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Toolkit Zone 3 Practical Modules

Water Stewardship

Green and Circular Economy in Business by
Digital Solutions

2024-1-EL01-KA210-ADU-000251741

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Chapter 12 - Water Stewardship

Water is becoming a strategic issue for European businesses. Droughts, floods and ageing infrastructure create increasing pressure on water availability and quality, while regulation is shifting from a narrow “supply and discharge” view to a broader stewardship approach. The EU Water Framework Directive requires all Member States to achieve good status for their waters and to manage rivers, lakes and groundwater in an integrated, basin based way that prevents deterioration and balances ecological needs with human use (Voulvoulis et al., 2017). At the same time, water economics in the Directive emphasise that users should bear not only the financial costs of water services but also environmental and resource costs, in line with the polluter pays principle (OECD, 2023). Inefficient or polluting water use is therefore likely to become more expensive over time. The risks are not theoretical. Between 2021 and 2023, weather and climate related extremes caused more than EUR 160 billion in economic losses in Europe, with SMEs particularly vulnerable to higher operating costs, disrupted supply chains and uninsured damage (SMEunited, 2025). Around 30 per cent of the European population and 20 per cent of its territory already experience annual water stress, with Southern Europe hardest hit but challenges now visible in countries such as Germany, the Netherlands and Belgium (SMEunited, 2025). In some regions, water restrictions, leaks and resource competition have driven operating cost increases of 10 to 15 per cent for SMEs in water dependent sectors such as food processing, textiles, landscaping and tourism. Flood events have doubled since 2014, and in several areas SMEs have reported revenue losses of up to 30 per cent after flooding, often with low insurance coverage (SMEunited, 2025). Globally, projections suggest that water demand will exceed available supply by around 40 per cent by 2030 (Allianz Care, 2025). Since SMEs account for roughly 90 per cent of businesses worldwide, their cumulative water footprint and their potential contribution to water conservation are significant. Sustainable water management is therefore not only an environmental responsibility but also a way to protect against shortages, price spikes and operational disruptions (Allianz Care, 2025).

The good news is that many SMEs are already moving in this direction. The 2024 Eurobarometer survey found that almost half of EU SMEs have adopted measures to save water as part of their broader resource efficiency efforts (European Commission, 2024). Water stewardship is about turning these scattered actions into a coherent approach that protects both the business and the local water environment.

12.1 Understanding water use and risk in an SME

The first step is to understand where and how water matters for business. For most SMEs, water issues fall into three overlapping dimensions.

Operational use and costs

This is the water that appears on the company's bills or is abstracted directly. Typical uses include process water in manufacturing, cleaning, cooling, irrigation in agriculture or horticulture, and domestic uses such as toilets and kitchens. Leaks, inefficient fixtures and poor housekeeping can significantly increase consumption and costs, especially where tariffs are rising or wastewater charges are based on metered use. At the system level, about a quarter of the water treated in European distribution networks is lost through leakage, and in some countries, losses can reach 60 per cent, amplifying scarcity and cost issues for end users, including SMEs (SMEunited, 2025).

Water quality and compliance

Discharges from processes or cleaning can affect local water quality. Only around a quarter of EU surface waters currently meet the Directive's chemical status objectives, with hazardous substances such as heavy metals, nutrients and persistent pollutants acting as major barriers. If ubiquitous, persistent substances were removed from the assessment, more than 80 per cent of surface waters would already reach the objectives (SMEunited, 2025). Small businesses mainly contribute to water pollution through wastewater, which may contain oils, metals, nitrogen, phosphorus, detergents or per- and polyfluoroalkyl substances (PFAS). Companies that do not control what leaves their site risk noncompliance, fines or reputational damage in the local community.

Value chain and location risk

Water risks rarely stop at the fence line. Suppliers may depend on water intensive raw materials from stressed river basins, while customers and neighbours may compete for the same resource during droughts. Analyses of European water resilience underline that water scarcity already poses macro-economic risks and that water reuse and efficiency will need to increase significantly by 2030 (Water Europe, 2024). For SMEs in sectors such as agriculture, food, textiles, chemicals or tourism, the reliability of local water resources can directly affect continuity of operations.

A further nuance, stressed by SME representatives, is the difference between water use and water consumption. Some sectors, such as pulp and paper, return most of the abstracted water to the environment after treatment, while others consume a larger

share through evaporation or product incorporation (SMEunited, 2025). For SMEs, understanding whether they mostly use and return water or genuinely consume it can help in designing fair and effective reduction targets.

A practical way for managers to grasp these issues is to map the company's water footprint in simple terms: where water enters, where it is used, where it leaves, and which parts of the process would be most vulnerable if supplies were restricted, prices rose or regulations tightened.

12.2 Water stewardship approaches and standards

Water stewardship goes beyond internal efficiency. It is about understanding shared water challenges in the catchment and working with others to address them. The Alliance for Water Stewardship defines stewardship as the use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through stakeholder inclusive processes (Alliance for Water Stewardship, 2023). Businesses using a stewardship approach, with or without formal certification, typically see benefits such as increased water efficiency, strengthened stakeholder relationships, improved local water quality and better information for investors and disclosure initiatives (CRESS, 2021).

Case work with micro, small and medium enterprises in industrial parks and supply chains shows that implementing a water stewardship standard can deliver economic benefits through reduced water and energy use, while also raising environmental performance across clusters of firms (WWF, 2017). This is particularly relevant for SMEs located on shared sites where infrastructure and risks are common.

For SMEs that want a structured but flexible framework, the ISO 46001 standard on water efficiency management systems offers one useful reference. ISO 46001 sets out requirements for establishing, implementing and maintaining a water efficiency management system based on a reduce, replace or reuse approach. It can be applied by organisations of any size and is designed to integrate with other management systems such as ISO 9001 and ISO 14001 (ISO, 2019). The standard focuses on measuring water use, identifying saving potentials, setting objectives and implementing plans to improve water performance, with certification available for organisations that want external validation (DQS, 2024).

Full certification will not be necessary or realistic for every SME. What matters is adopting the underlying logic: measure water use, set clear objectives, monitor performance and continuously improve, while keeping an eye on local catchment conditions and stakeholder concerns.

12.3 A simple water stewardship plan for SMEs

A practical water stewardship plan for an SME can be built around five steps.

Step 1: Establish a water baseline

Collect recent water bills and, where possible, meter readings to understand total annual consumption and costs. Break this down by major uses if feasible, for example production, cleaning, irrigation and sanitary uses. Even a rough breakdown can reveal hotspots, such as a single process step, an ageing piece of equipment or a leaking distribution line that uses disproportionate amounts of water. Where possible, record both total abstraction and, if relevant, net consumption, so that improvements can be related to changes in productivity.

Step 2: Identify hotspots and risks

Walk through the site and processes to look for visible waste and risk points: leaking taps or pipes, continuously running hoses, inefficient cleaning practices, uncontrolled cooling water flows or poorly maintained irrigation. Combine this with a brief review of local conditions. Are there already seasonal restrictions on water use. Is the area prone to droughts or floods. Are there sensitive ecosystems or communities downstream. Material on national river basin management plans, prepared under the Water Framework Directive, can provide useful context on the status and pressures of local water bodies (Voulvoulis et al., 2017).

Step 3: Set targets and indicators

Based on the baseline and hotspot analysis, set a small number of clear, realistic targets. Examples include reducing total water use by a certain percentage over three years, cutting leaks to a defined level, or ensuring that all wastewater discharges consistently meet or exceed legal requirements. Indicators might include cubic metres of water per year, litres per unit of product, or water cost per unit of revenue. Guidance for European businesses on environmental key performance indicators suggests that normalising data in this way improves comparability over time and between sites (UK Department for Environment, Food and Rural Affairs, 2006). Targets should be proportionate and take account of the specific sector and processes, in line with the “Think small first” approach advocated by SME organisations (SMEunited, 2025).

Step 4: Implement efficiency, reuse and treatment measures

Many effective measures are low cost and quick to implement. Repairing leaks, installing low flow taps and toilets, using water efficient appliances, adjusting cleaning schedules, shutting off unnecessary flows and training staff to report problems can all produce rapid savings (Allianz Care, 2025). More capital intensive options include upgrading process equipment, installing recirculation or closed loop cooling systems, capturing rainwater for non potable uses such as cleaning or irrigation, or treating and reusing some process water as greywater for flushing or cooling.

In some sectors, there may be opportunities for nature based solutions. Landscaping that uses drought tolerant species, bioswales, rain gardens or permeable surfaces can reduce irrigation needs and improve local flood absorption and biodiversity. Examples from SME cooperatives show that such approaches can cut irrigation requirements by around 40 per cent while enhancing resilience to heavy rainfall (SMEunited, 2025). In industrial areas, digital tools such as smart meters and leak detection sensors have reduced water losses by up to 30 per cent in some pilots, pointing to an emerging role for affordable “smart water” solutions for SMEs (SMEunited, 2025).

Where SMEs use chemicals or detergents, water stewardship should include reviewing substance use and wastewater practices. Tools such as Subsport Plus, which helps identify safer alternatives and provides access to substitution support, can guide SMEs in phasing out hazardous substances and reducing the burden on wastewater treatment systems (SMEunited, 2025). In some locations, it may be more cost effective to develop shared pre treatment or small scale treatment facilities with other firms on the same site, rather than each SME investing alone.

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Step 5: Engage people and partners

Experience from water stewardship programmes for small enterprises shows that training and awareness are central for success (WWF, 2017). Operators and cleaning staff often know where water is being wasted and can suggest practical improvements. Engaging them in setting targets, monitoring use and recognising achievements helps embed good practices. Simple measures such as visible water use dashboards, suggestion schemes and small rewards can maintain motivation.

Externally, building relationships with local water utilities, river basin authorities, municipalities and community groups can provide early warning of upcoming restrictions or regulatory changes and open doors to support schemes or co funded projects. Allianz Care (2025) notes that collaboration with local communities on joint conservation initiatives can strengthen social licence and reputation. At a wider level, SMEs can

monitor information from early warning systems, such as European drought and flood observatories, via public channels, to anticipate and plan for extreme events that might affect their sites or supply chains (SMEUnited, 2025).

Typical barriers for SMEs include limited awareness of their water impact, the perception that upfront investment costs are prohibitive and a lack of in house expertise to design and implement measures (Allianz Care, 2025). These can be reduced through targeted information and tools, financial support schemes that lower initial costs and access to external technical assistance. Many sector associations, chambers of commerce and public agencies now offer guidance, training and, in some cases, grants or preferential loans for water efficiency and resilience projects.

12.4 Water stewardship as part of resilience and competitiveness

Water stewardship is sometimes perceived as a purely environmental responsibility. In reality, it is closely linked to business resilience, cost control and competitiveness. European level analysis values water's contribution to the economy at around EUR 11 trillion, highlighting its systemic importance (Water Europe, 2024). As recovery of environmental and resource costs becomes more prominent in water pricing, inefficient or polluting water use will increasingly show up in company accounts (OECD, 2023). From a managerial perspective, the benefits of sustainable water management for SMEs can be grouped into five categories (Allianz Care, 2025).

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Environmental benefits

Reduced strain on local water resources and ecosystems, lower pollution loads and contributions to achieving basin level objectives under the Water Framework Directive.

Financial savings

Lower water and wastewater bills through leak repair, efficient fixtures, water saving technologies and recycling, often with short payback times. In some cases, efficiency measures also reduce energy costs.

Reputational advantages

A better sustainability profile with customers, employees, investors and local communities. Many buyers now look for suppliers that can demonstrate responsible resource use, especially in sectors where water is a visible concern.

Regulatory compliance

Easier and more predictable compliance with permits and regulations, reduced risk of fines or forced shutdowns and a stronger position in discussions with regulators and inspectors.

Operational resilience

Improved ability to cope with water restrictions, droughts or floods, reduced dependency on stressed infrastructure and lower risk of sudden interruptions to operations.

SMEs also have opportunities on the solutions side. The SMEunited position paper on water resilience highlights that small firms are key innovators in digital monitoring, circular water practices and nature-based solutions, and that their products and services can help other actors in the water system adapt (SMEunited, 2025). For example, SMEs specialise in leak detection technologies, low water use equipment, local treatment systems and climate resilient landscaping. Water stewardship is therefore not only about defensive risk management, but also about identifying new business opportunities.

Access to finance is a recurring concern. Many SMEs face high upfront costs and high interest rates for investments in water saving or resilience measures. SME organisations argue that water related investments that generate wider public benefits, such as pollution reduction or climate adaptation, are legitimate targets for grants, guarantees and blended finance under instruments such as InvestEU or national support schemes (SMEunited, 2025). For individual firms, this means it is worthwhile to actively search for grant calls, incentive programmes and risk sharing instruments at local, national and EU level, and to discuss water-related projects with banks and investors as part of broader sustainability plans.

Insurance and early warning also play a role. Low insurance coverage for water related damages makes SMEs particularly vulnerable to floods and other extreme events. Improving coverage, along with better use of EU solidarity and civil protection mechanisms at national level, can help reduce the impact of shocks (SMEunited, 2025). At company level, integrating publicly available flood and drought forecasts into contingency planning can support timely decisions about stock levels, alternative suppliers or temporary adjustments to operations.

Overall, water stewardship should be seen as part of normal business planning rather than as an optional add on. For SMEs, a simple plan that measures use, manages risks, engages staff and cooperates with local partners can deliver tangible cost savings,

reduce exposure to physical and regulatory risks and strengthen their position in markets and value chains that are becoming more sensitive to water issues. Evidence from broader environmental management shows that firms which actively manage environmental performance tend to be more innovative and better at long term planning and often enjoy competitive advantages (Castillo-Vergara et al., 2023). In an increasingly water constrained Europe, SMEs that treat stewardship as a strategic topic are likely to be more resilient and attractive partners for customers, financiers and communities.

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