
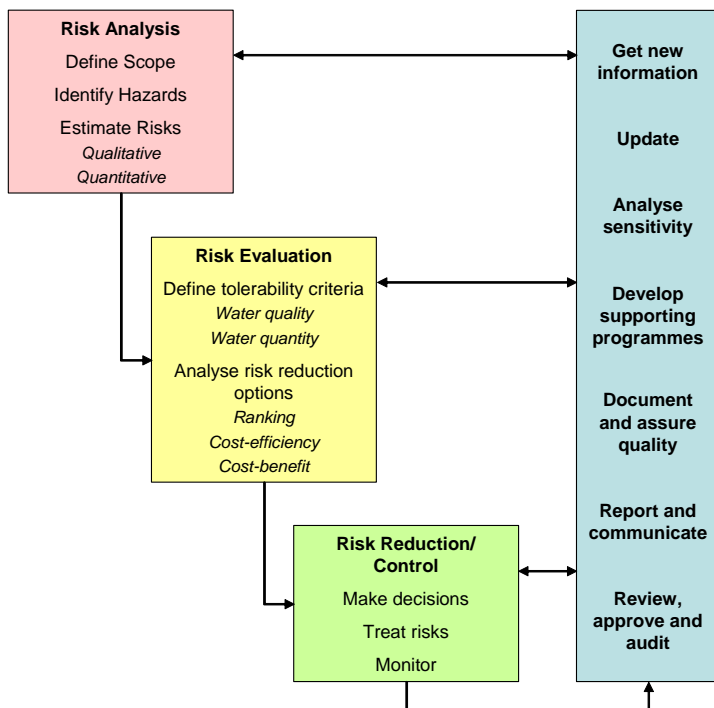


<p><i>Water safety Plan</i></p>	<p style="text-align: center;"><b>Comprehensive Framework for Integrated Risk Management in Water Safety Plans</b></p> <p style="text-align: center;"><i>Management guidance</i></p>	
<p><b>Information derived from:</b> Based on research and application in the European Union funded TECHNEAU research project.</p>	<p><b>Related tools:</b></p> <ul style="list-style-type: none"> <li>○ Identify hazards and hazardous events</li> <li>○ Assess and prioritise risks</li> <li>○ Identify control measures</li> </ul>	
<p><b>Important Notes to users:</b> <i>This document provides general guidance to support improved management of drinking water quality. It cannot however be definitive and users must ensure that they assess local factors and particularly take account of any national or regional legislative requirements before adoption. This may also require close collaboration with others. The priority to be given to implementing controls to manage identified risks to water quality will depend on a proper prioritisation process by each water supplier.</i></p>		
<p><b>Summary</b> Risk assessment and risk prioritisation are critical elements of a Water Safety Plan. However the process can be complex, require considerable resources and take a long time. Therefore before establishing a risk management system it is important to be clear on the most cost effective approach to meet local priorities and needs. This document provides an overview of the TECHNEAU Generic Framework, which is a comprehensive structure for integrated risk management from catchment to consumer in Water Safety Plans, considering both <i>water quality</i> and <i>water quantity</i></p>		
<p><b>Detailed information</b></p> <p>The TECHNEAU Generic Framework is aimed at providing a comprehensive structure for integrated risk management from catchment to consumer in Water Safety Plans, considering both <i>water quality</i> and <i>water quantity</i>.</p> <p>To provide good risk management practice and comply with the intentions of WSPs the framework is aimed at enabling:</p> <ul style="list-style-type: none"> <li>○ Application to groundwater and surface water supplies at different levels of complexity and for both <i>quality</i> and <i>quantity</i> risks.</li> <li>○ A clear definition of the <i>scope</i> of the risk management process.</li> <li>○ The use of relevant methods for <i>identification</i> of hazards related to both water quality and water quantity, e.g. microbial, chemical, radiological, technical, operational, and administrative hazards.</li> <li>○ The use of relevant methods, for <i>structuring and integrating</i> source water systems, treatment systems, distribution and plumbing network systems into one integrated risk assessment model.</li> <li>○ The use of relevant methods for <i>qualitative</i> and <i>quantitative</i> estimations of risk.</li> <li>○ The use of relevant methods for <i>uncertainty assessment</i> of risk estimations</li> <li>○ Risks to be expressed in <i>monetary units</i> as far as possible to provide for cost-benefit and/or cost-efficiency considerations in prioritisation of risk reduction efforts.</li> <li>○ The use of relevant agreed <i>risk tolerability criteria</i> as a basis for risk evaluation.</li> <li>○ <i>Transparency</i>.</li> <li>○ The use of relevant methods for identification and analysis of the effect of the performance of <i>risk reduction options</i>.</li> <li>○ <i>Verification</i> of results, e.g. review approval and audit procedures.</li> <li>○ The use of relevant methods for <i>risk communication</i> between involved stakeholders.</li> </ul>		

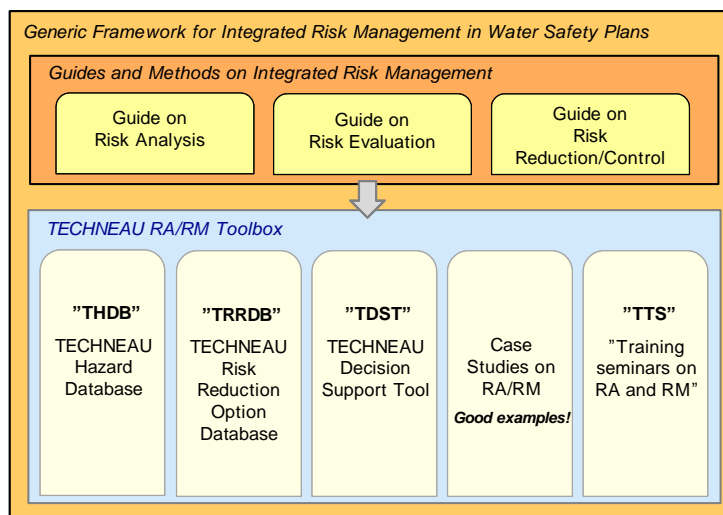
The suggested framework is in full compliance with the general risk management process and in concordance with WSP. The main components of the suggested framework are displayed in the figure below.



The primary target user of the framework is the water company. However, each water company may not be able to perform every step in the risk management process. For example, water companies are typically not in a position to determine health risk tolerability criteria. Nor may the water company be able to implement risk reduction measures in the source water system. It is therefore important to emphasise that the framework must be communicated between involved stakeholders. In a successful risk management, the views and priorities of other stakeholders must be taken into consideration in order to define relevant tolerability criteria and to implement relevant and reasonable risk reduction measures.

To support application of the framework, a number of tools and methods are being developed in TECHNEAU. More information can be obtained from the links below:

- Guidance reports on risk analysis, risk evaluation and risk reduction/control.
- A hazard identification database.
- A database for providing information on risk reduction options.
- Methods on decision support regarding risk reduction options.
- A set of case studies with practical application of methods



<b>Reference for further detailed information:</b>	
Rosén, L., P. Hokstad, A. Lindhe, S. Sklet, J. Røstum, (2007). Generic framework and methods for integrated risk management in water safety plans, TECHNEAU report. Deliverable no. D 4.1.3, D 4.2.1, D 4.2.2, D 4.2.3. ( <a href="http://www.techneau.org/index.php?id=124">http://www.techneau.org/index.php?id=124</a> )	
<b>Typical resources needed:</b>	
This more comprehensive approach is likely to require more resources and time as well as external expert support. However the benefits will be proportionately greater.	
<b>Document creation:</b>	
<b>Author</b>	<b>Date</b>
Lars Rosén and Andreas Lindhe	January 2009
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