



EurEau

Rue du Luxembourg 47-51,  
B-1050 Brussels, Belgium  
Tel : +32 (0)2 706 40 80  
Fax : +32 (0) 2 706 40 81  
BE 0416.415.357  
secretariat@eureau.org  
www.eureau.org

# Towards effective Water Safety Planning

## Summary

**EUREAU supports the revision of Annexe II of the Drinking Water Directive (EC/98/83) to formalise the common principles of Water Safety Plans (WSPs), the principles of which are already used by many Member States.**

**WSPs have clear benefits to both water service providers and to water consumers. For WSPs to be effective it is important that they are not simply considered as an administrative exercise and are clearly linked to operational practices and capital investment programmes. EUREAU however recognises that WSPs do not prevent accidents and clear links should be made with emergency planning processes.**

**The WSP approach should be based on a common vocabulary and common standard practices however new obligations need to be kept as simple and clear as possible to allow application in all supplies from large to small as well at a building level. Water suppliers do not have control of the catchment, nor do they have control on the situation in buildings and housings. In order to ensure the safety of their customers, these ends of the supply chain should form an integral part of the WSP approach, and appropriate provision must be made so that other legislation, at minimum, enables a coherent WSP approach to take place.**

---

## 1. Principles of Water Safety Plans

The reliable supply of good, safe drinking water requires that health based targets are established for water supply, from which robust quality standards can be put in place, as is done with the Drinking Water Directive (DWD).

The Water Safety Plan approach comprises three components: an effective and transparent Water Safety Plan (WSP), an independent verification process; and the

participation of stakeholders. The combined effect of the three components is absolutely essential for ensuring that the DWD objectives are met, namely:

- 1.** an effective protection of resources designated for drinking water supply (groundwater, spring water, rivers, dams, and lakes), under the responsibility of the catchment authorities;
- 2.** drinking water intake, treatment and distribution, should be based on a professional management system related to Codes of Practices, due diligence and well trained staff/operators; and
- 3.** maintaining the high quality of drinking water up to the consumer's taps needs their domestic installations to be properly planned, installed and maintained, according to a PRM approach, under the owners' responsibility.

The principles of WSPs are already common practice in many European utilities, as a result of permitting requirements, complementing the explicit DWD compliance monitoring programs. For example, on-line monitoring equipment has enabled the development of real-time water quality control schemes which ensures a genuine preventive risk management, which the majority of the EU population currently benefits from.

Since 2004, the World Health Organisation (WHO) has recommended the formal development of WSP, which the UK and Portugal have incorporated in their respective national legislations, as did some non-European States (e.g. Australian States). This illustrates how WSP can be provided for in legislation. Where they have been adopted WSPs have proven to be a strong and flexible concept which applies to a variety of situations in terms of size and country development level.

Whilst the DWD does currently provide a number of concrete risk management obligations which align with the broader WSP approach, it is felt that any revision of the Directive, or its annexes, should make more explicit WSP obligations.

## 2. Benefits of Water Safety Plans

There are major benefits to utilities and consumers of developing and implementing WSPs.

- ~ WSPs, through a holistic approach, improve the safety of drinking water supply throughout the whole water supply chain from water catchment to the customer tap - an approach that is already common practice in the food sector.
- ~ WSPs require utilities to gain knowledge about assets (above ground & buried) and their susceptibility to risks that could affect water quality, going beyond the list of mandatory parameters under the DWD.

EUREAU takes the view that common principles of WSPs should be incorporated in the DWD so as to support management practices. The goal being to systematise long-

established operation and management practices through the identification of the suitable operational monitoring of barriers or control measures.

This change would stimulate a culture oriented towards risk management and continuous improvement, as was introduced decades ago under the ISO 9000 series. The benefit of clarifying the legislative requirements is that all parties including authorities, basin authorities, municipalities, operators and surrounding services and stakeholders will have to adopt a common language and a long-term holistic view as to how bringing safety into day-to-day routines at all levels. The WSP approach also yields a broader analysis of risk control issues, sometimes enabling less capital intensive solutions to be implemented.

### 3. Balance in mandatory requirements

The general level of compliance of EU drinking water with standards set out by the DWD is already high. The additional benefit of adding WSP requirements will be an improved mutual understanding and cooperation between the water suppliers, the competent authorities, catchment stakeholders and premises owners. However for the benefits to be realised it is essential that any new obligations are kept as simple and clear as possible and do not result in an excessive administrative burden.

Extensive supporting material is already available at international level (e.g. from WHO, ISO, IWA) and some frameworks also exist at Member States level, either in local law or through other mechanisms such as Codes of Practices. At the EU level, EUREAU take the view that the vocabulary and terminology used should align with the EN 15975-2 standard for "*Security of drinking water supply - Guidelines for risk and crisis management - Part 2: Risk management*". This will avoid creating confusion and multiple possible interpretations.

It is important that WSPs are not purely an administrative exercise, but act as the review and gap-analysis between existing controls developed by the utilities themselves and the requirements of WSP. This will increase the confidence of authorities, whilst not overwhelming them with excessive documentation or reporting requirements.

The WHO has made clear that the local water supplier should have responsibility for development of plans and it is imperative that any legislative proposal provides clarity on which body within a Member State will approve WSPs once developed.

The EU proposal for auditing of systems must contain enough flexibility for Member States to develop national schemes based on the mechanisms already in place, such as preexisting certification requirements or Code of Practices. Auditors must be experts in water quality in order to develop quality dialogue with the audited professional.

WSP implementation is not immediate in time and in depth as plans will evolve and develop with time. EU and national authorities should recognise this focus on getting the

process started rather than waiting for refined plans from the outset. WSPs will inevitably improve over time, alongside the increased professionalism as all parties share experiences and expertise.

Reviews of WSPs should not only be carried out at fixed intervals (e.g. 5 years) but should be flexible in order to allow updates to take place as and when new information or expertise become available or to new and emerging risks such as:

- ~ hydrologic changes
- ~ changes in the upstream domestic, industrial or agricultural balance & farming activities
- ~ new water treatment technologies,
- ~ changes to the level of risk management professionalism of auditors and administrations.

Although taking a holistic view and striving to eliminate risks from the outset, WSPs do not per se ensure that accidents cannot occur. WSPs, however, should give a clear structure for reacting as early as possible to any incidents and provide opportunity to learn from experience, through clarified crisis management procedures. The EN 15975-2 standard "*Security of drinking water supply - Guidelines for risk and crisis management - Part A: Crisis management*" could be a good basis to cope with these situations.

The WHO approach provides that WSPs are part of the bigger health picture, which encompasses health surveillance and protection. For Member States already achieving high level of compliance against the parametric standards set by the DWD, the additional benefits of WSPs will be difficult to quantify, unless health surveillance results are feedback to utilities to enable an understanding of the changing patterns of illness within communities. A rapprochement between the WSP and the health surveillance should be catered for at Member State level.

## 4. Communicating Water Safety Plans

Consumers will directly benefit from WSPs and develop a better confidence in drinking water by understanding the multiple barrier approach. The WSP approach is also an opportunity to clarify, between parties that zero risk in the context of drinking water provision is not an achievable aim, as it is in any other context. The notion of acceptable risk needs therefore to be made more transparent. Some accepted risks levels may take the form of EU-wide parametric values; some other may not be subject to parametric values, which will therefore be more difficult to assess. Any revision of the DWD must provide suitable indications to the acceptable levels of risk taking into account public health and social measures.

An area of increasing difficulty is where no applicable parametric value currently exists. In such cases it is likely that the management of potential risks (such as endocrine disrupting compounds or pharmaceuticals) will be subjective. Whilst the precautionary

principle must apply, the complexity of the situation can hardly be manageable by local health authorities and water suppliers. Appropriate mechanisms must be in place at an EU and national level to sort out and minimise such risks, and provide enough guidance for local actors to take suitable, and meaningful, actions.

The level of detail in the information made available to the public about the WSP should be clarified, as should the level at which such information should be disclosed. EUREAU believes that disclosure of this information must not in itself constitute a risk to the physical security of drinking water systems.

The WSP approach must also provide supporting information for any capital investment needed to protect the safety of supplies, with a view that all stakeholders have a shared understanding from which to make and support investment decisions.

The number of potential solutions to be documented may prove high and result in further confusion. This inherent communication difficulty must be kept in mind whilst developing the WSP scheme and the exact role of the parties should be clarified early in the processes for effective application.

## 5. Upstream and downstream ends of the supply chain

Water suppliers do not have control of the catchment, nor do they control the drinking water in buildings and housings past the point of delivery. These ends of the supply chain form an integral part of the WSP approach, but appropriate provision must be made so that other legislation, at minimum, enables the WSP approach to take place.

Regarding basin management, enough provisions are already in place under the Water Framework Directive, which provide elements of the upstream risk analysis and monitoring. It is important that such elements are automatically shared with the concerned water suppliers.

The responsibility for drinking water safety beyond the point of delivery rests with the building or property owner. EUREAU recommends that water safety be sufficiently taken in charge by the owners and their respective federations or authorities so that audits and certifications are implemented to control the risks within buildings.

## 6. Water Safety Plans in small supplies

Small supplies (serving between 50 and 5000 citizens) have a history of generally lower compliance with drinking water quality standards than larger supplies. Small supplies can exhibit specific characteristics such as lack of awareness on water quality issues & threats, resulting in a lack of availability of personnel with suitable knowledge, technical support or training. The political priority given to water matters in small supplies is also often at stake, resulting in insufficient financial resources, weak or ineffective enforcement mechanisms. The renewed DWD should strike a balance between increased mandatory

monitoring and the development of WSP which have to be proportionate in means and audit frequency.

## 7. Reporting requirements

WSP development requires a comprehensive understanding of the system, the range and magnitude of hazards and hazardous events that may affect the system and the ability of existing processes and infrastructure to manage actual or potential risks.. It also requires an assessment of capabilities to meet targets in a dynamic way, since performance is not constant.

There is an inherent difficulty in developing an EU reporting scheme which adequately captures such elements so as to give confidence that progress is underway in all Member States. In such matter, EUREAU believes that the EU or national authorities should not view WSP as a means to complete their database or micro-manage utilities. The elaboration of suitable and proportionate metrics to be reported upon from local to national level and from national to EU level, is absolutely essential and should be discussed at the same time as the new requirements, with a view to characterise progress over time and create a level playing field.

## 8. Sampling requirements

WSP must enable tailoring of monitoring to a more inclusive risks analysis. This may yield a lower level of end-of-the pipe testing, but also some increased monitoring schemes in raw waters. When this happens to be the case, the funding issue must be addressed as part of the WSP construction.

It must also be recognised that the case-by-case monitoring schemes and potentially broadened range of parameters may create financial, administrative and technical difficulties for utilities and laboratories, which may in some cases challenge their viability.

## 9. Concluding comments

EUREAU support the principles of Water Safety Plans within the context established in this document. EUREAU supports the steps being taken by DG Environment to amend Annexes II and III of the DWD to clarify the processes necessary to introduce them. Many Member States have already adopted the WSP approach and opportunity should be taken to learn from their experiences.





## About EurEau

EurEau is the voice of Europe's water sector. With a direct employment of around 500,000 people, the European water sector makes a significant contribution to the European economy.

EurEau represents drinking water and waste water service providers from 27 countries in Europe, from both the private and the public sector. Our members are the national associations of water services in Europe.

At EurEau we bring national water professionals together to agree European water industry positions regarding the management of water quality, resource efficiency and access to water for Europe's citizens and businesses.



EurEau

Rue du Luxembourg 47-51,  
B-1050 Brussels, Belgium  
Tel : +32 (0)2 706 40 80  
Fax : +32 (0) 2 706 40 81  
secretariat@eureau.org  
www.eureau.org

