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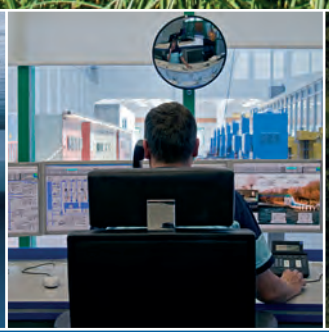
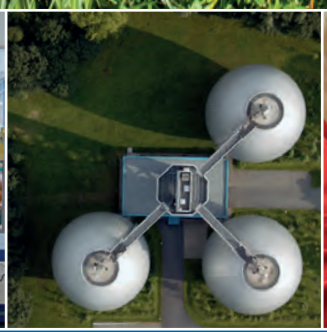
Profile of the German Water Sector

2015

Summary





Foreword

With the "Profile of the German Water Sector 2015" the ATT, BDEW, DVGW, DBVW, DWA and VKU in consultation with the German Association of Cities (Deutscher Städtetag – DST) and the German Association of Towns and Municipalities (Deutscher Städte- und Gemeindebund – DStGB) provide an up-to-date picture of water supply and wastewater disposal in Germany. It gives the interested public and decision makers extensive, detailed information about the water sector's performance, the great variety of its tasks and the current challenges it faces. Like the previous three editions since 2005, the fully up-dated Profile 2015 demonstrates that the modernisation strategy pursued equally by the government and by the water sector itself is also taking effect in an increasingly difficult environment.

The Profile documents the high performance of the German water sector in European and international comparison with regard to safety, quality and sustainability of the supply and disposal services, economic efficiency and customer satisfaction. It is essential to maintain the level of performance achieved to date and to bring about improvements wherever possible and required.

The associations promote the continuous improvement process in the companies through benchmarking and recommend their members participate in benchmarking projects (Associations' Declarations 2003 and 2005). Benchmarking means to compare and improve by learning from the other participants in a comparison group.

Benchmarking, the transparent documentation of performance through the water sector's Profile, and continuous development are the pillars of the sector's permanent improvement which it implements in its own responsibility. This concept was acknowledged and supported by the German Federal Government in its 2006 report on the modernisation strategy for the German water sector.

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German Technical and Scientific Association for Gas and Water (DVGW)
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Core statements

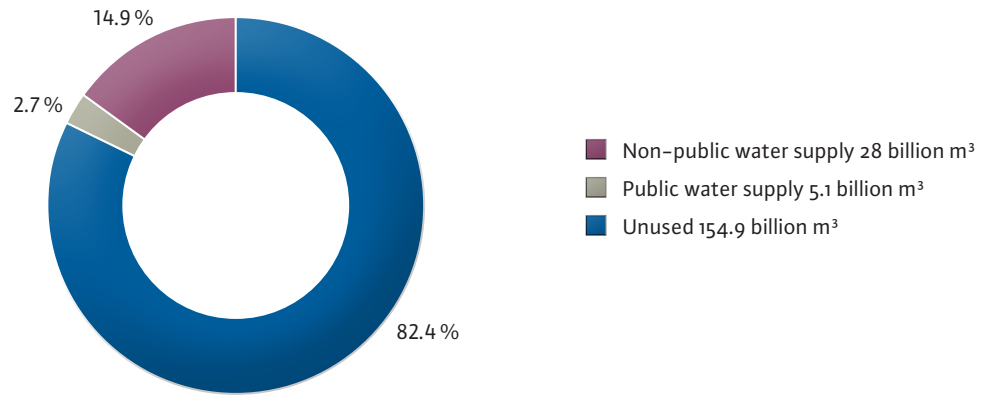
Performance

In Germany the citizens always have drinking water available in excellent quality and sufficient quantity. In addition to the comfortable resource situation in Germany as a water-rich country, the high technical standards and a range of voluntary measures by the water sector contribute to the protection of natural resources.

Water utilisation in Germany in 2010

Total available water resources: 188 billion cubic metres

Data as percent



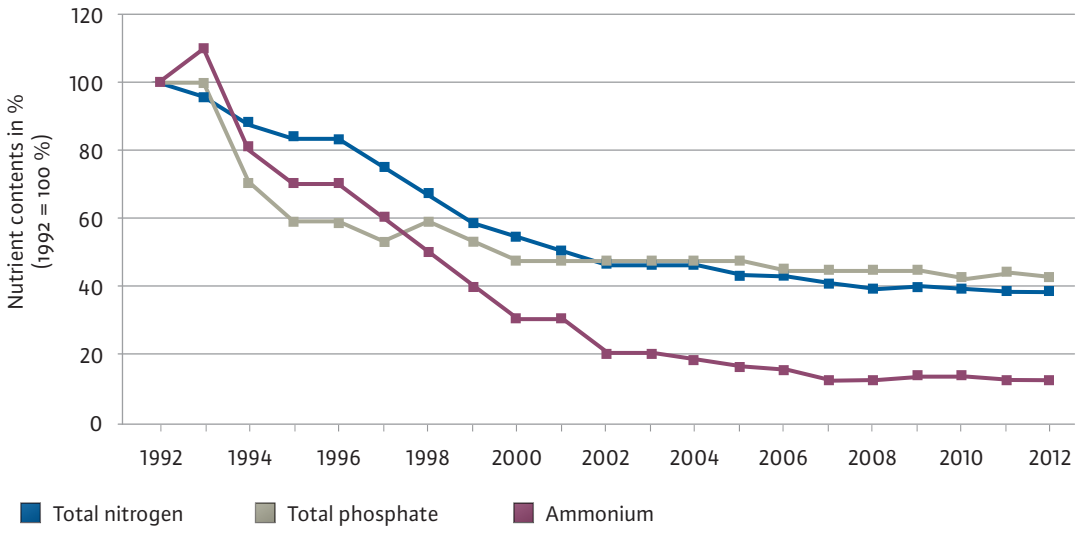
Source: German Federal Statistical Office, Fachserie 19, Reihe 2.1.1, published in 02/2013; German Federal Institute of Hydrology

Wastewater treatment in Germany is also at a very high level. In contrast to many EU countries, almost 100 percent of the wastewater is treated to the highest EU purification standard. Through their work, drinking water suppliers and wastewater utilities thus contribute significantly to preventive and comprehensive water resources protection.

Performance characteristics of the water supply and wastewater disposal in Germany are long-term safety of supply and disposal, high drinking water quality, high wastewater disposal standards, high customer satisfaction and careful management of water resources and economic efficiency. These aspects are considered in the 5-pillar benchmarking concept. Through the nationwide application of benchmarking, the utilities have significantly improved in all service areas.

Improvement in the effluent quality of municipal wastewater treatment plants

Based on the example of phosphate and nitrogen



Source: 25th DWA performance comparison of municipal wastewater treatment plants, 2013

To remain sustainable, the water sector needs to be efficient, to cover costs and be transparent for the customers. Benchmarking projects are a key instrument here. The main prerequisites for the success of the benchmarking and performance indicator projects are confidentiality and voluntariness, but also the consistency and compatibility of data. For this purpose, the performance indicator systems of the industry are continually developed.

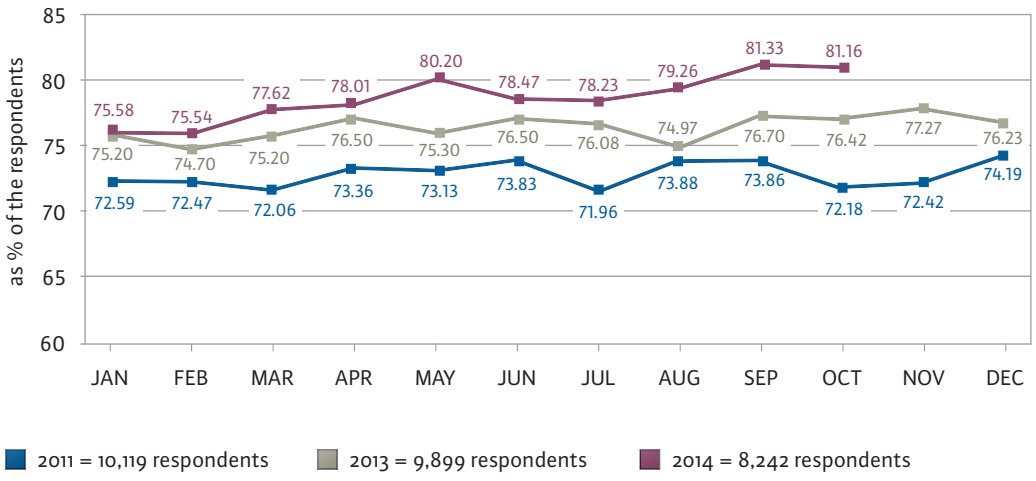
Approved technical standards and adherence to strict legal requirements lead to the high quality and the long-term safety of the German drinking water supply and wastewater disposal.

Organisation and efficiency

In Germany, water supply and wastewater disposal are core duties of public services in the general interest within the competence of the municipalities or other public corporations. Their democratically legitimised bodies take the strategic decisions with regard to the forms of organisation, participations and cooperation. Germany has a varied supply and disposal structure comprising public and private sector companies.

Customer satisfaction with the service of their water supplier

Answer “very satisfied” and “satisfied”

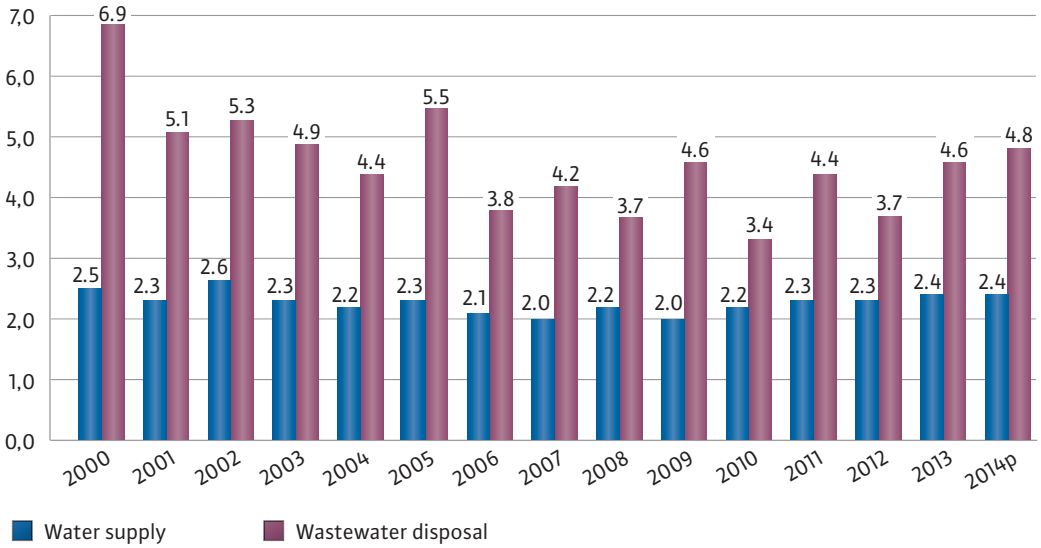


Source: Study: Quality and image of drinking water in Germany (TWIS), data report 2013/2014, I.E.S.K./VKU

The German water sector is one of the largest customers for the private sector, as planning and construction contracts are awarded to a large extent to outside companies.

Development of capital expenditure in public water supply and wastewater disposal from 2000 to 2014

according to plant areas, in billion Euro

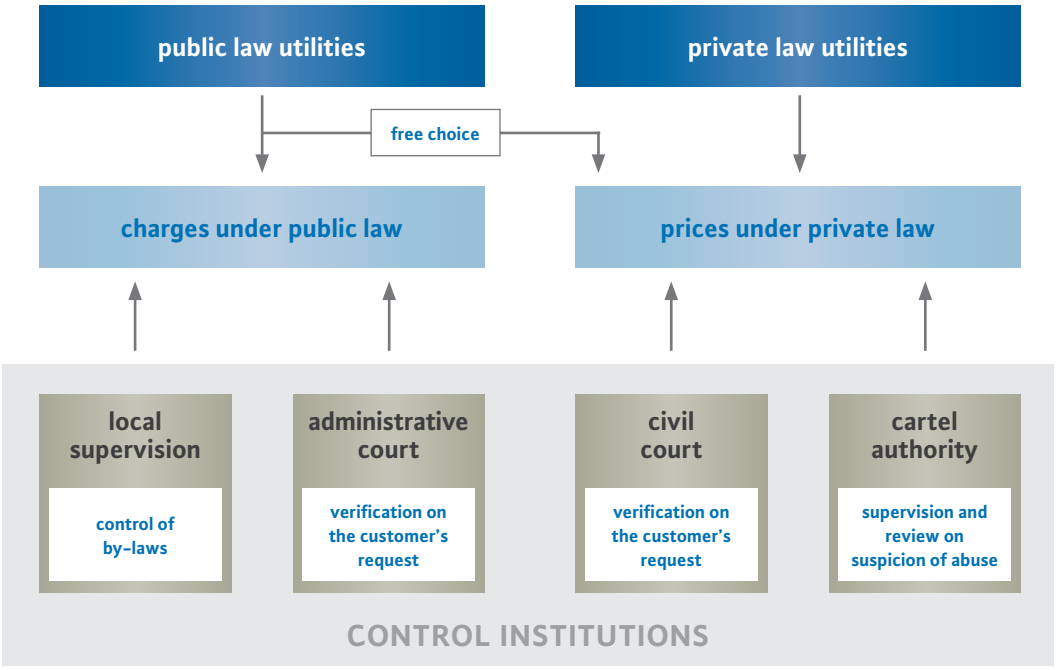


Source: Water supply: BDEW Water Statistics; Wastewater disposal: BDEW/DWA/Deutscher Städtetag – wastewater survey, p = provisional

Fees, drinking water quality, environmental requirements as well as water abstraction rights and discharge rights are subject to strict state control; the cost coverage is anchored in law. The increase in fees for drinking water and wastewater have mainly been below the inflation index for many years. Safety of supply and drinking water quality are of utmost importance for the customers and almost all consider the fees paid for this to be appropriate.

The specific regional and local parameters determine the supply and disposal conditions on site. Water supply and wastewater disposal therefore always require locally adapted solutions. This, combined with the different legal requirements of the federal states, results in different efforts and costs. Taking into account the respective water consumption and performance standards, customers in Germany spend less on their drinking water than customers in comparable European countries.

Control of prices and charges

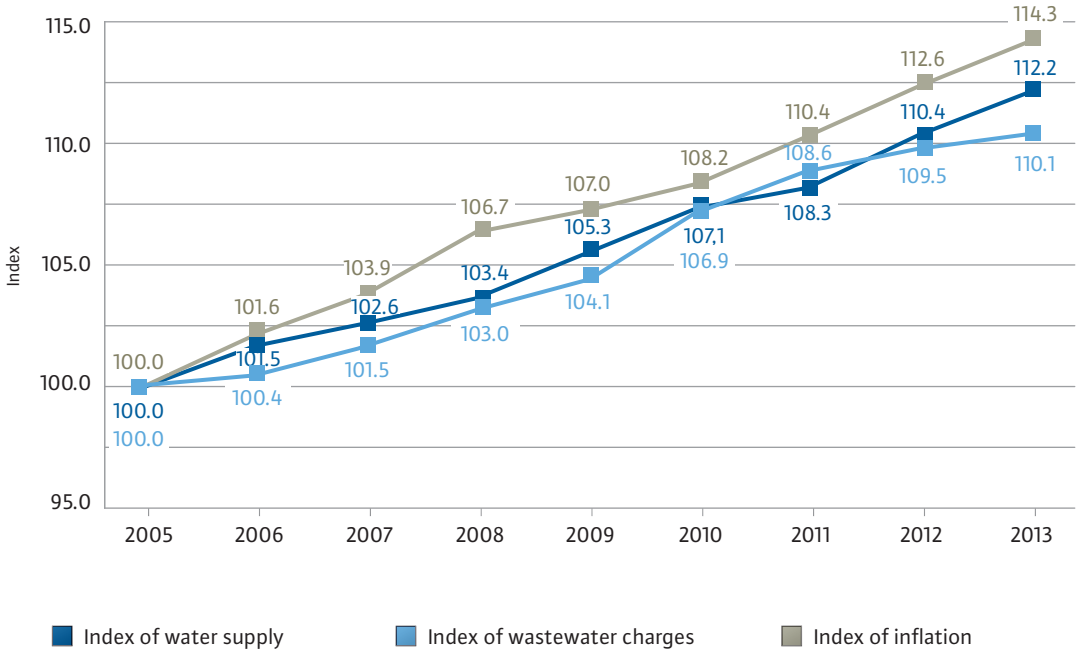


Source: VKU

The water utilities have realised that it is optimally qualified employees with their industry-specific knowledge and skills that keep the utilities viable in the long-term. Therefore, they have continually invested in the education of young people for many years, often beyond their own needs.

Development of the prices and charges for the water supply/ wastewater disposal and the inflation rate 2005 to 2013

Year 2005 (wastewater disposal) = 100



Source: Water supply: BDEW, German Federal Statistical Office;
Wastewater disposal: German Federal Statistical Office, Fachserie 17, Reihe 7

In Germany, water supply and wastewater disposal are core duties of public services in the general interest within the competence of the municipalities or other public corporations. Their democratically legitimised bodies take the strategic decisions with regard to the forms of organisation, participations and cooperation. Fees, drinking water quality, environmental requirements as well as water abstraction rights and discharge rights are subject to strict state control; the cost coverage is anchored in law.

The charges and prices are largely determined by the specific regional and local context. They have mainly developed below the inflation index for many years.

Tasks and challenges

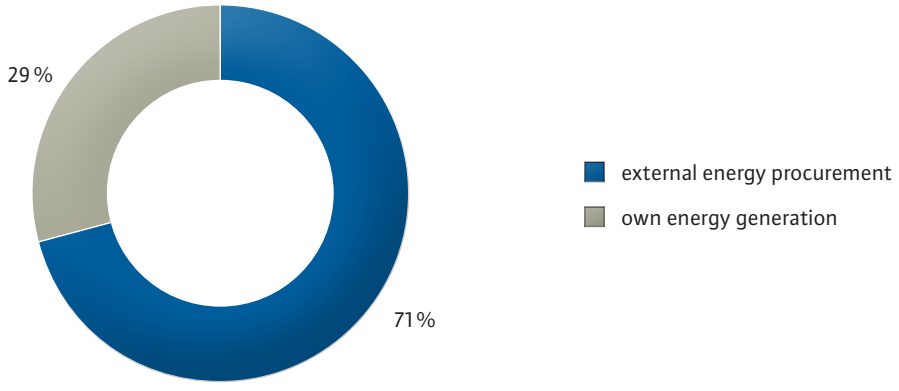
The requirements put on modern, sustainable water management are increasing steadily. It's no longer just a matter of providing drinking water and treating wastewater. The comprehensive approach is increasingly gaining in importance, with the aim of achieving a sustainable, integrated water management. Thus, in addition to drinking water supply and wastewater disposal, among other things, the maintenance and protection of water bodies, the landscape water regime and coastal protection and flood control are among the tasks of a functioning water sector. In addition, the changes in social priorities influence the work of the water sector. Thus, energy consumption and efficiency, and resource protection are becoming increasingly high profile. Concomitant conflicts of use with the water sector need to be solved through social consensus.

In addition to proven methods, the utilities develop and test new technologies to save or generate energy. This includes, for example, the use of energy-efficient pumping technologies or heat recovery from wastewater. Operators make great efforts to treat wastewater with a minimum expenditure of energy. In wastewater disposal, a quarter of the total power consumption of 4.2 tWh per year is already covered by the utilities' own energy production in the context of sludge digestion.

As a result of our modern industrial society and sophisticated analytics, anthropogenic micro pollutants can be detected better in groundwater and surface water. There is considerable need for research on their effects on humans and the environment. This challenge cannot be dealt with solely by the water sector. When dealing with micro pollutants, the focus needs to be on preventing their input at the immediate source. Where this is not possible, the polluter pays principle needs to be applied.

Share of the plants' own energy generation

as percent

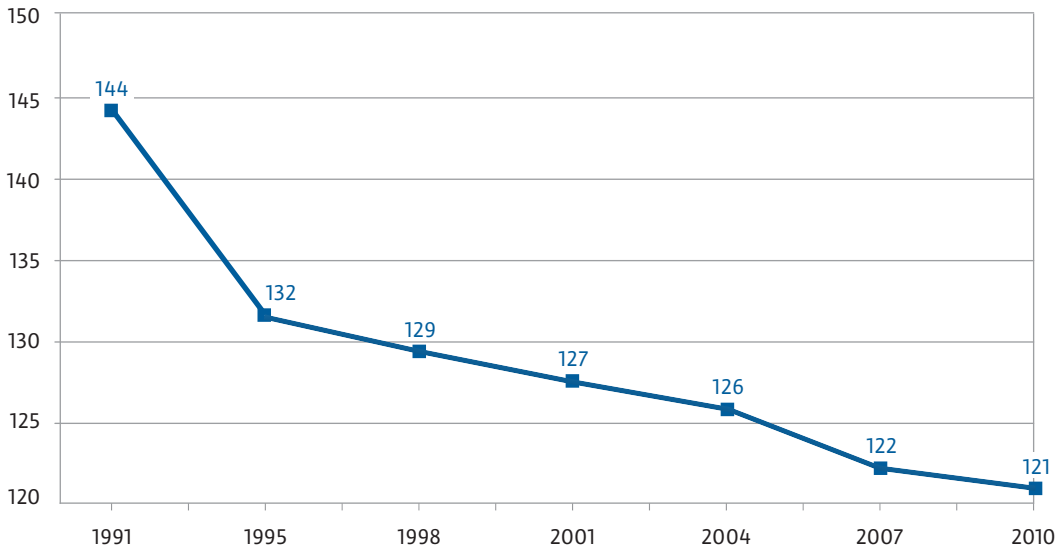


Source: VKU, Energie im Fokus, 2012

Water consumption has been decreasing significantly for decades. Nevertheless, the utilities have to provide appropriate capacity for peak demand and an infrastructure which is able to cope with this. Therefore, political demands for further reductions in water consumption are not reasonable, especially in water-rich Germany.

Development of the per-capita water consumption

Data in litres per person and day, Germany



Source: German Federal Statistical Office, Fachserie 19, Reihe 2.1, Heft 2010, published in 08/2013

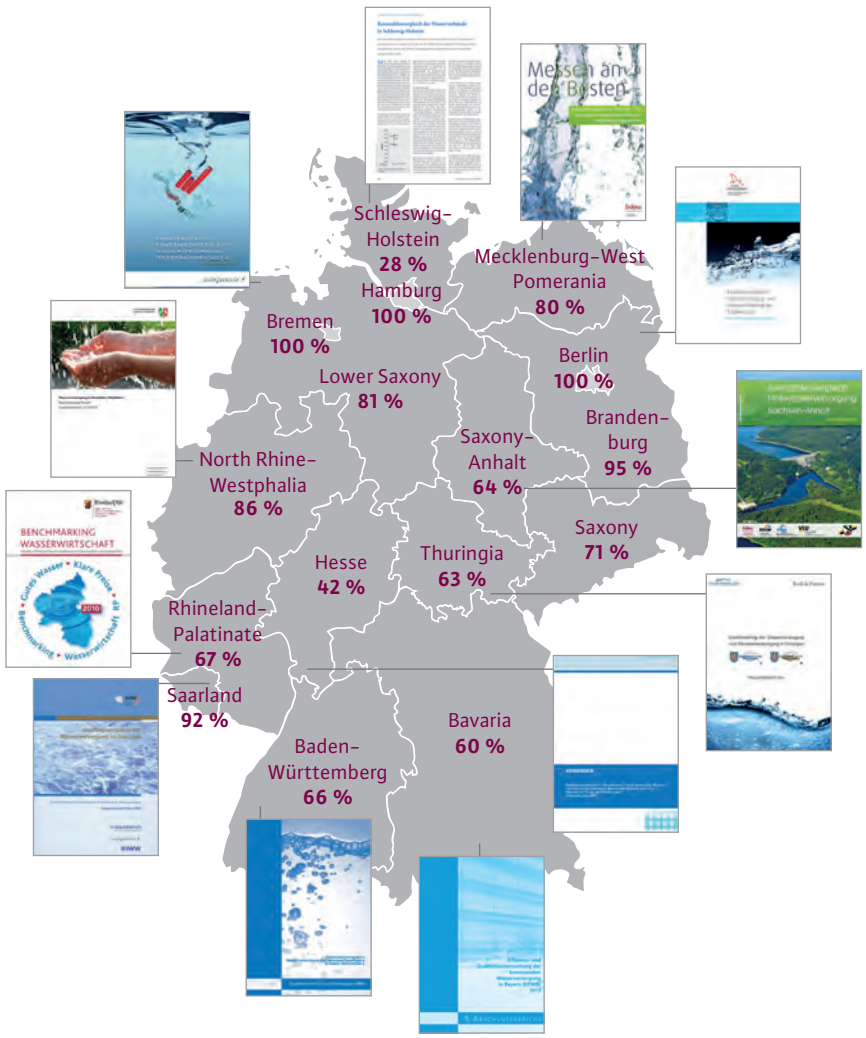
Demographic and climate change together with continuously decreasing water consumption pose great challenges for the German water sector. The German water sector meets these challenges by developing solutions that are adapted to the respective conditions. It proves that it can meet these challenges thanks to its comprehensive technical, economic and scientific expertise and its practical research activities.

Demographic change, the looming climate change, the sophisticated detection and the minimisation of the input of anthropogenic micro pollutants, as well as conflicts of use with industry, agriculture and energy policy objectives are the current challenges faced by the German water sector. Drinking water supply and wastewater disposal face these tasks and work locally to achieve flexible and adapted solutions that comply with the social consensus.

Statewide benchmarking projects in water supply and wastewater disposal

To remain competitive, the water sector needs to be efficient, economically viable and transparent to the customer. Benchmarking projects are a key tool here so that the sector continues to develop steadily and dynamically. Therefore, the associations of the water sector have supported the various benchmarking projects commissioned by the economics, interior and environment ministries of

Distribution of statewide water supply benchmarking projects



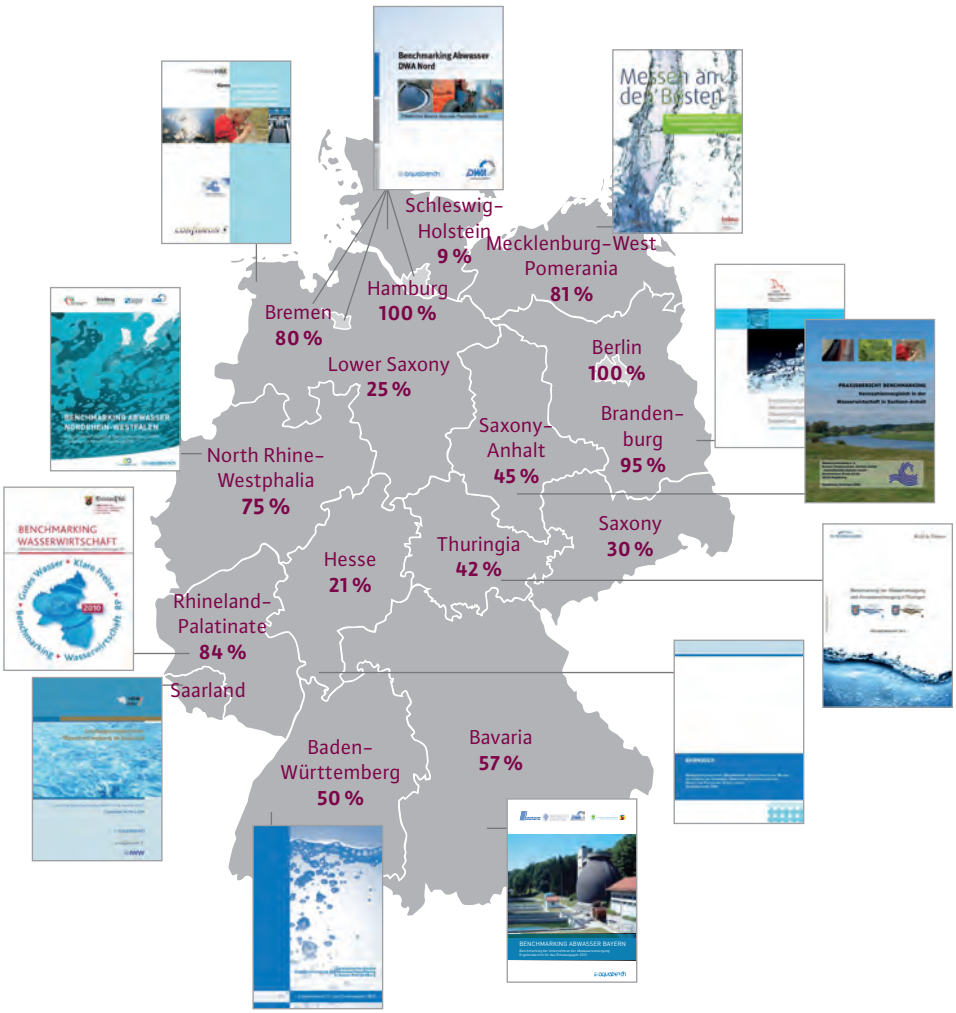
xx %
share of drinking water quantities covered by benchmarking projects (cumulative value)

with public project report
without public project report

Source: Public project reports and BDEW 2014

the federal states or by the utilities themselves for more than a decade. The maps provide an overview of which federal states already have public project reports, and indicate the extent of the area the projects now cover.

Distribution of statewide wastewater disposal benchmarking projects



xx %
degree of coverage for wastewater treatment of the population (cumulative value)

with statewide project
without statewide project

Source: Public project reports and DWA 2014

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