



International Association
of Water Service Companies
in the Danube River
Catchment Area



Water Safety and Crisis Management: Business Continuity Essentials for Disaster Risk Management



GAIN practical experience
on water safety planning
measures

LEARN from other
practitioners in the sector

BE UP TO DATE on the
latest trends in the sector

BENEFIT from regional and
global experiences from other
utilities and experts

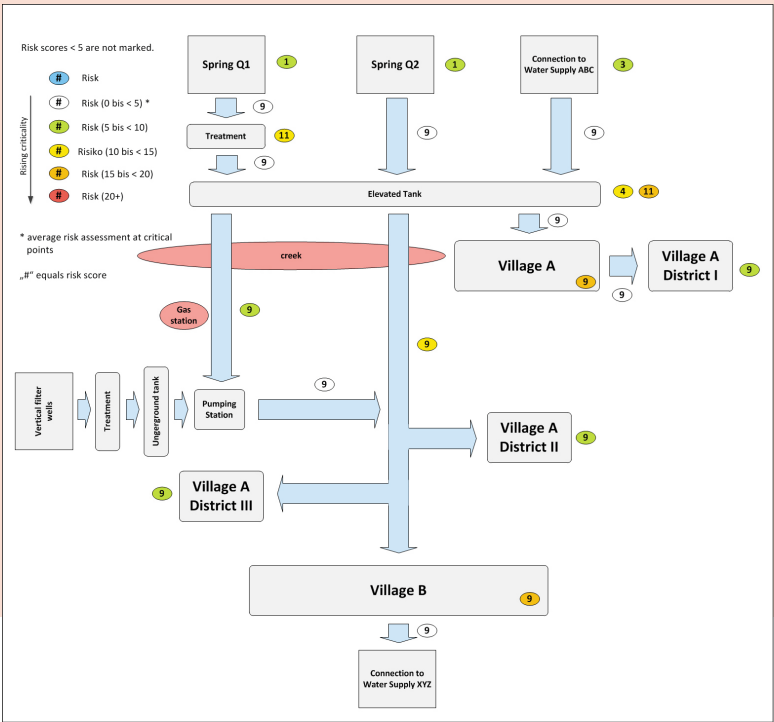
Water Safety and Crisis Management: Business Continuity Essentials for Disaster Risk Management

WSP Module 3, Part 2: Risk assessment

Category	Description	Facility/ Position = Critical Point	Likelihood	Severity of Consequences	Riskscore	Control Point	Measures for risk mitigation/ reduction	Risk owner	Status	Validation	Documentation
1.4	Industrial and commercial buildings, gas station, leakage and contamination of groundwater with oil/ fuel	Catchment area, Spring 1	1	4	4	dispatcher/ engineer on duty	already implemented: continuous SAK measurement at treatment facility, monthly inspection of protection zone	Head of water capturing		yearly	SAK database, plant permits industrial plant ABC
1.5	Storage of water-polluting solids: leakage and contamination of groundwater with dung/ nitrate	Catchment area, Well, Spring 1, Spring 2	2	3	6	dispatcher/ engineer on duty	already implemented: regular water analyses (nitrate), monthly inspection of protection zone	Head of water capturing		yearly	water quality analysis reports, technical inspection reports
3.1	Fertilizer: leakage and contamination of groundwater	Catchment area, Spring 1, Spring 2, Well	2	3	6	dispatcher/ engineer on duty	already implemented: regular water analyses (nitrate), monthly inspection of protection zone	Head of water capturing		yearly	water quality analysis reports, technical inspection reports
3.2	Use of pesticides: leakage and contamination of groundwater	Catchment area, Spring 1, Spring 2, Well	2	3	6	dispatcher/ engineer on duty	additional measures: direct contact and exchange of information with local farmers	Head of water capturing		yearly	water quality analysis reports
4.1	Streets: leaking oil, petrol after accidents, contamination of groundwater	Catchment area, Spring 1, Spring 2, Well	1	4	4	dispatcher/ engineer on duty	already implemented: regular water analyses (chemical parameters), monthly inspection of protection zone	Head of water capturing		yearly	
5.1	Surface water (streams, pond, Precipitation): Danger of polluted surface water contaminating groundwater	Catchment area, Well, Spring 1, Spring 2	3	4	12	dispatcher/ engineer on duty	already implemented: regular water analyses, monthly inspection of protection zone, connection to regional supplier	Head of water capturing		yearly	
5.2	Flooding and alluvial: Danger of floods contamination of groundwater	Catchment area, Well	2	4	8	dispatcher/ engineer on duty	additional measures: improve construction state of water extraction plant, already implemented: regular water analyses, connection to regional supplier, flood early warning mechanism	Head of water capturing		yearly	
7.0	Natural conditions: vermin entering the well, contamination of groundwater	Spring 1, Spring 2, Well	2	3	6	dispatcher/ engineer on duty	already implemented: regular water analyses, monthly inspection of well	Head of water capturing		yearly	
7.1	Unsecured entrance, contamination of resources	Well, Spring 1, Spring 2	3	2	6	dispatcher/ engineer on duty	install access controls	Head of water capturing		yearly	
7.2	No dry conditions at entrance (chemical and microbiological)					dispatcher/ engineer on duty		Head of water capturing		yearly	

Identify, measure and mitigate risk using state-of-the-art Water Safety Planning (WSP) Methodology.

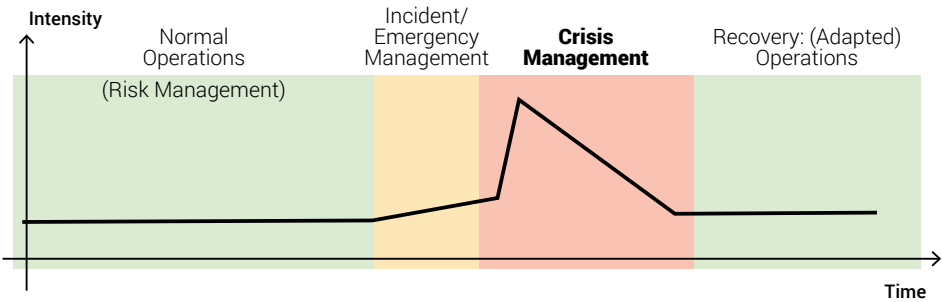
Likelihood	Severity	Severity				
		1	2	3	4	5
multiple	5	5	10	15	20	25
	4	4	8	12	16	20
1yr	3	3	6	9	12	15
	2	2	4	6	8	10
10yr	1	1	2	3	4	5



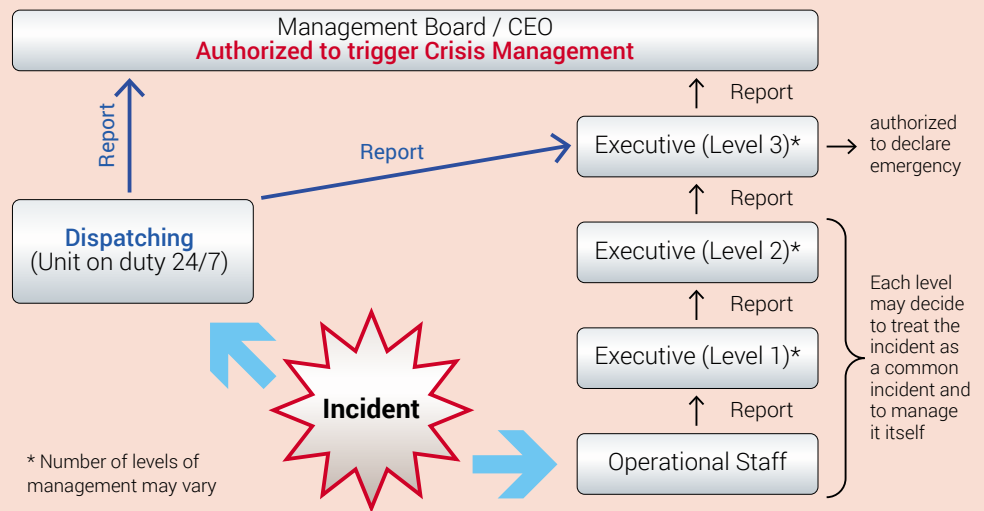
Expand the classic ISO 31000 Risk Management approach by introducing technical control points and control measures to implement a full **Water Safety Plan (WSP)** at your water works.

Identify and improve vulnerabilities at your water works to increase resiliency when the next disastrous event hits.

Build on your WSP results and measures to set up a **scalable, multi-level** organisational response in accordance with DVGW W 1002: **Crisis Management**.



Design and implement operating procedures for floods, earthquakes, power outages, large pipe failings, or any other type of potentially disastrous event.

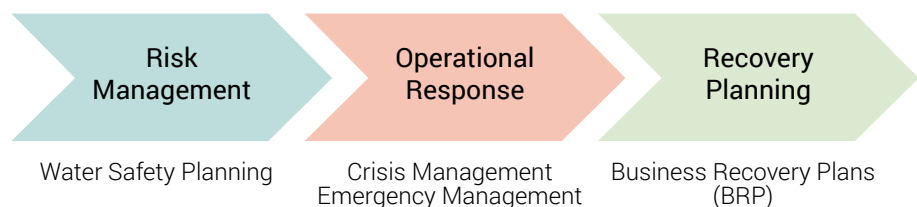


Scale your crisis management and response measures up or down to fit your specific organisation. **Crisis Management plans can be scaled up to 1000+ employees or down to just one employee!**

Test and train your newly implemented crisis and disaster preparedness measures with top experts from Europe.

Utilize a large number of scenario-based real-time exercises to train the skills and strengthen the situational awareness of your executives.

Implement the full business continuity cycle to ensure continued water supply at your water works even under critical/disastrous circumstances.



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Program description and covered topics

Lack of response mechanisms to pollution outbreaks and increasingly frequent natural disasters such as floods and droughts hinder the ability of water supply utilities to sustainably provide their services, hence posing a risk to national public health.

Through this Program, supported utilities learn how to identify operational hazards and how to plan, prepare and respond to these incidents for fast response and recovery in the event of a crisis or disaster. In addition, practitioners receive practical scenario-based training for decision-making under uncertainty.

The Program has been developed at the regional level in cooperation with the Technical Partner, the Infraprotect consortium with Energie AG Wasser, Vienna Water and the Austrian Association for Gas and Water ÖVGW, and is delivered by national or regional Hubs in local language. The duration of the Program is one year, and it consists of workshops as well as hands-on exercises at the utilities themselves with support of the trainers. Participating utilities pay a registration fee which is communicated by the Hub.

Set-up of Program

The Program is designed on learning-by-doing principles. It includes a mix of face-to-face training workshops providing tools and techniques to address the challenges faced and see them applied in practice, followed by on the job training, in which participating utilities apply the tools and techniques to their particular situation and develop concrete products (diagnostics, action plans etc.). The principles of blended learning are applied, i.e. face-to-face training is accompanied by e-learning material provided within the D-LeaP Academy.

For more information on the Program concept and design please visit **www.d-leap.org**!

Learning goals

To manage risks under normal operations and during disaster events

To prepare and apply Water Safety Planning and Crisis Management tools in operations of your water supply system

To implement Business Continuity Management (BCM) in operations of your water supply system

To scale crisis management solutions up or down to fit the needs of organisations of any size of a water supply system

To conceptualize a way of cooperation with relevant national and local institutions for mutual aid and assistance

Hubs:



UTVSI, Association for Water Technology and Sanitary Engineering of Serbia



ADKOM, Association of Utility Service Providers of Macedonia



SHUKOS, Water and Wastewater Works Association of Kosovo/**SHUKALB**, Water Supply and Sewerage Association of Albania

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The Danube Learning Partnership is supported by



Smart policies, strong utilities, sustainable services