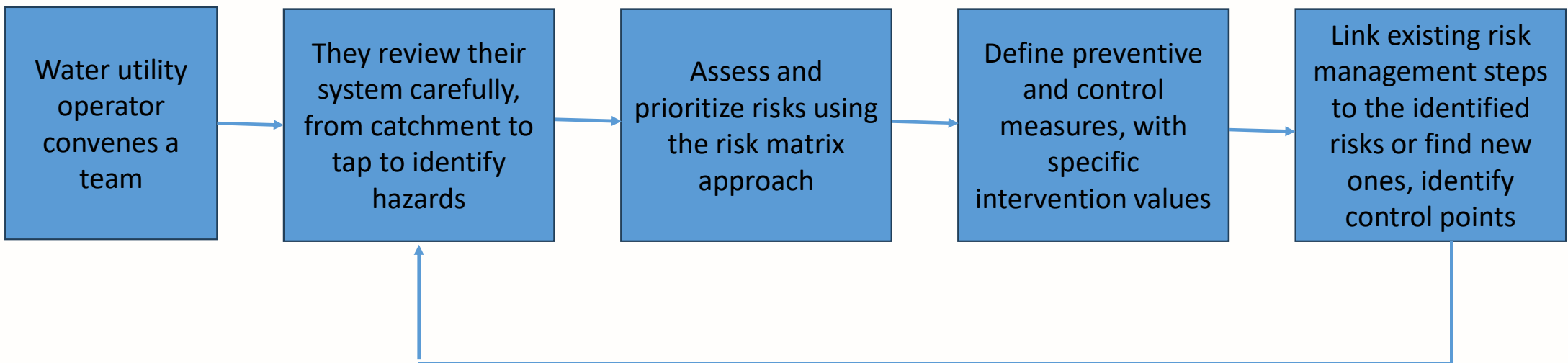
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Risk based approach in the water supply chain on three levels



5/2023 (I.12.) Government Decree

Process of WSP development



Aim: to ensure the safety, continuity and acceptability of drinking water supply

Based on: hazard analysis and risk assessment at all stages of the water supply chain

Water safety planning in Hungary

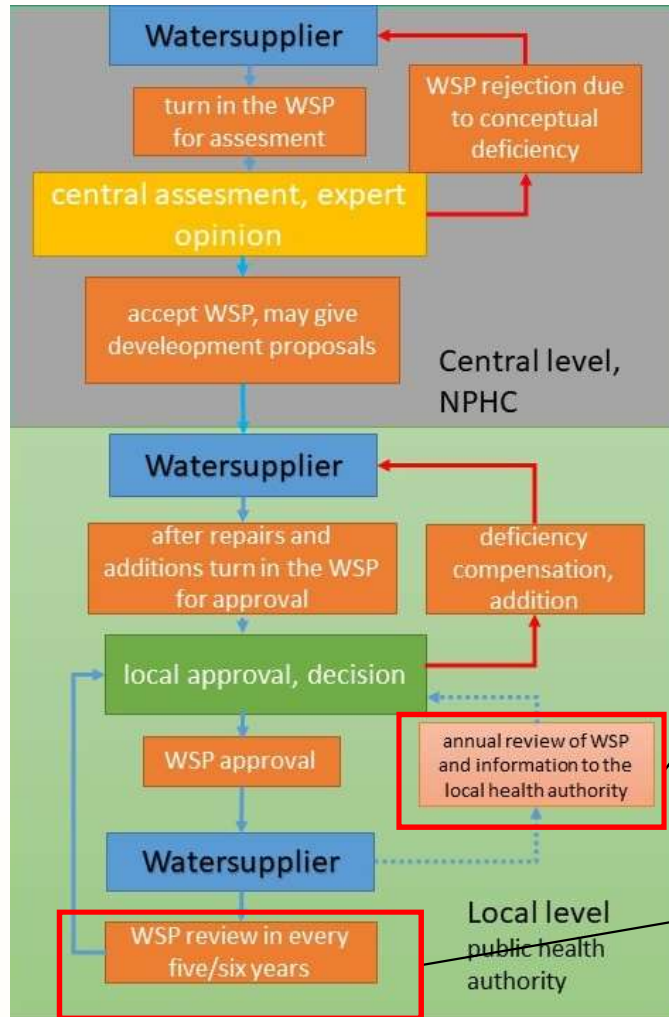
- Legal requirement for large supplies (serving over 5000 people) since 2009 (Gov. Decree 65/2009 (III. 21.) 4. §)
- Obligation is extended to all supplies (serving over 50 people) since December 2013 (Gov. Decree 430/2013 (XI.15))

Supplied population	Deadline
>100.000	July 1 st 2012
50.000-100.000	July 1 st 2013
5.000-50.000	July 1 st 2014
50-5.000	November 30 th 2017

Process of WSP approval

	Operators	National level: National Center of Public Health and Pharmacy (NCPH)	Local level: local public health authorities
Role	Develop WSP	Issue expert opinion	Issue formal approval
First submission	Submit the WSP for approval	Expertise (technology, risk assessment, etc.) Less information on local aspects More flexible – assistance to the suppliers, personal interviews	Varying level of technical, VBT methodological expertise Knowledge of the water supply, Personal contact Site visit More formal process (legal deadlines, communication etc.)
Review process	Internal revision: every year, report the changes	New expert opinion in case of significant changes of the water supply chain (new technology, water base etc.)	External audit every 6 years

Process of WSP approval

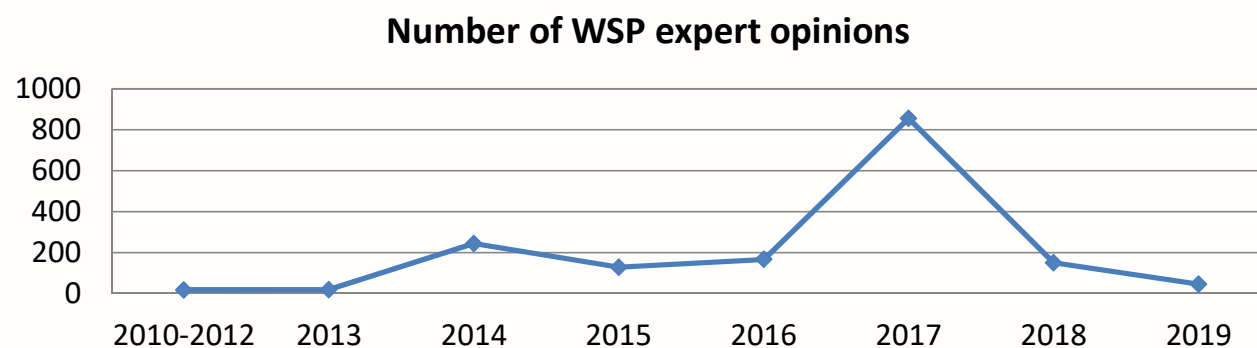


Internal revision: every year, report the changes to local authorities

External audit: every 6 years

Water safety planning in numbers

- more than 1600 WSP expert opinion until 2019
- all public utilities
 - ~ 150 WSP for not public utilities (>10m³/day)
- huge administrative burden on NPHC and public health authorities



- huge differences in quality of the WSPs

Challenges - Water safety planning in Hungary

Mandatory requirement

- Top down approach
- Varying level of commitment from water suppliers
- Content requirements of the WSP are listed in the legislation
- Need for more detailed additional guidance

Covers all public utilities and individual supplies

- Public utilities: higher expertise, usually develop their own WSP
- Small (individual) supplies involves external experts
- Differences in WSP methodology, complexity, quality
- Does not apply to single household wells

WSP revision

- Internal audit every year, results/changes reported to the local public health offices
- Operators need to realize that it is a rolling process
- Continuous self-improvement

NPHC in the WSP developing process

- Development of legislation
- Guidelines on WSP development (2009, 2015, 2019)
- Trainings for operators and public health authorities
- Collaboration in a WSP groups
- WSP template tool (2017)
 - online version (working but not used in practice)
 - offline version (easy data collection tables and detailed registry of risks)
- Evaluation on WSP's quality and approval process and effectiveness on national level
- Guideline on WSP auditing (2020)

WSP auditing

- External (by authorities) and internal (by suppliers)
- Continuous and regular review is essential
- Monitoring and implementing changes (legal, technological, etc.)
- Check that the WSP is meeting its objectives:
 - safe drinking water supply;
 - identify hazards and risks;
 - a reduction in the number of complaints and non-compliances;
 - increase consumer confidence;
 - better communication between parties involved in the supply of drinking water;
 - better trained and more efficient workforce.

Changes in 2023

Directive 2020/2184

Risk based approach in the water supply chain on three levels

-Risk assesment and risk management of the catcment areas for abstraction points



-Risk assesment and risk management of the water supply system (WSP)



-Risk assesment of domestic distribution system

5/2023 (I.12.) Government Decree

Hazard analysis of catchment areas for abstraction points

- Obligation for all supplies serving over 50 people (over 10m³/day)
- Public and non public utilities
- Division of tasks and responsibilities between:
 - water authorities
 - disaster management authorities (water protection authority)
 - water utilities

Hazard analysis of catchment areas for abstraction points

Water authority

- Designation and characterization of the catchment area
 - using the largest designated protective area or where it is not designated yet (protected water sources, not public utilities), unique methodology in cooperation with drinking water suppliers
- Collecting hazards, hazardous events, and potential pollution sources
- Collection of water quality monitoring results
 - data from water suppliers, national monitoring system, emission data from industry and agriculture)
- Determination of source water monitoring frequency and parameters based on the risk assessment of the catchment area
- Planning and implementing preventive and risk-reduction interventions in the catchment area
- Deadline: December 25, 2025
- Water authorities will make the hazard analysis accessible to the water utilities, public health and water protection authority

Hazard analysis of catchment areas for abstraction points

Water protection authority

- designation and revision of water resource protection areas
- Implementing risk reduction measures related to emission control (e.g. more stringent emission values for production sites, banning and penalizing illegal activities in the catchment)

Hazard analysis of catchment areas for abstraction points

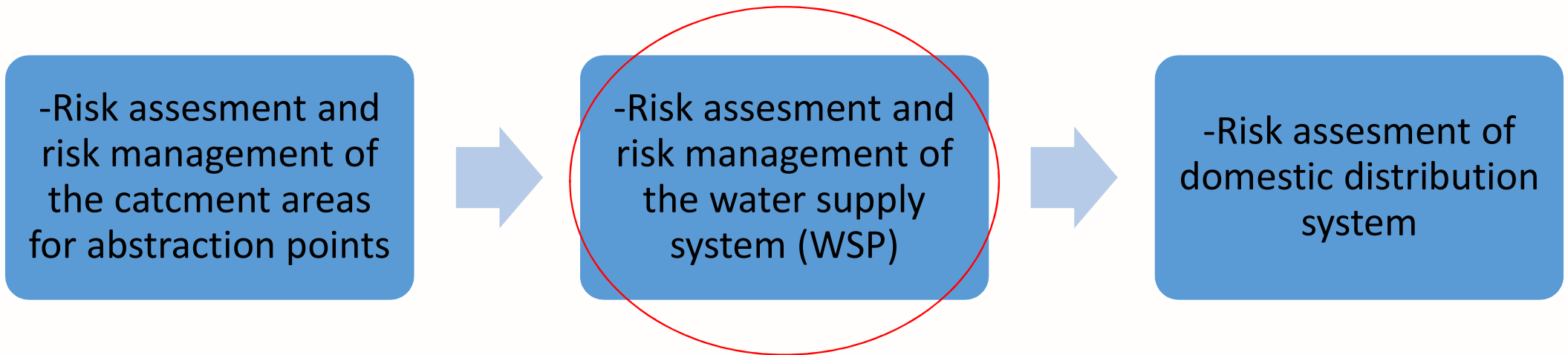
Water utilities

- Receives the outcomes of the hazard analysis from the water authority
- Integrates relevant risks into the WSP
- Definition targeted preventive and control measures
 - intervention in areas under water supplier's responsibility
 - initiation of action at the competent authority if the action is outside of the supplier's responsibility (e.g. emissions)
- Deadline: December 22, 2026
- Risk assessment for catchment is integrated as part of the regular revision procedure of the WSP every 6 years

Changes in 2023

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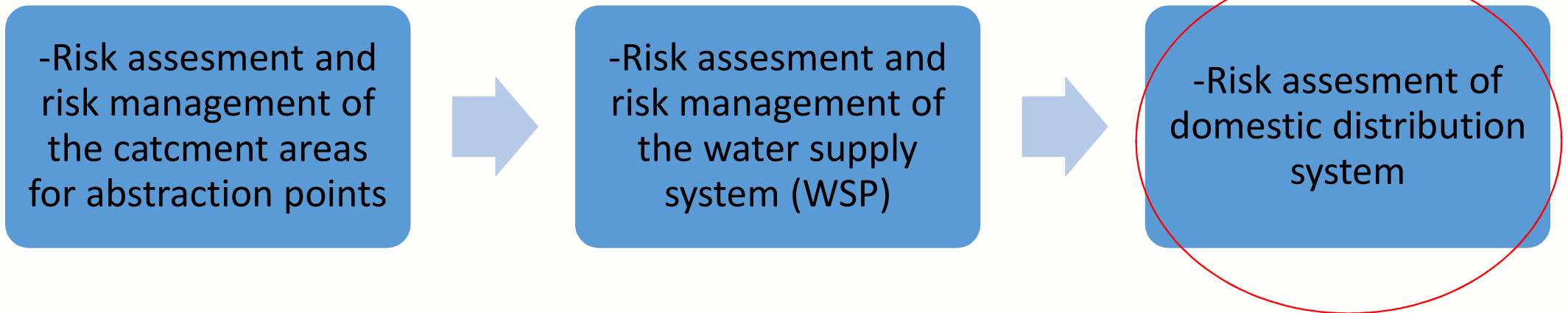
Water Safety Plan changes

- Integration of source water catchment area hazard analysis and monitoring data into the WSP - no later than Dec 2026.
- Improved assessment of risks from climate change, leaks and leakage rates
- Verification of the compliance of materials in contact with water, more pronounced assessment of their risks
- Development of operational monitoring programme
 - detailed well and technology monitoring program (parameters, sampling points and frequency) – formalization of existing practices
 - Increased/online turbidity measurements (where applicable)
 - Verification of virus removal efficiency of the treatment technology in water supply systems using surface water or groundwater exposed to surface pollution
 - If the drinking water is disinfected, verification of the effectiveness of the disinfection process

Changes in 2023

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Domestic distribution system

- General analysis of water quality influencing factors in buildings by NPHC unti 2027
 - Impact of materials contact with drinking water
 - secondary contamination
 - water user habits
- Risk assesment methodology for buildings and information to the public on potential changes of drinking water quality in the domestic distribution systems (NCPHP until 2027)
 - Methodology exists for *Legionella* (guidelines of NCPHP) and lead
- Individual, building-level risk assessment in priority buildings
 - *Legionella* – healthcare facilities, social institutions (except nursery schools)
 - Lead - childcare facilities (educational or boarding facilities for children under the age of 14)
- Monitoring: priority buildings and where the risk assessment indicates high risk for lead or *Legionella*
- Responsibility of the building operators

**Thank you for your
attention!**

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