

# How benchmarking is used in the Water Sector



**EurEau**  
*1975-2015*

Water matters

## Summary

**Benchmarking is an essential method of measuring and providing insights on performance. It is most useful as an internal management tool for water and wastewater service providers, and has also developed as a tool for public authorities and regulators to learn best practices from each other, to continuously improve services.**

**There are already many successful benchmarking initiatives either existing or being developed at Member State level and also at EU and global level. In very many cases the data and information is publicly available. (Examples of benchmarking initiatives at national level are in Annex 1 and international cooperation in Annex 2).**

**The successful benchmarking initiatives so far focus on organisational efficiency, use of resources, and quality and environmental performance and outcomes.**

**EurEau believes that creating a new benchmarking exercise at European level would only add an unnecessary additional layer on the already existing publicly available information. The effort should be put on the promotion of relevant benchmarking instruments and other initiatives.**

**EurEau members are fully committed to public transparency. This empowers customers and stakeholders to improve their awareness of water matters and express their interest, ideas and expectations. However, extensive or increased benchmarking is not the exclusive nor the ideal solution to transparency or increasing customer engagement and awareness (see EurEau's paper on transparency).**

**Water customers and stakeholders' interest is firstly on their own specific local issues like drinking water quality, price and customer service standards. Comparisons of water services in other regions within their country can sometimes be useful to some customers, but they show very little interest in making comparisons with services in other member states.**



**Some of the benchmarking information is available due to regulatory requirements (e.g. Article 13 Information and reporting of the Drinking Water Directive) that water services have to apply to and others are related to the outcome of benchmarking projects.**

---

## Context

The European Commission's interest in benchmarks and indicators for water services was part of a response to the European Citizens' Initiative on the Right2Water. In its Communication (COM(2014)177), the Commission quite rightly stated that: transparency can play a key role in improving citizens' access to water and sanitation, impacting on its three main dimensions (ie accessibility, affordability and quality).

EurEau fully supports the need for transparency and that water is a human right and must be accessible to all. Our members want to give their customers and stakeholders insights into water services – performance, organisation & management, challenges etc. This is something very important and dear to us and we want to work with stakeholders and decision-makers at EU level to help us achieve this.

Indicators and benchmarks for water services can increase transparency. But benchmarks and indicators are foremost to assess and improve performance; transparency measures are to know more about how water services are governed and how they perform in the context of their societal responsibility.

## Opportunities and limits

Benchmarking is a very powerful tool that can help water operators to create insight in their performance relative to peers and to improve the management of water services, but it is not an easy exercise.

Benchmarking allows identification of strengths and weaknesses to improve performance. It is an opportunity for managers to network their peers, to compare themselves with the others and to learn from the best. By sharing data and performance indicators (PI), benchmarking naturally standardises the monitoring of key PIs between participants. It improves by itself the basic level of knowledge on water services.

But to reach this level of reliability it demands great efforts in terms of commitment of management. It requires time, good data quality, sufficient resources to ensure the quality of data collected and the maintenance of the data base. It is an exercise with a long-term perspective which can be costly



depending on the type of data collected and the starting situation of the utilities.

Finally, interpretation of the results should be used carefully. The results are dependent on the local context of the actors that can make them perform good or bad. It makes it difficult even across EurEau members to agree on definitions and types of data that can be shared and compared at European level.

## Benchmarking at national and international level

Many benchmarking initiatives are conducted in Europe at national level, where water utilities are compared to others within their own country. These initiatives can be conducted either by national associations or in partnership with the regulators.

There are also many initiatives at European and global level, many of which EurEau members are involved in.

There are more details of these national initiatives in Appendices 1 and 2.

---

## 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 28 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.



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



## Annex 1 - Benchmarking at national level

The organisation and regulation of the water services is the exclusive jurisdiction of the Member States. European water utilities have used benchmarking either voluntarily or due to regulatory requirements for more than 25 years.

Since the 1990s, these activities were developed in a more institutionalised way with an improvement of the service quality. For example, in The Netherlands, introducing voluntary benchmarking has raised efficiency by 35% and brought high customer satisfaction at 7.7/10

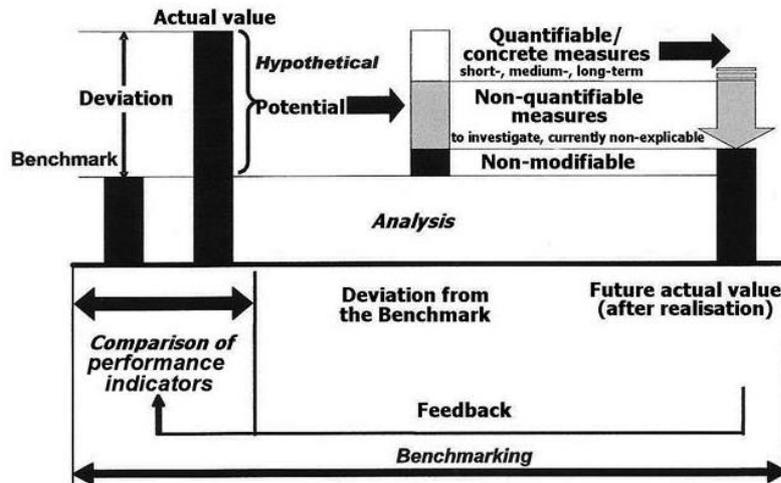
Many benchmarking initiatives are conducted across Europe at national level, where water utilities are compared to others within their own country. These initiatives can be conducted either by national associations or in partnership with the regulators. The aim of implementing this instrument is to guarantee good or even improved performance to their customers. In many Member States some form of benchmarking is implemented in the water services sector.

### **Netherlands**

In the Netherlands benchmarking of water services has been in place since the late '90's. Since 1997 Vewin and the Dutch drinking water companies performed a form of voluntary benchmarking initiative. This benchmark consisted of assessing an extended amount of Key Performance Indicators (KPI's) on water quality, services, environment and finance and efficiency. Since 2012 the benchmark has become an obligatory element in the Drinking Water Act.

### **Germany**

Germany has been working on benchmarking since 2002. Benchmarking is carried out on the basis of five performance indicators (the 5-pillar model): security of supply, quality of supply, sustainability, economic efficiency and customer service. Individual key performance indicators can only be compared in combination with contextual information and results from the other pillars. Two prerequisites have made an important contribution to success: information on a voluntary basis and confidentiality.



Source: Benchmarking-Cycle, Technische Mitteilung, Merkblatt W 1100, März 2008, Benchmarking in der Wasserversorgung und Abwasserentsorgung, DVGW, Bonn

## United Kingdom

Water companies in England and Wales annually publish a wide range of benchmarking data. This covers areas including environmental impact, reliability and customer service. OFWAT also publishes data relating to companies' business plans during the price review process every five years. In Scotland the regulator WICS publishes data on Scottish Water's performance. Data on the quality of drinking water is published annually by the three drinking water regulators and details on environmental performance by the environmental agencies.

## Flanders (Belgium)

Only one company is responsible for the wastewater treatment. To gain insight in its performance the company, on a voluntary basis, takes part in the international benchmark exercise of EBC (since 2008) and of the German benchmark projects organised by Aquabench (since 2009). The results are used in the discussions with the Flemish regulator.

Drinking water operators are doing benchmark-exercises on a voluntary basis. This benchmark exercises consists of assessing an extended amount of Key Performance Indicators (KPI's) on water quality, services, environment and finance and efficiency (same as in the Netherlands). Since 2013 they are asked to do process benchmark exercises; the results of these exercises which highlight and examine several processes will be available from 2015 and on. This process-benchmarks are submitted to the approval of the Flemish water regulator.



## Denmark

The Danish water provider association, DANVA, started voluntary benchmarking in 2002. The initiative comprises the majority of Danish water and wastewater companies measured by size. The purpose of the benchmarking is to measure the companies on a broad range of areas and to support companies in performance improvements. Data is confidential, but DANVA annually publishes a number of central statistics and key performance indicators in an easily accessible format for external readers. Various state offices also publicise statistics on economic efficiency, prices, environmental impact etc. Process benchmarking has been obligatory in the period 2010-16.

## Finland

Benchmarking in Finland was first started by 8 urban water utilities in 2003. FIWA took the coordination role in 2006 and since then about 50 utilities have participated in the benchmarking system. This is an advanced level BM system mainly used as an effective management tool in utilities in order to measure the utilities on a broad range of areas and to support utilities in performance improvements. Participating utilities pay an annual membership fee. A public report is available annually on limited part of data and KPIs. In 2016 the FIWA benchmarking system (VENLA) will be opened up for all FIWA's member utilities free but with more limited amount of data and indicators. This basic level BM system will also be closely integrated with the new national water information system (VEETI) which will be taken into use in 2016. VENLA will continue to serve as a management tool for water utilities, whereas VEETI will serve more as a tool to ensure transparent water sector information for various stakeholders.

## Spain

Since 1987, and biennially, the Spanish Association of Water Supply and Sanitation (AEAS-AGA), conducts a survey on drinking water supply and sanitation, with the aim of improving the knowledge of urban water sector. This survey includes general information such as management regime, annual turnover, organisms responsible for tariff approval and water price or costs of services, as well as specific information on water supply, water quality, sanitation and commercial management (in which are included, for example, billing, charging or customers service).

In addition, since 1999, a study of urban water tariffs is carried out in order to have a rigorous and consistent comparative analysis of Spanish water tariffs, by means of comparable economic indicators grouped by average values in administrative territories of greater geographic scope, as in Spain the competency for urban water services is municipal, and each local authority



can have different prices and tariff structures.

### Summary of national initiatives

Name	Scope	Created	Short description
<b>Vewin benchmark Reflections on performance</b>	Netherlands	1997	Started as an initiative of the Dutch drinking water companies the benchmark is now part of the transparency obligations under the Drinking Water Act. The benchmark is now executed by the supervising government. All Dutch drinking water companies take part.
<b>RIONED, benchmark on sewage</b>	Netherlands	2003	Wastewater is collected at municipality level in the Netherlands. RIONED organizes every 3 years a nationwide benchmark in which almost all municipalities participate. The aim is to share best practices and learn from them. The RIONED Foundation is the umbrella organisation for sewage management, in which public bodies, industry and the educational sector work together.
<b>Dutch Water Authorities (Unie van Waterschappen), benchmark on wastewater treatment</b>	Netherlands	1998	The wastewater from the municipal sewages and industrial wastewater is treated by the water boards in over 400 wastewater treatment plants. Every 3 years a benchmark is held by the Unie van Waterschappen, the Dutch umbrella organisation of the water boards. Goal of the benchmark is to measure performance, both in costs and outcome, and to learn and improve.
<b>BDEW (German Association of Energy and Water Industries) and DVGW (German Technical and Scientific Association for Gas and Water)</b> <a href="http://www.dvgw.de/wasser/organisation-management/benchmarking/">http://www.dvgw.de/wasser/organisation-management/benchmarking/</a>	Germany	2002	BDEW and DVGW supports various benchmarking projects and conducts the development of the performance indicator systems in Germany.  Every four years the "Profile of the German water sector" is published that provides information about benchmarking



		<p>results and projects.</p> <p>Several benchmarking projects in different federal states in Germany (Bundesländer):</p> <p><a href="http://www.wasserbenchmarking-rp.de/">http://www.wasserbenchmarking-rp.de/</a></p> <p><a href="http://www.wasserbenchmarking-saarland.de/">http://www.wasserbenchmarking-saarland.de/</a></p> <p><a href="http://www.abwasserbenchmarking-bw.de/">http://www.abwasserbenchmarking-bw.de/</a></p> <p><a href="http://www.abwasserbenchmarking-bayern.de/">http://www.abwasserbenchmarking-bayern.de/</a></p> <p><a href="http://www.abwasserbenchmarking-thueringen.de/">http://www.abwasserbenchmarking-thueringen.de/</a></p> <p><a href="http://www.abwasserbenchmarking-nrw.de/">http://www.abwasserbenchmarking-nrw.de/</a></p> <p><a href="http://www.wasserbenchmarking-nrw.de/">http://www.wasserbenchmarking-nrw.de/</a></p> <p><a href="http://www.abwasserbenchmarking-nord.de/">http://www.abwasserbenchmarking-nord.de/</a></p> <p><a href="http://www.abwasserbenchmarking-hessen.de/">http://www.abwasserbenchmarking-hessen.de/</a></p> <p><a href="http://www.abwasserbenchmarking-sachsen.de/">http://www.abwasserbenchmarking-sachsen.de/</a></p> <p><a href="http://www.kennzahlen-bb.de">www.kennzahlen-bb.de</a></p> <p><a href="http://www.kennzahlen-lsa.de">www.kennzahlen-lsa.de</a></p> <p><a href="http://www.kennzahlen-mv.de">www.kennzahlen-mv.de</a></p> <p><a href="http://www.kennzahlen-mv.de/info.html">www.kennzahlen-mv.de/info.html</a></p> <p><a href="http://www.kennzahlen-h2o.de">www.kennzahlen-h2o.de</a></p> <p><a href="http://www.wasserverbandstag.de">www.wasserverbandstag.de</a></p> <p><a href="http://www.wasserverbandstag.de/main/siwa_informationen.php?navid=8">www.wasserverbandstag.de/main/siwa_informationen.php?navid=8</a></p> <p><a href="http://www.fh-schmalkalden.e/ET_Versorgungswirtschaft.html">www.fh-schmalkalden.e/ET_Versorgungswirtschaft.html</a></p> <p><a href="http://www.benchmarking-bw.de">www.benchmarking-bw.de</a></p> <p><a href="http://www.effwb.de">www.effwb.de</a></p> <p><a href="http://www.bkwasser.de">www.bkwasser.de</a></p> <p><a href="http://www.benchmarking-nrw.de">www.benchmarking-nrw.de</a></p>
--	--	--



<p><b>Entidade Reguladora dos Serviços de Águas e Resíduos(ERSAR)</b>  <b>The Water and Waste Services Regulation Authority in Portugal.</b>  <a href="http://www.ersar.pt">www.ersar.pt</a></p>	Portugal	2009	ERSAR is in charge of regulating public water supply services, urban wastewater management services and municipal waste management services.
<p><b>OFWAT</b>  <a href="https://www.ofwat.gov.uk/regulating/casework/reporting/">https://www.ofwat.gov.uk/regulating/casework/reporting/</a>  <a href="http://www.water.org.uk/publications/reports/industry-facts-and-figures-2014">http://www.water.org.uk/publications/reports/industry-facts-and-figures-2014</a></p>	England and Wales	1989	In England & Wales OFWAT publishes a wide range of data about companies' performance. The water companies also annually publish benchmarking data on a voluntary basis
<p><b>Water Industry Commission for Scotland (WICS)</b>  <a href="http://www.watercommission.co.uk/view_Monitoring_Performance.aspx">http://www.watercommission.co.uk/view_Monitoring_Performance.aspx</a></p>	Scotland	2002	In Scotland the regulator WICS publishes benchmarking information about Scottish Water's performance including costs, customer service and leakage
<p><b>Observatoire National des Services D'eau et d'Assainissement</b>  <b>national observatory on water &amp; sanitation services by the French national agency for water (Onema)</b>  <a href="http://www.services.eaufrance.fr/">http://www.services.eaufrance.fr/</a></p>	France	2006	The national observatory on public water and sanitation services provides access to information and data on the public drinking-water and sanitation services, their organisation, price(s) and performance levels. The data are provided on a voluntary basis.
<p><b>DANVA Benchmarking</b></p>	Denmark	2002	Benchmarking initiative comprising the majority of Danish water and wastewater companies. The purpose is to measure and enhance performance on a broad range of areas.
<p><b>FIWA benchmarking (VENLA)</b></p>	Finland	2006	Voluntary benchmarking system for FIWA's member utilities. Currently 50 members. Basic level BM system to be opened free for all FIWA members (about 300) in 2016. Close interaction with the new national water information system to be commenced in 2016.



## Annex 2 - Benchmarking initiatives at international level

There are various approaches to benchmarking that already exist and/or are being further developed through successful international cooperation. This section sets out the examples which most EurEau members support and are involved in.

But in general, benchmarking is a voluntary process depending on interest, willingness and capacity of participants. In that sense, the communication around the benchmarking results should be defined by the participants. It should remain anonymous to avoid unwanted ranking effects to protect participants that need to catch up with higher standards from being publicly blamed.

### **International Water Association (IWA)**

The definition of "Benchmarking" applied by International Water Association (IWA) is the most widely used and it is well accepted by the water industry:

"Benchmarking is a tool for performance improvement through systematic search and adaptation of leading practices. "

More recently in 2010, IWA has created a specialist group Benchmarking and Performance Assessment which is a forum for discussing, promoting, creating networking opportunities and improving the state of the art in all activities related to the performance assessment and benchmarking of water services. The group published in 2011 a guiding book on good practices of benchmarking for water utilities.

Benchmarking has 2 objectives: **performance assessment** and **performance improvement**.

According to IWA, a successful benchmarking project should set-up performance indicators (PIs) according to the desired objectives and not according to the data already collected. Also, the maintenance of the data collection is a crucial step that requires time, money and energy to obtain the quality needed.

### **European Benchmarking Cooperation**

National water associations and several utilities of Denmark, Finland, the Netherlands, Norway and Sweden as well as Russia and Singapore initiated the European Benchmarking Co-operation (EBC) in 2007. EBC is supported by EurEau and the European Commission has marked the EBC as an action group of the European Innovation Partnership on Water.

The EBC is an industry-based, not-for-profit benchmarking initiative for drinking water and wastewater services. EBC's benchmarking programme is



fully aligned with the IWA benchmarking framework. EBC is running a benchmarking project every year with the voluntary participants who are paying fees for the set-up of the exercise and the analyses of the data. The 2014 exercise regrouped 48 participants in 17 countries. Mission of EBC is to facilitate water utilities in the continuous process of improving & innovating water services and raising transparency, by offering an international benchmarking programme for water services, providing a platform for exchanging leading/best practices of management and operations and sharing knowledge and experiences on benchmarking.

### **World Bank-IBNET**

The World Bank has set-up a benchmarking initiative with IBNET<sup>1</sup>. It was originally more a tool for the World Bank, public authorities or finance organisations than for companies themselves. IBNET is now collecting more PIs on the technical performance of the utilities like water distribution and sanitation coverage, non-revenue water and metering practices, rather than monetary. IBNET is delivering toolkits and guidance to perform a proper performance assessment at the utility level. Six countries in Europe participated (BG, CZ, HR, HU, RO and SK) in the IBNET 2014 report,

### **ISO Standards**

In 2007, ISO published 3 standards on “activities relating to drinking water and wastewater services”. Although there is no comparison with peers, these standards define different performance indicators to make performance assessment and performance improvement. They also define the different components of water services recognised internationally by experts of the water sector.

In September 2015 the Draft International Standard of the ISO CD 24523 Benchmarking is expected, a standard on the methodology to conduct proper benchmarking. The ISO standard on benchmarking will be finalised and adopted soon.

### **OECD Water Governance Initiative**

In June 2015, the OECD published the OECD principles on Water Governance<sup>2</sup>, signed by EurEau and some of its members. These 12 principles are a framework to understand whether water governance systems are performing optimally and help to adjust them where necessary.

The principles have no direct relation with benchmarking of water services but principal 5, related to efficiency, calls to “produce, update and share, timely, consistent, comparable and policy-relevant water and water-related data and information, and use it to guide, assess and improve water policy” which is underlying the creation of monitoring systems that can help to compare

<sup>1</sup> <http://www.ib-net.org/>

<sup>2</sup> <http://www.oecd.org/gov/regional-policy/OECD-Principles-on-Water-Governance-brochure.pdf>



entities.

However, in the spirit of these principles, the governance response should be adapted to territorial specificities and it is highly context-dependent. Thus, data should be collected at the local scale. Currently the OECD is gathering an inventory of the relevant indicators and measurement frameworks in the world, related to water governance. This document is refereeing to multiple forms of benchmarking where European member states are already participating.

### Summary of international initiatives

Name	Scope	Created	Short description
<b>The European Benchmarking Co-operation (EBC)</b> <a href="http://www.waterbenchmark.org/">http://www.waterbenchmark.org/</a>	Europe	2004	The European Benchmarking Co-operation (EBC) is an industry-based, not-for-profit benchmarking initiative for water services. It aims to facilitate water utilities in improving their performance and raising transparency.
<b>IWA Benchmarking and Performance Assessment Specialist Group (BPA SG)</b> <a href="http://www.iwabenchmarking.com/site/">http://www.iwabenchmarking.com/site/</a>	Worldwide	2010	The BPA SG is the forum for discussing, promoting, create networking opportunities and improving the state of the art in all activities related to the performance assessment and benchmarking of water services.
<b>ISO (International Organization for Standardization)</b> <b>ISO/TC 224 Service activities relating to drinking water supply systems and wastewater systems – Quality criteria of the service and performance indicators</b> <a href="http://www.iso.org/iso/iso_tec hnical_committee?commid=299764">http://www.iso.org/iso/iso_tec hnical_committee?commid=299764</a>	Worldwide	2007	Standardisation might help water services to organize Benchmarking between utilities to improve their performance and set confidence with Stakeholders by developing an appropriate communication.
<b>The International Benchmarking Network for Water and Sanitation Utilities (IBNET)</b> <a href="http://www.ib-net.org/http://">http://www.ib-net.org/http://</a>	Worldwide	late 1990s	The International Benchmarking Network for Water and Sanitation Utilities (IBNET) is an initiative to encourage water and sanitation utilities to compile and share a set of core cost and PIs, and thus meet the needs of the various stakeholders

