

# PH1C: Establish regulatory frameworks and guidelines for water and sanitation safety plans

REGULATORY FUNCTION: PUBLIC HEALTH		PH1C
<p><b>OBJECTIVE PH1</b></p> <p>There are rules ensuring public health standards for safe drinking water and sanitation</p>	<p><b>ACTION CARD PH1C</b></p> <p style="text-align: center;"><b>ESTABLISH REGULATORY FRAMEWORKS AND GUIDELINES FOR WATER AND SANITATION SAFETY PLANS</b></p>	
<p><b>COST:</b> Low                      <b>FREQUENCY:</b> One time</p> <p><b>TARGET GROUPS:</b> Regulators, ministries of health, service operators</p>		
<p><b>DESCRIPTION</b></p> <p>Regulators support ministries of health (or other relevant authorities) in regulating drinking water quality by establishing regulatory frameworks and guidelines for risk management approaches, such as water and sanitation safety plans (WSPs) as proposed by the WHO. WHO guidelines for drinking-water quality recommend WSPs as the most effective means of consistently ensuring the safety and acceptability of drinking-water supplies. In accordance, regulators establish guidelines for risk assessment including all steps in water supply from catchment to consumer, followed by implementation and monitoring of risk management control measures, with a focus on high priority risks. The water and sanitation safety planning approach is increasingly being adopted globally as best practice for the provision of safe drinking water and sanitation.</p>		
<p><b>EXPECTED OUTCOMES</b></p> <ul style="list-style-type: none"> <li>• Regulatory frameworks and guidelines for water and sanitation safety plans are established.</li> <li>• Service operators are legally bound by water and sanitation safety plans.</li> <li>• Consumer health is adequately protected.</li> </ul>		
<p><b>EXAMPLE 1: UNITED KINGDOM</b></p> <p>In the <b>UK</b>, the regulatory framework for risk assessments (WSPs) is established as follows.</p> <ol style="list-style-type: none"> <li>1. The regulation requires a comprehensive risk assessment for every treatment works and connected supply system. These risk assessments must cover all hazards and hazardous events which could present a risk of supplying water that could cause a risk to public health or an unwholesome supply.</li> <li>2. The Inspectorate fully endorses the WHO Water Safety Planning approach to the management of drinking water supplies.</li> <li>3. Risk assessments must take all process steps in the supply chain looking at potential risks.</li> <li>4. The methodology requires risk to be characterized for each hazard/hazardous event using a scoring system based on likelihood and consequence criteria. Risks should be characterized before (uncontrolled) and after taking into account permanent control measures in place.</li> <li>5. A risk assessment should take into consideration all parameters, elements, substances, micro-organisms including parasites, algae and viruses, and all variants that are indicative of a risk to drinking water quality and wholesomeness.</li> <li>6. Risks to raw water quality should use information obtained from abstraction point monitoring, catchment surveys and information on pesticide usage, to identify chemicals which could be detected in raw water through their usage or properties. The output of catchment risk assessments should be used to confirm water treatment needs.</li> <li>7. Risk assessments should be kept under continual review, and companies should have documented processes in place to capture new information, changes to residual risks, and to agree and prioritize actions required for mitigating residual risks.</li> <li>8. Water suppliers should mitigate risks in an expedient manner to ensure that uncontrolled risks to public health and wholesomeness are not allowed to persist for unacceptably long periods of time. If permanent mitigation involves the</li> </ol>		

implementation of a medium or long term solution, interim operational measures should be put in place to ensure that consumers are not supplied with unwholesome water.

#### **EXAMPLE 2: CHINA**

In **China**, the Water Supplies Department of the Hong Kong Government produced Guidelines for Drinking Water Safety Plans for Buildings in Hong Kong. This specifies the primary objective as the prevention of chemical or microbial contamination during transfer and storage of drinking water between the connection points and points of consumption. The Water Supplies Department assures provision of safe and wholesome water supply at all connection points to buildings, in compliance with drinking water quality standards, which currently adopt values of chemicals and other substances set out in the WHO guidelines for drinking water quality (2011). Whereas water quality may be affected by internal plumbing, implementation of water and sanitation safety plans for buildings can reduce deterioration and maintain water quality up to the point of consumption. Following the WHO guidelines, more stringent water quality requirements may apply in specific buildings which require water of appropriate quality, taking into account high risk groups due to their type of exposure and potential vulnerabilities.

#### **EXAMPLE 3: COSTA RICA**

In Costa Rica, Executive Order No. 38924-S, pursuant to current guidelines of the World Health Organization (WHO), defines Water Safety Plans (WSP) as one or more documented plans that identify possible risks, from the catchment area to the consumer; it details and prioritizes these risks and implements control measures for their mitigation, in addition to service provision management risks. In the biannual water quality reports that operators must submit, they are obliged to report WSPs or other voluntary quality programs being implemented. A WSP, according to the Manual for the Development of Water Safety Plans by the WHO and the IWA, usually contains, among other aspects, a description of the water supply system, a determination of the risks, hazardous events and a risk assessment, the determination and validation of control measures, and the classification of risks.

#### **EXAMPLE 4: BRAZIL**

In Brazil, according to Ordinance No. 2914/2011 of the Ministry of Health, the entity in charge of the water for human consumption distribution system must maintain a systematic assessment of the collective distribution system, stipulating health risks and on the basis of the following criteria: occupation of the riverbed that contributes to the source; water characteristic history; physical characteristics of the system; operational practices; and quality of distributed water according to Water Safety Plan (WSP) principles recommended by the World Health Organization (WHO) or those defined in the guidelines in force in the country.

#### **EXAMPLE 5: URUGUAY**

In Uruguay, according to the recommendations of the World Health Organization (WHO), the Regulation approved by the Energy and Water Services Regulator, (URSEA) via Resolution 120/2018, establishes that the Drinking Water Service Provider (EPSA) must adopt a risk management approach to drinking water services, stipulating the requirements and obligations that the EPSA must comply with when designing and implementing Water Safety Plans throughout all the distribution systems under its purview, and a progressive schedule with a view to 2030 aiming to have all drinking water distribution systems in Uruguay under a Water Safety Plan by that year.

#### **LINKS**

UK: WHO web page: <https://www.who.int/publications/i/item/WHO-SDE-WSH-05.06>  
<https://www.who.int/news/item/03-03-2021-new-water-safety-planning-training-videos>

UK: <https://www.dwi.gov.uk/water-companies/water-safety-plans/>  
<https://www.dwi.gov.uk/private-water-supplies/pws-installations/treatment-guide-2/>

China (Hong Kong): [https://www.wsd.gov.hk/filemanager/en/content\\_1734/WSPBHK\\_main\\_text\\_e.pdf](https://www.wsd.gov.hk/filemanager/en/content_1734/WSPBHK_main_text_e.pdf)

Costa Rica: Water Safety Plans (WSP)

[http://www.aqq.com.es/documentos/DE\\_289\\_Decreto\\_No\\_38924\\_S\\_Reglamento\\_para\\_calidad\\_agua\\_potable.pdf](http://www.aqq.com.es/documentos/DE_289_Decreto_No_38924_S_Reglamento_para_calidad_agua_potable.pdf)

Brazil: Ordinance No. 2.914 of December 12, 2011. Establishes the procedures for the supervision and monitoring of the quality of water for human consumption and its drinkability standard.

<https://www.gov.br/agricultura/pt-br/assuntos/inspecao/produtos-vegetal/legislacao-1/biblioteca-de-normas-vinhos-e-bebidas/portaria-no-2-914-de-12-de-dezembro-de-2011.pdf/view>

Uruguay: REGULATION ON WATER SAFETY PLANS

[Http://www.ursea.gub.uy/web/mnnormativo2.nsf//0/832578EE0057357E03258275005984BF/\\$File/reglamentopsa-Marzo2018.pdf](Http://www.ursea.gub.uy/web/mnnormativo2.nsf//0/832578EE0057357E03258275005984BF/$File/reglamentopsa-Marzo2018.pdf)

### **INTERNAL CAPACITIES NEEDED AND THE ROLE OF PARTNERS**

To establish frameworks and guidelines for water and sanitation safety plans requires the in-country capacity on risk management, and specifically on risk management in relation to water supply. Based on that understanding, and perceived need and demand including buy-in from decision makers, the process to establish frameworks and related guidelines that suit specific contexts can begin and will need to be tailored to the prevalent typologies of water supply modalities, technologies, and capacities for implementation at different levels and in different service delivery model scenarios. Development partners could support the entire process by providing awareness raising and capacity development training, promoting peer to peer learning from countries with more experience, and in providing direct technical assistance to review draft frameworks and guidelines.