



La société
wallonne
des eaux



How to steer WSPs towards a model of good governance

October 25th, 2018– Cremona

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From its status as a **methodological tool to control and minimize the health risk**, the concept of **Water Safety Plan** is evolving towards a status of **model of good governance** by widening its scope of interest.

How to steer WSPs towards a model of good governance

1. The Risk Approach and the EC Directive
2. Water Safety Plans, as tool to minimize the sanitary risks
3. The evolution of Water Safety Plan towards Good Governance
4. Conclusions

1. The Risk Approach and the EC Directive

Introduced in 2015, **Water Safety Plans become mandatory** according to the future European Directive (standard EN 15975-2)(1)

Future Directive :

- **Art 7: Introduction of the WSP approach.** Updated every 3 (6) years!
- **Art 8: Assessment of the hazards associated with water bodies** used for the abstraction of water intended for human consumption
- **Art 9: Supply risk assessment**
- **Art 10: Evaluation of the risks related to the domestic distribution:** by considering the nature of the customer (population exposed, health care establishments, hospitals, tourist sites, ...)

(1) These provisions are not new, as those obligations had already been introduced in 2015 with the amended Annex II to the Di

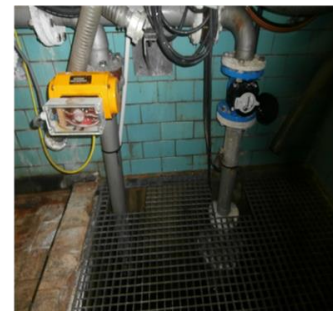
1. The Risk Approach and the EC Directive

- The approach is mainly oriented towards **health risks**, water quality and water quantity;
- The basis of work is the "**water supply zone**". A supply zone is a defined geographical area in which the water intended for human consumption comes from one or more sources and within which the quality may be considered to be more or less uniform.
- In each "water supply zone", **from abstraction area to the tap**, it is necessary to determine the dangerous events, and to estimate the risk (probability x dangerousness). It's called the **risk assessment**.
- The methodology is based on the "PLAN / DO / CHECK / ACT" principle of **continuous improvement**.

2. Water Safety Plans, as tool to minimize the sanitary risks

The 4 first steps for WSP elaboration are :

1. Create a team dedicated to the WSP
2. Describe the “Supply Zone”
3. Identify hazards and assess risks
4. Determine control measures and prioritize risks



2. Water Safety Plans, as tool to minimize the sanitary risks

After 6 years of application, and in view of the future European Directive, SWDE draws the following conclusions:

- With more than 300 “supply zone”, SWDE will **not be able to update its 300 WSP every 6 years**. The cost-benefit ratio is too unfavorable;
- **The concept of “supply zone” is far too local;**
- **Field staff do not take ownership of water safety plans** because the range scale is far too small and local → disempowerment of the field teams.
WSP is seen as a burden and not as an asset !

2. Water Safety Plans, as tool to minimize the sanitary risks

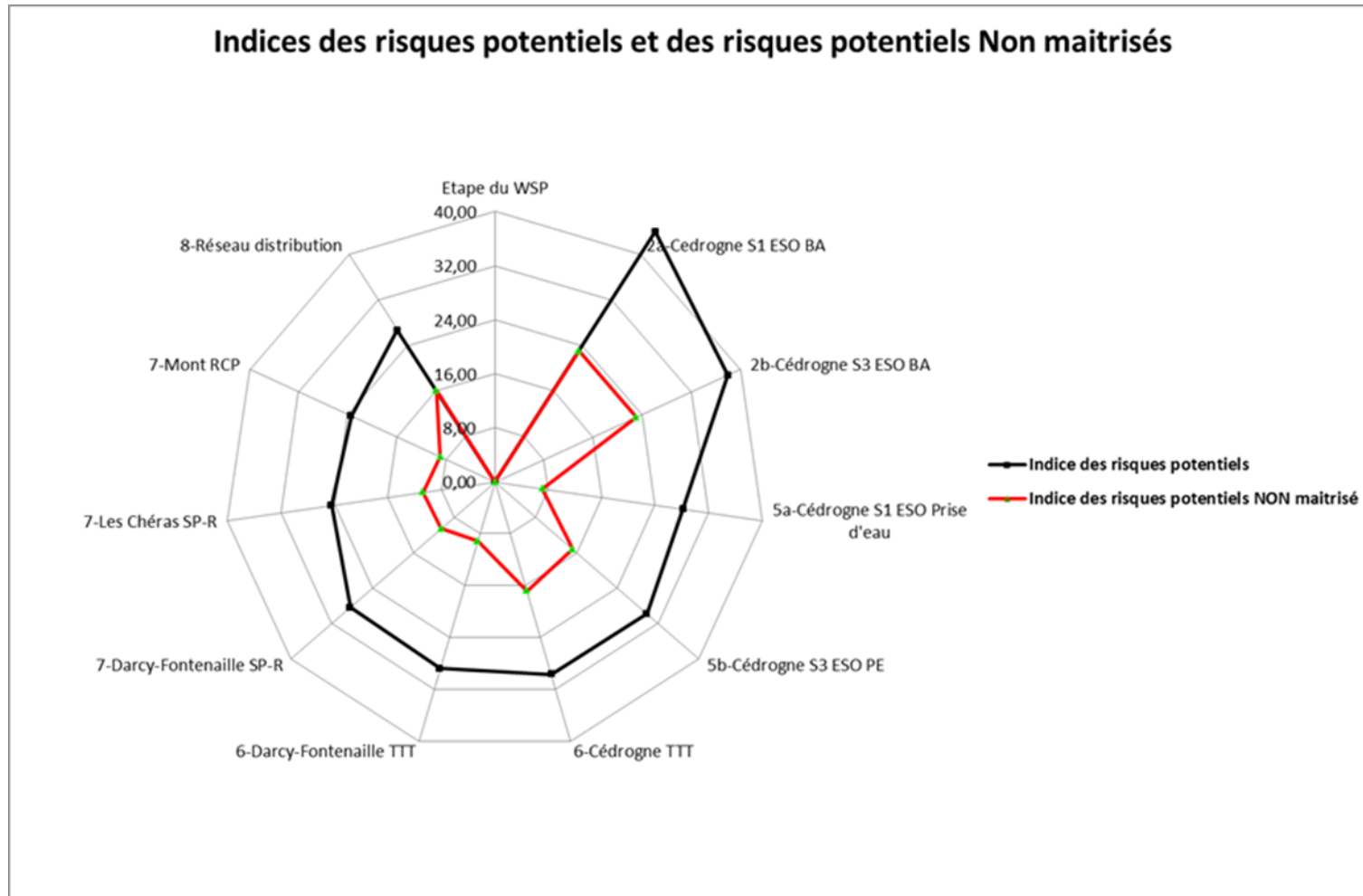
The WHO's steps for WSP elaboration are :

1. Create a team dedicated to the WSP (only for methodological support)
2. Describe the "Supply Zone" extended to a functional zone
3. Identify hazards and risks-assessment by the stakeholders
4. Determine control measures and prioritize risks by the stakeholders

These following actions are transversal and must be shared by all stakeholders

5. Develop action plans (to control risks): from potential risks to residual risks
6. Monitor the follow-up of the action plans, check the effectiveness of the WSPs
7. Integrate WSP into operational management processes
8. Develop media tools
9. Update WSP after each incident

3. The evolution of the Water Safety Plan towards Good Governance



3. The evolution of the Water Safety Plan towards Good Governance

It is necessary to rethink the concept of “supply zone” towards a broader concept of “functional zone”.

A “functional zone” is a collection of functionally supply areas, that can be mutually secured, that are critical in size to be managed as a whole, and where the facilities are interconnected to ensure continuity of drinking water supply.

A functional zone with an optimal size allows:

- **Technical** optimization (hydraulic, energy optimization, water quality controlled);
- **Financial** optimization (optimization of investment choices, value analysis);
- **Operational** optimization (preventive maintenance plan, economies of scale)

4. Conclusion

Involving Operational management in WSP at the level of a functional zone will help break silos created by process management.

All the stakeholders, such as production, distribution, financial services, purchase department, engineering department, experts in hydraulics, energy and water treatment, are interconnected together to share analyzes and co-construct a collective understanding of the functional zone around a **Risk-Based Assessment**.

5. Annexe

Matrice QUALITE			Gravité					
			Eau sans risque significatif pour la santé	Non-conformité localisée ou de courte durée, sans effet sur la santé ou conséquence purement esthétique	Importants problèmes d'aspect ou non-conformité durable sans effet long terme sur la santé	Effets sanitaires potentiels à long terme	Risque de maladie (immédiat)	
			Insignifiante	Mineure	Modérée	Majeure	Catastrophique	
			1	2	4	8	16	
Probabilité	Improbable	Maximum une fois tous les 10 ans	1	1	2	4	8	16
	Peu probable	Maximum une fois par an	2	2	4	8	16	32
	Probable	Maximum une par mois	3	3	6	12	24	48
	Très Probable	Maximum une fois par semaine	4	4	8	16	32	64
	Presque certain	une à plusieurs fois par jour	5	5	10	20	40	80

1 à 4	risque acceptable
5 à 12	risque indésirable
16 à 24	risque indésirable II (difficilement acceptable)
32 à 80	risque inacceptable

ACTION
Néant
A maîtriser
A maîtriser- plan d'action prioritaire
Urgente

Indice de détection ID	
0,6	Télégestion
0,8	Alarme (Télérelève)
0,9	surveillance (passage sur site : monitoring)
1	Pas d'alarme ni télégestion

Regional decree on water safety plans in Wallonia

(3) Actions à prendre en fonction des niveaux de risques

- Risque acceptable (niveau de risque compris entre 1 et 4 inclus) :
 - Pas d'obligation de prendre une action.
- Risque indésirable (niveau de risque compris entre 5 et 24 inclus) :
 - Plan d'actions à mettre en place afin de maîtriser le risque.
- Risque inacceptable (niveau de risque compris entre 25 et 80 inclus) :
 - Action urgente à mettre en place.

Vu pour être annexé à l'arrêté ministériel du précisant diverses modalités relatives au plan de gestion de sécurité sanitaire de l'eau

Namur, le **04 AVR. 2018**
Le Ministre,



CARLO DI ANTONIO

5. Annexe

Liste non exhaustive d'évènements à considérer :

Evènement	Code	Remarques
Développement algues et flore (dont racines)	1010	
Intrusion (insecte, animal,...)	1020	
Intrusion eaux (de ruissellement, saline, de surface, souterraine,...)	1030	
Evènement géophysique	1060	(ex : tremblement de terre, effondrement karstique, glissement de terrain, ..)
Evènement météorologique (chaleur, sécheresse, froid, fortes pluies, foudre,...)	1080	
Intrusion eaux (usées, contaminées, retour d'eau,...)	2000	
Pollution du sol (liée à une activité industrielle, agricole ou domestique, un stockage d'hydrocarbure,...)	2020	
Organisation externe (rupture de stock, grève, sous-traitance,...)	2100	
Intrusion humaine - Vandalisme/ terrorisme	2200	
Pollution atmosphérique	2450	