



# The Right to Water and Sustainable Consumption in EU Law

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## Abstract

The right to water has gathered momentum in recent years in Europe, having become the subject of the first European citizens' initiative and emerging as a human right. The right to water, however, is in constant, and not always linear, evolution as it faces fundamental trade-offs; on the one hand, access to clean and affordable water is essential to ensure a basic standard of living. On the other, water is an increasingly limited resource, so unfettered access to it increases the threat of scarcity and pollution. This article examines the interplay between the right to water and sustainable consumption objectives, exploring how innovation in regulation and best practice could reduce the risks to health and water scarcity. As water regulation affects multiple areas of law, the article will examine the right to water and sustainable consumption from a human rights' angle and taking a consumer law and environmental protection perspective. A particular focus will be on the Water Framework Directive and the recently revised Drinking Water Directive, examining incentives that promote water rights and sustainable water use. Key regulatory instruments will be evaluated, ranging from information and education tools to economic and social incentives. Finally, the article will propose new measures to align the right to water with the objective of sustainable consumption.

**Keywords** Water rights · Sustainable consumption · Consumer law

Affordable access to clean water is essential to avoid a number of health risks and is a key right to ensure a basic standard of living. At the same time, water is a limited resource, so unfettered access to it increases the threat of scarcity and pollution. Recent forecasts predict that, by 2030, water stress and shortage are likely to affect about half of the river basins in the EU (European Commission, 1991) and that, if countries do not alter their current water usage, this may lead to a 40% shortfall at the international level

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(UNESCO, 1991).<sup>1</sup> Already now, in the face of frequent droughts and looming water scarcity, certain Member States are facing challenges in ensuring universal access to water in some of their regions. Against this background, in recent decades, water services have been gradually privatized, often sparking controversy and strong resistance on the part of citizens worried that the provision of water becomes subjected to the logic of private profit (Chaisse, 2017). Water rights and the management of related services have therefore become the topic of intense debate, globally and nationally, that see the contraposition of economic arguments and a growing recognition of access to water as a human right (Chaisse, 2017; de Chazournes, 2013).

European law and policy in this area reflect many of these challenges and tensions surrounding water rights and environmental concerns. While regulated by secondary law, the right to water has not been expressly recognized in the Treaty on the Functioning of the European Union (TFEU) or in the EU Charter of Fundamental Rights. As will be discussed later, ambivalence has so far been the hallmark of the approach taken by European legislators. At the root of this is the fact that EU policy has had to accommodate a variety of regimes across Member States. While some countries maintain water provision as a public service, others have extensively privatized their water utilities. Each has therefore balanced, in its own way, the interests revolving around water provision (Delimatsis, 2017, 263 et seq.). In the absence of a coherent approach to water regulation, the initiative has sometimes been taken directly by citizens. The most visible example of this was the Right-2Water campaign which raised over 1.6 million signatures and became the first successful European citizens' initiative in history after this instrument was introduced by the Lisbon Treaty.<sup>2</sup> As a result, the European Commission had to formally respond to this action; the content of this response, and the ultimate consequences of the initiative, will be seen later. This article will examine the interplay between the right to water and sustainable consumption objectives, exploring how innovation in regulation and best practice could reduce the risks to health and water scarcity. As water regulation affects multiple areas of law, the article will examine the right to water and sustainable consumption from three main perspectives: environmental protection, human rights and consumer law. A particular focus will be on the Water Framework Directive, on the recently revised Drinking Water Directive and on the new Regulation on Minimum Requirements for Water Reuse, examining incentives that promote water rights and sustainable water use. Key regulatory instruments will be evaluated, ranging from information and education tools to economic and social incentives. Finally, the article will propose new measures to align the right to water with the objective of sustainable consumption.

## Environmental Protection, Sustainable Water Use and Consumer Law

Increasingly frequent drought events over the last decades have highlighted water scarcity as an emerging challenge not only for developing countries but also for Europe. In 2007, about 11% of European residents and 17% of its regions experienced water scarcity, and the cost of droughts over the last 30 years has been estimated to be EUR 100 billion.<sup>3</sup> In

<sup>1</sup> See also the OECD Environmental Outlook according to which by 2050 the demand for water may grow by 55% (2012).

<sup>2</sup> See [https://europa.eu/citizens-initiative/water-and-sanitation-are-human-right-water-public-good-not-commodity\\_en](https://europa.eu/citizens-initiative/water-and-sanitation-are-human-right-water-public-good-not-commodity_en) (accessed October 2022).

<sup>3</sup> See [https://ec.europa.eu/environment/water/quantity/scarcity\\_en.htm](https://ec.europa.eu/environment/water/quantity/scarcity_en.htm) (accessed in October 2022).

particular, in 2011 and 2012, important parts of Europe were affected by serious droughts during which water resources were dramatically reduced.

While drought and water scarcity are different phenomena, they are often intrinsically linked and can aggravate each other's impact.<sup>4</sup> Water scarcity arises when "there are insufficient water resources to satisfy long-term average requirements."<sup>5</sup> There are multiple reasons for this phenomenon but they are often related to long-term unsustainable water use (Van Loon & Van Lanen, 2013). Growing populations and improved living standards have resulted in a higher demand for water, putting more pressure on existing resources, whereas intensive irrigation of agriculture and the use of pesticides have contaminated water resources causing a further water deficit (European Commission Report, 1991). Drought is, in turn, "a natural climatic feature of below-average precipitation, which can last for months or years" (World Meteorological Organization, 2022). Climate change has resulted in higher temperatures and more droughts in some regions, triggering or amplifying water scarcity. Conversely, human-induced over-exploitation of water can increase the severity of a drought. Both water scarcity and droughts can have a negative environmental effect on biodiversity, lead to desertification and cause serious economic loss (European Commission, 2012). To face some of these challenges, the international community adopted the 1992 United Nations Framework Convention on Climate Change (UNFCCC), the 1997 Kyoto Protocol and the 2015 Paris Agreement. Most recently, the 2021 Glasgow Climate Pact has the potential to strengthen water-related climate solutions, focusing on the importance of ensuring the integrity of all ecosystems.

Furthermore, in 2003, the United Nations declared 2005–2015 the International Decade for Action "Water for Life" to promote policies and activities that enhance sustainable water resource management, aiming to improve water quality and availability.<sup>6</sup> This effort culminated in 2010 when, for the first time, access to water was recognized as a human right by the UN.<sup>7</sup> In 2015, the United Nations Sustainable Development Goals (SDGs) 2015 put renewed emphasis on the sustainable use of water as an increasingly important objective to combat industrial pollution and excessive withdrawals.

Notwithstanding these developments, important challenges persist, as stressed by the United Nations Special Rapporteur on the human right to safe drinking water, who again directed attention to access to water and sustainable use (de Albuquerque, 2013). These concerns were echoed by an OECD study according to which the excessive use of water and climate change will cause "one in every two people [to] live in water-stressed areas" by 2030.<sup>8</sup> Meanwhile, some areas of economic law still lag behind in the fight with these challenges (Kingston, 2010). Most visibly, consumer law has remained impervious to these innovations in international law (Twigg-Flesner & Micklitz, 2010) and, in particular, to environmental protection considerations (Luchs & Miller, 2015; OECD Study, 1991). While there are a number of international instruments that aim to promote sustainable consumer policy (e.g., The United Nations Guidelines for Consumer Protection), they often

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<sup>4</sup> *Idem*.

<sup>5</sup> For further explanation of these phenomena, see the European Commission's website: [https://ec.europa.eu/environment/water/quantity/scarcity\\_en.htm](https://ec.europa.eu/environment/water/quantity/scarcity_en.htm) (accessed on 25 August 2022).

<sup>6</sup> For more information, see <https://www.unwater.org/news/water-life-decade-2005-2015> (accessed August 2022).

<sup>7</sup> Resolution adopted by the General Assembly on 28 July 2010 (A/64/L.63/Rev.1 and Add.1), see <https://www.un.org/en/ga/64/resolutions.shtml> (accessed August 2022).

<sup>8</sup> See the OECD webpage <https://www.oecd.org/env/resources/water-therightpriceencourageefficiencyandinvestment.htm> (accessed September 2022).

lack binding force and effectiveness (Durovic & Lech, 2020). In addition, some authors have highlighted important limitations of EU and domestic climate change policies, pointing out that these focus mainly on regulating the production side of the economy, while neglecting the demand side, i.e., the consumers (de Cendra, 2011).

This gap is problematic because consumers' behaviour has a serious impact on climate change and water use through the purchase of goods and use of services that generate waste and greenhouse gas emissions. Moreover, this impact is increasing, due to growing consumption and an expanding global population. A stronger law and policy focus on consumer-oriented sustainable behaviour could help mitigate some of the environmental effects of consumption. For instance, it has been estimated that an adaptation of consumer behaviour focusing more on green actions could lead to a reduction in the EU carbon footprint by approximately 25% (Moran, et al., 2020).

In light of this context, this article will analyse the interface between the right to water and environmental protection from a sustainable consumption perspective, thus establishing a bridge between environmental and consumer law. At the international level, sustainable consumption was first established in the UN declaration adopted at the Rio summit in 1992. However, after Rio, environmental and consumer matters remained separate. The only references to international sustainable consumption were included in the United Nations Guidelines for Consumer Protection. Expanded in 1999 and updated in 2016, these mention sustainable consumption as an important objective for governments, defining sustainable consumption as "(...) meeting the needs for present and future generations for goods and services in ways that are economically, socially and environmentally sustainable" (clause 42). In addition, the Guidelines indicate information and awareness, resource efficiency and recycling as key tools to promote sustainable consumption. The Guidelines, however, were not given a binding status, and this limits their implementation and enforceability.

The limited impact of these Guidelines is echoed in the EU system, which does not include environmental protection considerations in its primary consumer law (Article 169 TFEU). One reason for this is that the EU, as with many industrialized countries, has traditionally focused on the economic interests of consumers, without considering broader, related global challenges (OECD, 1991). As a result, under EU consumer law, consumers are regarded primarily as rights holders with little responsibility for the negative consequences of over-consumption.

In light of this legal landscape, the next sections concentrate on the specific link between the right to water and sustainable consumption which, despite its importance, has been largely ignored by legal research (Verdure, 2011). This analysis will clarify how sustainable water consumption can be promoted in EU law, policy actions and best practice, in an effort to align sustainability objectives with the right to long-term water supply for all.

## The Human Right to Water

The right to water has only recently been recognized as a human right and attracted little attention in the past. For example, such a right was not mentioned explicitly in the 1948 Universal Declaration of Human Rights, or in the 1966 international human rights treaties.

Since the late 1970s, however, two phenomena contributed to bringing water to the centre of the political and social discourse—increasing water scarcity and the liberalization

of water services in the 1990s—which in turn led to growing social mobilization against the commodification of water (Langford & Russell, 2017). At the start of the twentieth century, many European countries had generally opted for the public management of water resources to promote public health and economic development objectives. Towards the end of the century, however, a neoliberal agenda became more dominant which encouraged privatization of water services (Costa Vieira, 2020). This was in turn often met with widespread dissatisfaction with reforms to water services, leading to public protests whose common *Leitmotiv* was a concern that privatization may lead to lower quality, higher prices and more limited access to water (Bieler, 2017; Langford, 2017).

However, recent country comparisons seem to suggest a more nuanced picture. While in some countries, the participation of private enterprise did prove helpful in tackling inefficiencies in the water sector, in others, it has increased prices, which led to exclusion (Costa Vieira, 2020). It is thus recognized that such widespread aversion to the commodification of water is only partly justified, as the effectiveness of a service is not determined uniquely by the private or public nature of its management, but largely depends on the specific context and appropriate government regulation.

Regardless of this, the backlash to privatization had the merit of bringing the issue of water to the fore. The first important signs of broader recognition of water rights emerged in 1977 when governments acknowledged in the UN Water Conference that individuals should have the right to access clean drinking water in sufficient quantities for their basic needs.<sup>9</sup> A number of other conferences followed, establishing the international right dimension of the access to water, but stopping short of defining it explicitly as a human right (Singh, 2017). In 2002, the UN Committee on Economic, Social and Cultural Rights clarified that the right to water is an implicit part of the International Covenant on Economic, Social and Cultural Rights because it is central to ensuring an adequate standard of living, as recognized in Article 11 of the Covenant.<sup>10</sup> Simultaneously, at the national level, access to and protection of water resources have been increasingly included in constitutional provisions (Langford & Russell, 2017) with a subsequent rise in regional court cases dealing with water-related issues (Braig, 2018).<sup>11</sup> This process culminated in 2010, with the formal recognition by the UN General Assembly of the right to water as a human right (Resolution 64/292 2010) (Winkler, 2014).<sup>12</sup> Once access to water had been recognized as a human right, the Human Rights Council defined and detailed it further, setting out to promote and enforce it via quality standards and non-discriminatory access to all individuals (de Albuquerque, 2013).<sup>13</sup> In particular, it spelled out four core elements for the effective realization of the right to water: from supply being “sufficient and continuous to cover personal and domestic use” to

<sup>9</sup> United Nations Water Conference, Mar del Plata Action Plan, Argentina, 1977.

<sup>10</sup> General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant) Adopted at the Twentieth Session of the Committee on Economic, Social and Cultural Rights, on 20 January 2003 (Contained in Document E/C.12/2002/11).

<sup>11</sup> See for example the case law of the European Court of Human Rights (ECtHR): Case ECtHR, *Zander v. Sweden* application n 14,282/88, judgment of 25.11.1993; see also WaterLex and Wash United, *The Human Rights to Water and Sanitations in Courts Worldwide: A Selection of National, Regional and International Case Law* (2014).

<sup>12</sup> According to the Human Rights Council “The human right to safe drinking water and sanitation is derived from the right to an adequate standard of living and inextricably related to the right to the highest attainable standard of physical and mental health, as well as the right to life and human dignity”: <https://www.ohchr.org/en/water-and-sanitation> (accessed in September 2017).

<sup>13</sup> See also de Albuquerque, *Realising the human rights to water and sanitation: A Handbook by the UN Special Rapporteur*, 2014: <https://www.ohchr.org/en/special-procedures/sr-water-and-sanitation/handbook-realizing-human-rights-water-and-sanitation> (accessed 19 December 2022).

being “safe and acceptable,” “within safe reach for all” and “affordable to all.” Subsequently, the 2015 UN Summit on Sustainable Development confirmed universal access to water as a central goal which contributes to economic progress, health and social equality. In addition, it stressed the importance of the sustainable management of water, mentioning “recycling” and “reducing pollution” as key objectives in addressing water scarcity.<sup>14</sup>

At the European level, the EU High Representative affirmed in 2010 that “all States bear human rights obligations regarding access to safe drinking water” and recognized that the right to water is essential to ensure an adequate standard of living and human dignity.<sup>15</sup> However, the European Union fell short of introducing an independent provision in the TFEU or in the 2000 EU Charter of Fundamental Rights explicitly recognizing the right to water. While the Charter contains several provisions that may imply such a right (including Article 1 on the right to dignity and Article 2 on the right to life), it does not directly mention the right to water as an autonomous fundamental right. It can therefore be argued that the EU primary law has not developed a strong, fully fledged concept of a right to water—although, as discussed in later sections, the situation is different for the EU secondary law.

A possible reason behind such a timid approach in EU primary law may be the relatively recent international recognition of the right to water, which still needs to be fully implemented at the regional and national level. In addition, the right to water is typically regarded as a socio-economic right, which has been generally more contested than civil and political rights (Thielbörger, 2014). In particular, some governments have been concerned about the financial obligations that an international recognition of the right to water may impose on them if it becomes enforceable (Murillo Chavarro, 2017).

Lacking a strong institutional framework necessary to implement it, the human right to water has thus remained relatively weak in practice (Singh, 2017). Nevertheless, it is conceivable that the EU may further promote it by leveraging two other aspects of this right, besides its human right dimension: the fact that water resources have some features of a collective good, and the fact that water supply is a service of general interest and thus carries a relevant political weight. Looking at water as a collective good and vital requirement for life implies considering it not as a standard commodity but as a natural heritage that needs to be preserved for the wider societal interest and future generations (Lange & Shephard, 2014). In turn, this forces law and policy makers to re-consider the economic principles that should direct water provision, applying an approach that focuses more on sustainable objectives and on the environmental implications of water usage.

For example, public goods are vulnerable to the so-called “tragedy of commons,” which may occur when multiple agents tapping into a shared resource may find it *individually* efficient to increase the usage to a certain level (Druzin, 2017). However, by so doing, they may precipitate a *collectively* inefficient outcome, which leads to over-exploitation and is damaging for everyone. Such a result could only be avoided by means of co-operation between the agents. This would require effective national and supra-national coordination and regulation that included long-term, sustainable development goals.

Similarly, the recognition of water supply as a service of general interest implies that a number of relevant principles and, potentially, norms can be applied to it by extension. The service of general interest concept was developed in parallel with the liberalization of the

<sup>14</sup> <https://sdgs.un.org/2030agenda> (accessed 19 December 2022).

<sup>15</sup> Declaration by the High Representative, Catherine Ashton, on behalf of the EU to commemorate World Water Day: [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/cfsp/113472.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/cfsp/113472.pdf) (accessed 19 December 2022).

market to guarantee the supply of basic services for individuals at an affordable price and under high-quality conditions (Rott, 2007).<sup>16</sup> On a high level, the Treaty on the Functioning of the European Union requires Member States to ensure that “access to services of general economic interest” are regulated according to “principles and conditions” set by the Union (Article 14). Moreover, it subjects firms operating these services to the rules contained in the Treaties and “in particular to [those] on competition” (Article 106). Thus, to the extent that water provision falls under the category of service of general economic interest, these norms provide opportunities for the EU to actively legislate on it. While Member States have the competence to determine which services should be classified as being of general interest,<sup>17</sup> the EU can play an important role in setting guidelines on the functioning of these services, for example in terms of quality standards, access and accountability (Thielbörger, 2014). This means that whether water provision is a service of general interest or not depends on what is decided by single Member States which, in addition, may well reach diverging conclusions. However, the fact that a subset of services of general interest, the so-called “social” services, are described as those catering for the “needs of vulnerable citizens, and [...] based on the principles of solidarity and equal access” makes it conceivable that, for example, the provision of water to particularly isolated regions may fall under this category. As will be seen later, recent EU law revisions mean that Member States are now expected to take action to maintain or improve access to drinking water for all and, in particular, for marginalized and vulnerable groups, in a similar fashion as for services of general interest. The above discussion underlines how water rights are multifaceted concepts whose position in the European legal landscape is in a state of flux. What is clear, though, is that on the one hand, the right to water is still awaiting an explicit recognition as an independent human right in the EU Charter of Fundamental Rights and, on the other, the EU has for a long time mainly focused on a market-oriented approach to this right, which manifested itself in privatization policies and limited EU competences in this area (Rott, 2007; Wilhelmsson, 2003). Although EU policy and regulation aimed to ensure affordability and high-quality standards of water supply in the deregulated market, water users have been more at risk from unfair contract terms, exclusion and interruption of services (Rott, 2007). This has not been without consequence on the welfare of EU citizens who have recently challenged the EU’s market policies and, in particular, the privatization of water services via social movements. Interestingly, the EU access to water movement was based on the aforementioned Article 14 TFEU, which covers services of general interest, and is inspired by the international recognition of water as a human right (Van den Berge, et al., 2020).

## The European Citizens’ Initiative on the Right to Water

A 2012 Eurobarometer report showed that EU residents considered water supply and quality as an important law and policy topic that required further action (Eurobarometer Survey, 2012).<sup>18</sup> The survey indicated that 73% of Europeans would welcome more

<sup>16</sup> See the EU Green Paper on Services of General Interest, COM (2003) 270, p. 7.

<sup>17</sup> [https://ec.europa.eu/info/topics/single-market/services-general-interest\\_en](https://ec.europa.eu/info/topics/single-market/services-general-interest_en) (accessed November 2018).

<sup>18</sup> While there exists a common concern regarding water pollution, differences in the perception of water risks exist, depending on the region, with the Mediterranean countries mainly fearing droughts, and Eastern countries being concerned about flooding; see Flash Eurobarometer 344, Attitudes of Europeans towards water – related issues, 2012.

EU measures to tackle the pressing problem of water pollution, scarcity and quality.<sup>19</sup> Furthermore, 62% of the consulted citizens thought that they were not well informed, and 67% were of the opinion that raising awareness of water-related issues, such as the environmental impact of water use, would help tackle some of the problems. In particular, although consumers declared that they generally try to use water responsibly, they felt that they could do more to protect this limited resource but would require additional information to take further action.

In order to push the European Commission to become more active in this field, a number of European citizens started a public campaign in 2012 called Right2Water, with the intention of putting forward a European citizens' initiative. Established by the Lisbon Treaty as an instrument of participatory democracy, the Citizens' Initiative allows one million citizens from at least seven Member States to request the Commission to prepare a legislative proposal on areas of EU competences.<sup>20</sup> The Right2Water initiative "Water and sanitation are a human right" used this new tool to request the Commission to implement the UN human right to water and sanitation in the EU suggesting three specific actions:

1. Mandate that the EU institutions and Member States grant to all inhabitants the right to water and sanitation.
2. Exclude water supply and the management of water resources from the domain of application of "internal market rules," and exclude water services from liberalization.
3. Induce the EU to increase its efforts to achieve universal access to water and sanitation.<sup>21</sup>

The Right2Water initiative thus challenged the EU's prevailing "neoliberal economic model" and tried to achieve a shift from a "market approach" to a "rights-based approach" to water (Van den Berge, et al., 2020). New measures were specifically required because a significant number of EU individuals still did not have suitable access to water or sanitation, emphasizing inequality between regions and social strata.<sup>22</sup> As seen in the previous section, the Right2Water campaign was part of a wider movement that emerged across European countries and at the global level, resisting privatization programmes by means of various legal strategies, including citizen referenda or litigation, to challenge the commercialization of water utilities (Langford, 2017; van den Berge, et al., 2020).

In 2013, Right2Water became the first successful European citizens' initiative, receiving over 1.6 million signatures across more than seven countries, in the proportions set out by the European Citizens' Initiative requirements. As a result, the European Commission had to provide a reply, clarifying its legal conclusions and the measures it intended to adopt.<sup>23</sup> The response of the Commission, however, followed a cautious approach, mostly describing already existing measures aimed at improving access to water, highlighting some areas

<sup>19</sup> Flash Eurobarometer 344, Attitudes of Europeans towards water – related issues, 2012.

<sup>20</sup> The European Citizens' Initiative was established by the Lisbon Treaty; see also EU Regulation No. 211/2011 on the citizens' initiative; O.J. L 65, 22.3.2011, p. 1.

<sup>21</sup> Right2Water citizens' initiative: [https://europa.eu/citizens-initiative/water-and-sanitation-are-human-right-water-public-good-not-commodity\\_en](https://europa.eu/citizens-initiative/water-and-sanitation-are-human-right-water-public-good-not-commodity_en) (accessed on 4 September 2017).

<sup>22</sup> Explanatory note of the European Citizens' Initiative: Water and sanitation are a human right! Water is a public good, not a commodity! (Annex to ECI Water and sanitation are a human right Ref. Ares (2012) 389,843—01/04/2012.

<sup>23</sup> Article 10 of the Regulation on the Citizens' Initiative.



for improvement, but stopping short of planning significant new measures (Karatzia, 2017; Vogiatzis, 2017).<sup>24</sup> This caused some backlash, as the response was criticized by both the European Parliament and the European Economic and Social Committee, which suggested that the Commission should have come forward with a fresh legislative proposal, advocating in favour of including the right to water in the EU Charter of Fundamental Rights.<sup>25</sup>

The Commission's initial approach may have arguably been motivated by the recognition that a balance needs to be struck between different objectives, in particular providing an abundant water supply, and that of protecting the environment, which in turn is necessary to ensure future water services. However, water scarcity and environmental concerns did not feature in the Commission's response, contrary to the European Parliament's answer, which stressed that the sustainable consumption of water should be a priority objective in the EU. Therefore, the Commission's response revealed a lack of ambition in this regard and, as argued later in this article, a comprehensive sustainable consumption approach in this area.

Another reason for the Commission's initial self-restraint may be that the approach of Member States to water rights varied considerably from country to country, notwithstanding the general privatization trend discussed previously. While some countries considered water as a common good and opted in favour of public management of water services, others regarded water as a commercial product and delegated responsibility to private companies or adopted hybrid models (Van Rijswijk, 2011).

Moreover, recognizing new water rights would entail extra costs to guarantee high-level standards and access to services. It would also require investment to improve infrastructure and avoid water leakages. As discussed previously, some governments were probably averse to such a commitment due to their economic and political situation. Therefore, the EU had to face the difficult challenge of determining minimum protective standards that ensured the right to water, without interfering too heavily with national systems.

In any case, the Right2Water initiative represented a landmark, demonstrating how important water rights are in the eye of the public. Eventually, in 2020, the EU did adopt a revised Drinking Water Directive, aimed at improving the safety and quality of drinking water, while also facilitating access to water for vulnerable groups.<sup>26</sup> However, this milestone was reached after a long evolution which is detailed in the next sections.

## EU Water Regulation and Remaining Challenges

The EU's efforts to improve water regulation cover three main elements: water quality, accessibility and affordability. Work on water quality had started in the 1970s and culminated in the Drinking Water Directive (1998),<sup>27</sup> the Water Framework Directive (2000)

<sup>24</sup> In the two subsequent successful European citizens' initiatives the Commission showed a similar reluctant approach to propose new legislative measures. Therefore, a number of scholars concluded that this instrument only had a limited practical effect.

<sup>25</sup> European Parliament resolution of 8 September 2015 on the follow-up to the citizens' initiative Right2Water (2014/2239(INI) 2014–2019 P8-TA (2015)0294; Opinion of the European Economic and Social Committee on the Communication from the Commission on the European Citizens' initiative "Water and sanitation are a human right! Water is a public good not a commodity!" 2014, NAT/644.

<sup>26</sup> Directive 2020/2184 of 2020 on the quality of water intended for human consumption (recast), OJ L 435, 23.12.2020.

<sup>27</sup> Directive 98/83/EC of 1998 on the quality of water intended for human consumption, OJ L 330.

and other EU measures.<sup>28</sup> Accessibility, on the other hand, had been fostered by providing assistance to Member States' infrastructure works, mainly in the form of financial support. Finally, affordability played a role in the Water Framework Directive, establishing measures to align consumer prices to effective water costs, but leaving it to national regulators to establish concrete measures to support, for example, low-income households.<sup>29</sup>

From a historic perspective, EU water regulation evolved in three waves of environmental legislation (Kallis & Butler, 2001) which, among other things, contributed to the protection of consumers. The first wave of water legislation started in the 1970s with the adoption of the 1973 Environmental Action Programme. This was followed by the development of numerous legislative measures to regulate specific areas of water, such as the Surface Water Directive in 1975 (Kingston et al., 2017).

In the 1990s, the second wave of water regulation was adopted mainly with the objective of tackling pollution challenges and protecting consumers from the adverse effects of water contamination. This was necessary as an evaluation of previous legislation showed gaps in this regard which needed to be addressed. As a result, key measures that were adopted during this period were the Urban Waste Water Treatment Directive (1991), the Directive on Nitrates (1991) and the Drinking Water Directive (1998).

Finally, a third legislative wave emerged in 2000 with the adoption of the Water Framework Directive (WFD).<sup>30</sup> The objective of this legislative initiative was to provide a more integrated approach to water management in the EU. This was innovative because it introduced a new focus on the sustainable management of water resources (Green et al., 2013; Grimeaud, 2001). In particular, the WFD aimed to enhance the sustainable use of water by ensuring a good ecological status and long-term environmental protection for all water, establishing a process for defining a local standard of water quality. To this end, it both imposed limits on the admissible levels of hazardous substances in surface and ground water, and started to deal with the impact of droughts and floods. According to the WFD, Member States are obliged to create a river basin management plan and to monitor the water quality by setting emission limits. Importantly, Member States have to use the principle of cost recovery for water services, taking into account resources and environmental costs, in line with the polluter pays principle. As costs are, to an extent, passed onto clients, this should provide an incentive to consumers to use water resources in an efficient way. The WFD also includes provisions for information and consultation requiring that Member States promote the involvement of interested parties in the implementation process of the Directive. These provisions focus, to a large extent, on river basin management plans, requiring that information is provided for the consultation and involvement of the public. If consumers wish to make a claim before the courts regarding these plans, they must show that their personal interests have been harmed (Van Rijswijk, 2011). In 2007, the Water Framework Directive was complemented by the Floods Directive (2007)<sup>31</sup> which requires Member States to assess and map flood risk areas and manage them with bespoke flood management plans.

While the development of environmental legislation has contributed to improving water management in Europe, serious challenges still persist. These deficits, can be attributed either to a lack of EU initiatives, or to the limited adaptation and enforcement

<sup>28</sup> Directive 2000/60/EC of 2000 establishing a framework for Community action in the field of water policy, OJ L 327.

<sup>29</sup> The EU does not have the power to directly set prices at the national level.

<sup>30</sup> Directive 2000/60/EC establishing a framework for Community action in the field of water policy, OJ L 327, 22.12.2000.

<sup>31</sup> Directive 2007/60/EC on the assessment and management of flood risks, OJ L 288, 6.11.2007, pp. 27–34.

by Member States, in turn made possible by the soft regulation approach of the directives (Green et al., 2013; Voulvoulis et al., 2017).

More specifically, three challenges have been particularly pressing from a consumer perspective: quality, accessibility and sustainability. First, better access to high-quality water needs to be promoted in the EU by ensuring implementation of EU rules. According to the 7th EU Environmental Action Programme, further actions have to be taken in order to:

- Guarantee better quality drinking water
- Renew and maintain water infrastructure, to make it more efficient
- Introduce new wastewater infrastructure

These measures will require adequate financing and good governance actions to ensure the coordination of funding at both the national and local levels. In this regard, Member States should apply for EU financial support to help with the implementation of the EU water regulation, along the lines of the Commission's Water Blueprint Communication (2012).<sup>32</sup>

A second challenge concerns water accessibility and participation of water users in decision-making. EU Member States could improve water accessibility, especially for vulnerable individuals, and promote transparency and information on the quality and affordability of water.<sup>33</sup> The Water Framework Directive mentions that EU citizens must be informed about water provision and about environmental matters.<sup>34</sup> They also have a right to be consulted when a river basin management plan is adopted and public bodies have to show how their opinions have been acknowledged. However, there is still a general lack of transparency and participation of water users in water management decisions (Van Rijswijk, 2011). Therefore, procedures should be further improved so that citizens can actively participate in decisions on water management and compare water quality across the EU.

A third issue that has not been sufficiently addressed at the EU level is the problem of the overuse of water resources and the need to promote sustainable consumption. In the current water regulation framework, there is a general lack of consumer information of sustainable use of water. The pollution of water resources bears a high cost that needs to be avoided and internalized. Therefore, according to the European Parliament effective policies that aim to protect water resources from agriculture, industrial pollution and household use are important.<sup>35</sup> The Drinking Water Directive could be implemented more effectively at the national level by improving the coordination and coherence of legislation in order to use water resources more efficiently and in a sustainable way. In addition, a recent legislative review by the Commission has revealed that the implementation of the cost recovery principle of the WFD has not been implemented sufficiently by Member States. As a result, environmental and resource costs are frequently not integrated into water tariffs, which are established below cost recovery in Member States.<sup>36</sup> Therefore, essential funds to repair leakages or to promote

<sup>32</sup> See [https://ec.europa.eu/environment/water/blueprint/index\\_en.htm](https://ec.europa.eu/environment/water/blueprint/index_en.htm) (accessed 19 December 2022).

<sup>33</sup> Communication from the European Commission on the European citizens' initiative "Water and sanitation are a human right! Water is a public good not a commodity!" 2014, p. 9.

<sup>34</sup> Directive 2003/4/EC on public access to environmental information.

<sup>35</sup> European Parliament resolution of 8 September 2015 on the follow-up to the citizens' initiative Right-2Water (2014/2239(INI); 2014–2019 P8-TA (2015)0294.

<sup>36</sup> See the Communication from the Commission on the Review of the European Water Scarcity and Droughts Policy, COM/2012/0672.

environmental goals are often absent. One of the case studies in this article will show that establishing a metering system is crucial for effective water pricing and allocation.

The EU has recently taken steps to tackle some of the previously mentioned challenges, specifically the ones regarding quality and accessibility. Most noteworthy, in 2017, the Commission proposed a newly revised version of the Drinking Water Directive, as a follow-up to the Right2Water initiative.<sup>37</sup> The new Drinking Water Directive was thus adopted in 2020, aiming to improve water quality and facilitate access to this essential resource.<sup>38</sup> Key innovative features therein include stronger quality standards based on the WHO safety recommendations, and a shift to a preventative “risk-based approach” to reduce water pollution. In line with the human right to water, the Directive encourages Member States to focus on the provision of drinking water for marginalized and vulnerable individuals, thus showing a renewed emphasis on social inclusion. Finally, the Directive also aims to improve transparency through better information and proposes measures to improve efficiency by reducing leakages. While indicating important avenues to strengthen the right to water, the Directive’s aims will only be achieved with sufficient funding and investment in infrastructure to support the transposition of the measures into national laws. In addition, the Directive still appears limited with regard to procedural rights to promote consumer participation in decision-making, as discussed in subsequent sections.

Overall, these recent developments are a testimony to the influence generated by the Right2Water citizen’s initiative, which drew attention to the human rights dimension of water, deeply influencing the EU regulatory approach. And yet, some of the challenges mentioned above have still to be solved, among them, the problem of sustainability and its root cause of water users’ behaviour excessively straining water resources. Taking an interdisciplinary approach, the next section puts forward possible avenues for legislative and policy actions able to address some of the above shortcomings, focusing particularly on the sustainable consumption and participation aspect.

## A Sustainable Consumption Approach to Water Regulation

The previous section highlighted remaining gaps in the current EU water regulation framework concerning sustainability and participation in decision-making. The shortcomings regarding sustainability have been recognized and stressed specifically by those EU institutions which more closely represent the citizens and socio-economic interests. For example, the European Parliament recommended the promotion of “rational use, recycling and reuse of water resources, which are vital issues for integrated management” to “save the natural resource and ensure that the environment is properly managed.” The European Economic and Social Committee, for its part, recommended that the Commission develops a sustainable approach to water management to ensure that this scarce resource is preserved for the long term.<sup>39</sup> It also suggested that the Commission promotes education and information on

<sup>37</sup> Proposal for a Directive on the quality of water intended for human consumption (recast), 2018 COM(2017) 753.

<sup>38</sup> Directive (EU) 2020/2184 on the quality of water intended for human consumption (recast), OJ L 435, 23.12.2020, p.1–62.

<sup>39</sup> Opinion of the European Economic and Social Committee on the Communication from the Commission on the European citizens’ initiative “Water and sanitation are a human right! Water is a public good not a commodity!” 2014, NAT/644, pp. 4–5.

water-related issues, while encouraging a water management system that is efficient, transparent and participatory.<sup>40</sup>

The breadth of these indications suggests that water-related challenges are best dealt with by applying a broad policy effort involving different areas of law. This is also reflected in Article 11 TFEU and Article 37 of the EU Charter of Fundamental Rights, which state that environmental protection requirements must be integrated into the Union's policies, with a view to promoting sustainable development.

Interestingly though, while environmental sustainability has permeated the debate in several areas of law, EU consumer law has remained largely impervious to it. This is clear for example in Article 169 TFEU, which focuses on consumers as rights holders but lacks an obligation dimension and thus fails to influence consumer behaviour and possibly instil a stronger sense of responsibility towards the environment.<sup>41</sup>

In contrast, at the international level, the United Nations Guidelines for Consumer Protection (UNGCP) suggests a broader consumer law model that takes account of environmental issues, by stating that "(i)nformed consumers have an essential role in promoting consumption that is environmentally, economically and socially sustainable, including through the effects of their choices on producers." This role should be promoted through the "development and implementation of policies for sustainable consumption and the integration of those policies with other public policies" (UNGCP section H). However, when it comes to direct consumer choice, EU policy typically uses "soft" instruments (as for example in its campaigns for sustainable consumption), which does not have sufficient legal force to ensure rapid and sizable change (Pollex, 2017). This somewhat minimalist approach is part of the apparent paradox of the EU; on the one hand, it proclaims objectives for sustainable consumption, and on the other, it has been supportive of the privatization of water utilities which is firmly centred on privately led economic growth rather than on sustainability goals. Accordingly, the focus of EU policy remained on the production side, rather than on the behaviour of consumers who are viewed mainly as rational individuals able to discern and pursue long-term sustainability objectives and virtuously steer the economy in that direction (Pollex, 2017). In reality, however, water users often lack the information, education and coordination instruments that would be required to realize a sustainable economy, making a strong case for including environmental considerations in consumer law (Schrader, 2007). The promotion of procedural provisions in line with the Aarhus Convention, which has been described as an instrument for "environmental democracy," would help in this sense, providing opportunities for consumer engagement through public participation in environmental decision-making<sup>42</sup> (Poza Vera, 2011).

The remainder of this article proposes avenues to close existing gaps by drawing inspiration from interdisciplinary research that highlights the ethical and environmental dimension of consumption (Ricci et al., 2016; Schrader, 2007), and discussing three key topics in the water sector. The first of these is water recycling, a practice currently facing obstacles that may however be tackled in the EU by specific legal and policy initiatives. The second topic is consumer awareness about the environmental costs of consumption. The last topic

<sup>40</sup> European Parliament resolution of 8 September 2015 on the follow-up to the citizens' initiative Right2Water (2014/2239(INI); 2014–2019 P8-TA (2015)0294.

<sup>41</sup> OECD Study, Promoting Sustainable Consumption (2008).

<sup>42</sup> See the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, adopted on 25 June 1998.

is that of financial incentives in water consumption and how regulation in this area could reduce overuse, thereby alleviating the problems of quality and sustainability.

## Water Recycling

Scarcity of a resource may be tackled either by promoting parsimonious use or by improving efficiency in the “production” phase, an aspect of which is recycling. The UN has recommended that water recycling should be increased globally and has included this objective in its Sustainable Development Goals.<sup>43</sup> Additionally, the European Commission has identified water reuse as a key objective for a self-sustaining economy, offering considerable social, economic and environmental advantages, while reducing greenhouse gas emissions.<sup>44</sup> This shows that recycling is now well recognized as a key element of sound water management. However, it still faces significant obstacles in the EU for three reasons. First, a lack of confidence in the very concept of recycling water as the public may fear residual pollution; second, stakeholders may fail to fully grasp the importance and advantages of water recycling; and third, the EU does not have a coherent framework to concretely promote water reuse.<sup>45</sup>

The Commission’s Water Blueprint<sup>46</sup> revealed that approximately half of surface waters in Europe “are in less than good ecological status” whereas serious gaps in monitoring the chemical surface status of waters were identified. As a result, the quality of 40% of water bodies is unknown.<sup>47</sup> As this poses problems of trust when it comes to water that has not undergone a recycling process, *a fortiori*, the general public will have similar concerns regarding processed or recycled water as might be expected, with this lack of confidence comes lack of acceptance, which presents an obstacle to recycling as a key way of easing the pressure on the environment (Schäfer & Beder, 2006).

One general piece of legislation in this respect is the WFD, which introduced a risk assessment framework for processed water requiring, in particular, water to be tested for toxic substances. Critics of this approach (Kallis & Butler, 2001) have argued that this framework is too permissive, omitting many hazardous substances and failing to require a complete list of chemical substances.<sup>48</sup> These limitations somehow undermine the ability of the WFD to encourage public confidence in processed water, regardless of their actual impact on water quality.

More recently, the European Commission has taken a more targeted approach to boost water reuse and public acceptance thereof, presenting an Action Plan in 2015 within its circular economy package. The Plan sets out various initiatives to boost the reuse of wastewater, ranging from measures facilitating its integration in water planning management to support for innovation and research.<sup>49</sup> A key measure of the Action Plan was the adoption of the 2020 Regulation on Minimum Requirements for

<sup>43</sup> Goal 6 of the UN Sustainable Development Goals on clean water and sanitation: <https://www.un.org/sustainabledevelopment/water-and-sanitation/> (accessed in October 2022).

<sup>44</sup> See: Water Blueprint to safeguard Europe’s water resources, COM (2012) 673 final.

<sup>45</sup> For more on water reuse, see <https://ec.europa.eu/environment/water/reuse.htm> (accessed in October 2022).

<sup>46</sup> The Water Blueprint: [https://ec.europa.eu/environment/water/blueprint/index\\_en.htm](https://ec.europa.eu/environment/water/blueprint/index_en.htm)

<sup>47</sup> See also the European Commission, Communication on the Water Framework Directive and the Floods Directive: Actions toward the good status of EU water and to reduce flood risks, 9.3.2015, p. 3.

<sup>48</sup> According to Crawford-Brown (2011), the risk regulation approach in the WFD is too soft to solve the lack of confidence problem of the public, arguing in favour of a more preventative risk regulation approach.

<sup>49</sup> See the European Commission’s Action Plan on water reuse within the circular economy: <http://ec.europa.eu/environment/water/reuse-actions.htm> (accessed in Oct. 2022).

Water Reuse, promoting the reuse of water in agricultural irrigation.<sup>50</sup> The Regulation sets common standards to promote the reuse of water while ensuring the protection of human health. This is particularly significant because, despite its lesser environmental impact compared to desalination or water transfer, water recycling is relatively uncommon in Europe, not only because of the cost, but arguably also because of the absence of common health and environmental standards. The said Regulation aims at closing this gap by establishing a harmonized set of water quality standards and monitoring requirements.

Particularly relevant for the consumer is the fact that Member States are now explicitly required to ensure that water reuse does not lead to a lower quality standard of water that is intended for human consumption. The Regulation requires that “water reuse risk management plans should pay special attention to the protection of water bodies used for the abstraction of water intended for human consumption.” This is important to assuage concerns regarding health risks which, as observed by recent studies, could hinder public acceptance of water reuse (Berti Suman & Toscano, 1). In this sense, the new Regulation puts forward new risk management provisions on health and environmental risks, including specific rules on information and compliance checks. On the other hand, it also promotes education and training initiatives on the water reuse process.

Besides reducing the confidence problem, information provisions can also promote responsible behaviour. Conscious of this, the EU has established criteria to assess the environmental performance of products, and thus develop an eco-labelling system able to guide consumers in their purchase of goods that are relevant to water (e.g., laundry and dishwasher detergents).<sup>51</sup>

However, focusing mainly on information and education instruments, the Water Reuse Regulation implicitly conceives a passive engagement on the part of the public. A more comprehensive regulatory model would instead promote active public participation (for example in the assessment process of water standards), one effect of which would again be strengthening trust in water reuse measures. Arguably, a legal basis to move in this direction is provided by the 1998 Aarhus Convention, which stresses the importance of information, public participation in environmental decision-making and access to justice.<sup>52</sup> In addition, the previously discussed WFD indicates how public participation could be promoted as it contains “information and consultation” provisions, requiring Member States to encourage the involvement of all interested parties in its implementation (Art. 14 WFD).<sup>53</sup> Innovative “participatory monitoring techniques” have also been proposed by some scholars as a catalyst for public active participation (Berti Suman et al., 1). The next section will focus on the topic of drinking water and how a “water footprint approach” can enhance information and promote sustainable consumption.

<sup>50</sup> EU Regulation (EU) 2020/741 of 25 May 2020 on minimum requirements for water reuse, OJ L 177/32 5.6.2020.

<sup>51</sup> Regulation (EC) No 66/2010 of 2009 on the EU Ecolabel; for an example on how green production standards can influence water use at the national level see Lange & Shephard, 2014

<sup>52</sup> See the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, adopted on 25 June 1998.

<sup>53</sup> See the discussion of the previous EU water regulation section in this article.

## Water Footprint and Consumer Information

Consumer awareness about the environmental implications of water use or, more specifically, of water-related purchases is a pre-requisite for sustainable water consumption (Gómez-Llanos et al., 2020). However, relevant information in this sense is limited. A case in point is provided by the use of bottled water, to which consumers are most often drawn on the basis of misconceptions regarding domestic tap water.<sup>54</sup> In many developed countries, tap water is safe and relatively inexpensive. Yet, the demand for bottled water has grown significantly in these regions.<sup>55</sup> At the global level, consumption is estimated to have almost doubled in the decade leading up to 2018, from just over 200 billion litres per year in 2007 to almost 400 in 2018. This trend can lead to environmental challenges, contributing to waste, climate change and pollution. For example, according to recent studies, every litre of bottled water uses three litres of regular water in its production (Van Der Linden, 52). Furthermore, the production and distribution of water bottles emit a high amount of carbon dioxide as packaging, refrigeration and transportation all require energy. In addition, the plastic bottles can rarely be recycled, leading to an increase in landfill and marine litter.<sup>56</sup> Notwithstanding these negative consequences, EU law has done very little to promote consumers' awareness of the implications of using packaged water as opposed to tap water (Van Der Linden, 2013).

A relevant case study on drinking water in Italy<sup>57</sup> indicated that consumers' awareness is limited and that providing information could lead to a lower consumption footprint and therefore to socially preferable outcomes (Botto et al., 4). As in other countries, Italian consumers purchase bottled water for several reasons: sensorial characteristics such as taste and odour; social status and attraction to the "image" of the fashionable lifestyle projected by using bottled water; and, crucially, because of widespread suspicion about the quality of tap water (Niccolucci et al., 2011).<sup>58</sup> Consumers make their purchase choices weighing these perceived benefits with the cost of the water represented by the price of the bottle. The problem with this is that both the perceived benefits and the cost are sometimes based on erroneous concerns about health risks. While there may be some variations in quality, depending on the region,<sup>59</sup> water standards in Italy are generally high. The health concerns around tap water are often exaggerated and likewise the perceived benefits of its alternative, i.e., of packaged water (Cidu et al., 2010). Similarly, the actual cost of bottled water turns out to be higher than the retail price of a bottle because the latter does not fully reflect the environmental impact of production. Misinformed about the water footprint of their choice and, in this case, over-estimating the positive effects, consumers are led to make

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<sup>54</sup> Final Impact Assessment Report for the European Commission, Study supporting the revision of the EU Drinking Water Directive, 2016.

<sup>55</sup> See <https://www.statista.com/statistics/455422/bottled-water-consumption-in-europe-per-capita/>, according to which consumption of bottled water has increased as consumers try to choose healthier options than sugar-based drinks.

<sup>56</sup> See European Commission Press release on "Safer drinking water for all Europeans," Brussels, 1 February 2018.

<sup>57</sup> Italy has seen a dramatic rise in bottled water demand and was the leading market for bottled water in 2016; see <https://www.statista.com/statistics/455422/bottled-water-consumption-in-europe-per-capita/>.

<sup>58</sup> See for example the Country Report on the Drinking Water Quality in Italy for 2011–2013: [https://ec.europa.eu/environment/water/water-drink/reporting\\_en.html](https://ec.europa.eu/environment/water/water-drink/reporting_en.html) (accessed in 2018).

<sup>59</sup> In 2014, the European Commission started an infringement procedure against Italy because it failed to ensure that the drinking water for the region of Latium met the European standard, European Press Release 2014.



decisions that are inefficient as they fail to balance the actual costs and benefits or the ensuing actions.

A recent EU study seems to confirm some of these findings for other countries indicating that, despite general compliance by Member States with the standards imposed by the European Drinking Water Directive, many consumers lacked trust in tap water.<sup>60</sup> At the same time, they often believed that bottled water was cleaner or safer. This is not necessarily the case as producers of bottled water did not have to comply with the same quality and accountability standards imposed on the providers of tap drinking water under the previous Drinking Water Directive. In addition, plastic bottles can emit toxic substances and contamination problems have occurred in the past (Van Der Linden, 2013). Consequently, consumers rely on costly bottled drinking water, frequently ignorant of the unnecessary financial, health and environmental implications this entails.

Therefore, in order to dissipate existing concerns and promote a behavioural change, it is essential to build more trust in water services by ensuring a consistently high quality of drinking water in all regions. This would require the improvement not only of the water quality from a health perspective but also of the taste and smell. Furthermore, a key element in promoting confidence in water could be achieved by improving transparency in the water sector. A broad legal basis for EU initiatives in this sense comes from Article 169 of the TFEU stating “[...] the Union shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organize themselves in order to safeguard their interests.” In the specific context of water, Article 12 of the 98/83/EC Drinking Water Directive required Member States to provide up-to-date and adequate information on water quality. Governments have broadly complied with the Directive, for example by providing information using various means including websites, leaflets or reports. However, recent surveys suggest that a large proportion of the EU population still find this information unsatisfactory because it is difficult to find, or understand, and lacks clarity.<sup>61</sup>

As mentioned previously, the proposed revision of the Drinking Water Directive in 2017 already aimed at improving trust, and therefore, the newly adopted 2020 Directive now contains two further elements particularly relevant in this regard. First, it included provisions to improve safety, by requiring Member States to ensure that “water intended for human consumption is subject to a risk-based approach that covers the whole supply chain from the catchment area, abstraction, treatment, storage and distribution of water (...)” (Article 7). This is further strengthened by imposing minimum requirements for materials, treatment chemicals and filters coming into contact with water intended for human consumption (Articles 11 and 12). Second, it promotes transparency and easier access to information, requiring Member States to ensure that households receive, at least once a year, relevant information on their water quality, price and consumed volume (Art. 17).

This new legislative adaptation is a welcome change which will hopefully increase consumer confidence in tap water and reduce reliance on bottled water. Although some uncertainty may remain with regard to the appropriate implementation of risk assessments by drinking water providers (Tsaridou & Karabelas, 2021), including whether consumers will find it easy to access and understand the information provided to them, the Directive’s risk assessment approach and monitoring system are likely to improve water standards and confidence in Member States. Importantly, the revised Directive recognizes the importance of

<sup>60</sup> Final Impact Assessment Report for the European Commission, Study supporting the revision of the EU Drinking Water Directive, 2016.

<sup>61</sup> *Idem*, p. 23.

preventive safety planning vis-à-vis corrective measures, an approach only partially considered in the previous regulation (Tsaridou & Karabelas, 2021).

While promoting confidence in tap water, the new Directive does not contain measures to combat the other side of the problem: lack of information about the environmental costs of water, whether this is packaged in bottles or, more subtly, used to produce other products. This is why developing a robust method to measure water footprint would be crucial in raising public awareness and lead individuals towards more sustainable consumption (Gómez-Llanos et al., 2020). Two instruments can be particularly helpful in this regard. The first is a requirement for clear information and standardized water labelling, allowing consumers to compare products or services on the basis of their environmental impact.<sup>62</sup> The main hurdle to implementing this is the establishment of a science-based certification system (Sánchez-Bravo et al., 2020) that ensures comparability and objectivity.<sup>63</sup> On the other hand, there are also cases of spontaneous initiatives in this regard. For example, Thames Water, one of the largest water companies in the UK, provides information on its website about water usage and saving measures, offering free water-saving devices to its customers, to help them reduce water use and save money.<sup>64</sup>

The second is requiring companies to internalize the environmental impact of their products. Just like a “carbon tax” aims to hold companies accountable for their emissions, it would be possible to conceive a “water tax” which obtains the same result: aligning water prices with societal costs.

The next section discusses this solution more in detail, in the broader context of financial incentives to promote sustainable water consumption.

## Financial Incentives to Promote Sustainable Water Use

When a product (or service) is provided generating externalities, its final price often does not reflect the total societal cost associated with it. This happens in the case of water-related products, leading to inefficiencies, as highlighted by a recent OECD study according to which better pricing would motivate consumers to reduce pollution and waste.<sup>65</sup> The internalization of water-related externalities is a funding element in the provision of financial incentives towards sustainability. These considerations underpin several pieces of EU law and, in particular, the Lisbon Treaty which includes, in Article 191 (2) TFEU, the “polluter pays principle” as a key element of environmental law (Scotford, 2017). On the other hand, the Water Framework Directive (WFD) incorporates this environmental principle in its “full cost recovery principle” according to which all water service costs, including those related to the negative environmental impact, should be paid by the user. The European Commission clarified that pricing policies should, in particular, cover three types of costs:

- (1) The financial costs of water supply (costs of administering and providing services)
- (2) The environmental costs (damage costs caused by water use, on the environment and ecosystems)

<sup>62</sup> European Environment Agency, Policies and measures to promote sustainable water use, 2007.

<sup>63</sup> See also the recent Parliament Study on the Human Right to Drinking Water (Mirumachi et al., 2021) that suggests a behavioural change of consumption.

<sup>64</sup> <https://www.thameswater.co.uk/Be-water-smart/Copy-of-Water-saving-freebies> (accessed October 2017).

<sup>65</sup> See more about the water and the right pricing to encourage efficiency and investment at the OECD website: <https://www.oecd.org/env/resources/water-therightpriceencourageefficiencyandinvestment.htm> (accessed September 2022).

- (3) The resource costs (costs of foregone opportunities suffered by other users due to resource depletion)<sup>66</sup>

While based on strong theoretical considerations, the cost recovery principle is far from being widely and consistently applied in the EU. The WFD implementation reports, for example, revealed that Member States have made only limited progress in setting water prices according to the above principles.<sup>67</sup> Among other issues, an important challenge seems to be the Directive's limited scope and a lack of clarity with regard to Member States' obligations in terms of implementation (Gawel, 2015).

For example, the European Commission brought a complaint against Germany claiming that its narrow interpretation of water service utilities was limiting the scope of the Directive's "cost recovery" principle (C-525/12 Commission v Germany, 2014). However, the CJEU clarified that Member States have a wide discretion when they implement the Directive as they may "subject to certain conditions, opt not to proceed with the recovery of costs for a given water use activity where this does not compromise the purposes and achievement of the objectives of that directive." Irrespective of any assessment of the CJEU ruling, the fact that the Commission was unsuccessful exemplifies constraints faced by the Directive in promoting a sustainable approach to water via economic (pricing) mechanisms (Delimatsis, 2017; Gawel, 2015).

Another problem with the cost recovery principle is that its application may lead to higher prices. In a logical consequence, this could mean that low-income consumers or vulnerable groups may then struggle to pay for their access to water (Bolderdijk & Steg, 2015). Over the last decades, several European countries have shown a general trend towards more expensive water services. For example, water prices have increased markedly in Denmark and this has led to a considerable reduction in water consumption.<sup>68</sup> Similar developments can be noticed in numerous eastern European countries where water prices were initially kept low because of state subsidies, but grew considerably after 1990 with the change by these countries to market-economies. This in turn resulted in a significant reduction in water consumption.<sup>69</sup>

These developments could compromise the newly recognized rights in Art. 16 of the revised DWD, which requires Member States to take "measures to improve or maintain access to water intended for human consumption for all, in particular for vulnerable and marginalised groups." To avoid this, higher water prices would have to be complemented by social measures to prevent exclusion and water poverty specifically for vulnerable and low-income consumers. As a prime instrument for ensuring that market prices reflect societal costs is tax (or reduced subsidies), these measures could then be funded by the newly generated income.

Two measures can support the WFD in the implementation of the cost recovery principle. The first relates to water meters, which allow water companies to charge consumers on the basis of actual usage, providing households with clear incentives to save water. Some smart meters have additional features enabling consumers to track water consumption even more closely, making them more aware of the costs. However, water meters are

<sup>66</sup> Communication from the Commission to the Council, European Parliament and Economic and Social Committee: Pricing and sustainable management of water resources, COM (2000) 477 – (Not published in the Official Journal).

<sup>67</sup> For the implementation reports, see [https://ec.europa.eu/environment/water/water-framework/impl\\_repor ts.htm](https://ec.europa.eu/environment/water/water-framework/impl_repor ts.htm) (accessed 2022).

<sup>68</sup> See [https://www2.mst.dk/udgiv/Publications/2001/87-7944-519-5/html/app02\\_eng.htm](https://www2.mst.dk/udgiv/Publications/2001/87-7944-519-5/html/app02_eng.htm); OECD Promoting Sustainable Consumption, Good Practice in OECD Countries, 2008.

<sup>69</sup> European Environment Agency (2008). Policies and measures to promote sustainable water use.

still not used widely across Member States and, notably, in the UK, where most households are charged a fixed rate, depending only on the number of people living in the property. In 2009, only about 35% of UK households were using metered charging while the rest were charged a fixed rate. The fixed rate system has two main weaknesses: first, it does not provide consumers with sufficient incentives to use water in a sustainable way and, second, it does not effectively support low-income users who may struggle to afford the fixed rate (Walker, 2009). In contrast, a recent 2021 Report by Waterwise in the UK has highlighted that smart water meters can lead to an important reduction in water consumption and help to tackle leakages. This Report showed that residents with smart water meters are more aware of water scarcity problems and focus to a greater extent on water-saving measures than unmetered consumers. Similarly, at the European level, it has been shown that consumers who have meters installed in their houses use less water and save on their bills.<sup>70</sup> Yet, recent research revealed a lack of consumer information about the benefits of smart meters (Report by Waterwise, 2021). This suggests that information campaigns and consumer education could increase the uptake of smart meters promoting more sustainable water use.

A second measure would be gradualism in the application of the cost recovery principle and flexibility.<sup>71</sup> The WFD itself allows some degree of flexibility to take account of possible negative effects of price rises stating, in Art. 9 (1), that Member States may take account of the “social, environmental and economic effects (...)” of the cost recovery rules. In addition, according to Art. 9 (4), Member States can exclude a specific water use activity from the application of the principle, provided that this does not compromise the objectives of the Directive.

These provisions have far-reaching implications. First, they allow for a targeted application of the principle—allowing, for example, for a more stringent application for industrial water polluters, while granting to Member States more flexibility when it comes to dealing with water services to households and, in particular, vulnerable individuals. Second, they arguably imply that the assessment of whether certain price hikes are deemed acceptable would need to take into account consumer affordability.

A last aspect of water pricing is that of public involvement. If higher prices are set, this can be considered acceptable and fair only if they are fixed in a gradual and transparent way by involving the public in water pricing policies. This in turn requires adequate legal measures to promote information and active participation in consultations on water-related decisions on the part of consumers. Article 14 WFD requires Member States to “encourage the active involvement of all interested parties in the implementation of this Directive.” However, it does not mention consumer groups and seems to focus mainly on the review of river basin management plans. In turn, although Art. 17 of the revised DWD requires Member States to ensure that consumers receive regular information about the price of drinking water, it does not include specific provisions to improve active involvement in decision-making. Given the strong interest shown by the public in participating in the European citizens’ initiative on the Right to Water, the DWD could have arguably done more in this area. A stronger focus on participation would make it more likely that all interests are taken into account and increase public acceptance. This would also be more in line with the

<sup>70</sup> European Environment Agency (2012). Policies and measures to promote sustainable water use.

<sup>71</sup> See also the OECD Study, which argues that setting the right price on water will incentivize sustainable consumption: <https://www.oecd.org/env/resources/water-therightpricecanencourageefficiencyandinvestment.htm> (accessed September 2022).

aforementioned Aarhus Convention (Van Rijswick, 2011). While the DWD is limited in this regard, there have been efforts at the national level to encourage the involvement of the public in water-related matters, for example, via the establishment of a Customer Forum in Scotland and the creation of Customer Challenge Groups in England (Heims & Lodge, 2018; Hendry, 2016).

## Conclusion

This article examined the right to water in Europe, in relation to the broader topic of sustainable consumption, exploring how the related risks to health and the environment can be mitigated through law and policy measures. The recent public initiative Right2Water has shown that EU citizens feel strongly about water-related issues, and this has finally led the European Commission to take action to improve access to drinking water. While the 2000 Water Framework Directive, and then the revised 2020 Drinking Water Directive, further upgraded the EU legal framework in this area, the EU has not gone so far as to explicitly include the right to water in its Charter of Fundamental Rights, and is thus lagging, to some extent, behind international developments.

This article has therefore argued that further work is necessary to strengthen the right to water and reach sustainable water consumption, overcoming, in particular, the implementation deficits of the 2000 Water Framework Directive. Discussing concrete case studies, this article has argued that a successful water strategy could comprise a mixture of policy and regulatory innovation to enhance water quality, availability and sustainable consumption. From a legal perspective, this article has argued for a new approach to EU consumer law, whereby individuals are not only regarded as right holders, but also as responsible parties, whose engagement in water-related decisions is facilitated by procedural provisions. Concerning law and policy actions, this article has discussed practical solutions with the potential to (i) advance awareness; (ii) efficiently use, produce or reuse water (meters, financial incentives); (iii) enable consumers to make informed choices that in turn promote sustainability (water footprint measures); and, finally, (iv) educate the public (public campaigns). Sustainable water usage can only be promoted if consumers and companies are fully aware of the environmental implications of their actions, and are made responsible for them, while preserving access to water as a fundamental right. The solution to the pressing problem of water is a complex one and, as such, will require taking an eclectic and holistic approach. This article has argued that consumer law, inspired by new principles, can play an important role in solving this complex puzzle. The general principles have already been laid out; it is now important to translate them into national law and into practical solutions.

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## Declarations

**Conflict of Interest** The author declares no competing interests.

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