

# Hydrating portfolios: investing in water

FEBRUARY 2026

Water is the world's **most essential resource for life on Earth**, and it is a crucial element for economic growth and social stability. The **annual economic value of water and freshwater ecosystems is estimated to be US\$58 trillion** <sup>[+]</sup> – around half of global annual GDP. Access to water and sanitation are **recognized by the UN as human rights** <sup>[+]</sup>, and **water has no substitute**, it has a very inelastic demand <sup>[+]</sup>. But the world's freshwater ecosystems are under stress, as global demand rises, climate change intensifies, and new technologies shift consumption patterns. According to the UN the world is already in the state of "water bankruptcy" <sup>[+]</sup>.

Despite water is foundational to nearly every aspects of our society, it is seldom prioritized for action, placing it as **one of the key environmental challenges for the future, but also as a sustainable investing thematic to consider going forward** <sup>[+]</sup>. Innovation and improving technologies on the water management area are topics to follow as part of the environmental solutions for a more sustainable world <sup>[+]</sup>.



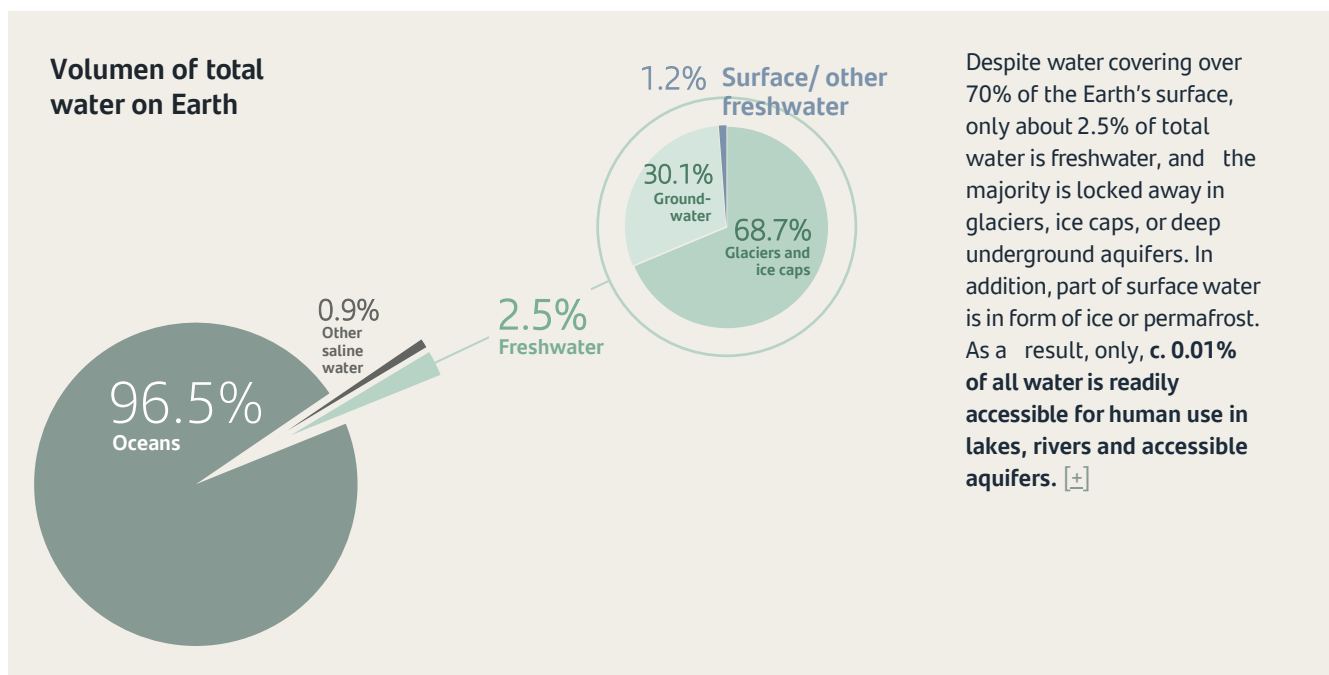
# 1. The blue gold: why water is essential

## A blue world with scarce water

Freshwater is absolutely **essential for life, a finite and vulnerable resource** [±]. The water we consume is four billion years old, it is the same dinosaurs drank [±], the same that led to the fall of empires in Mesopotamia [±] and the same that is weaponized in the shadow in conflicts around the world. [±]

**Figure 1: Freshwater scarcity**

Fuente: [USGS](#)



## Current situation: availability decreases while demand soars at unsustainable pace

### The supply

Surface waters are shrinking at scale. Melting glaciers, biodiversity degrading, shifting rainfall patterns, and intensifying droughts as a consequence of climate change are shifting water dynamics and the hydrological cycle [±]. Land-use activities and intensive industrial processes, are also interfering with natural water patterns, often resulting in ecological damage and water pollution, thus reducing water supply [±].

### The demand

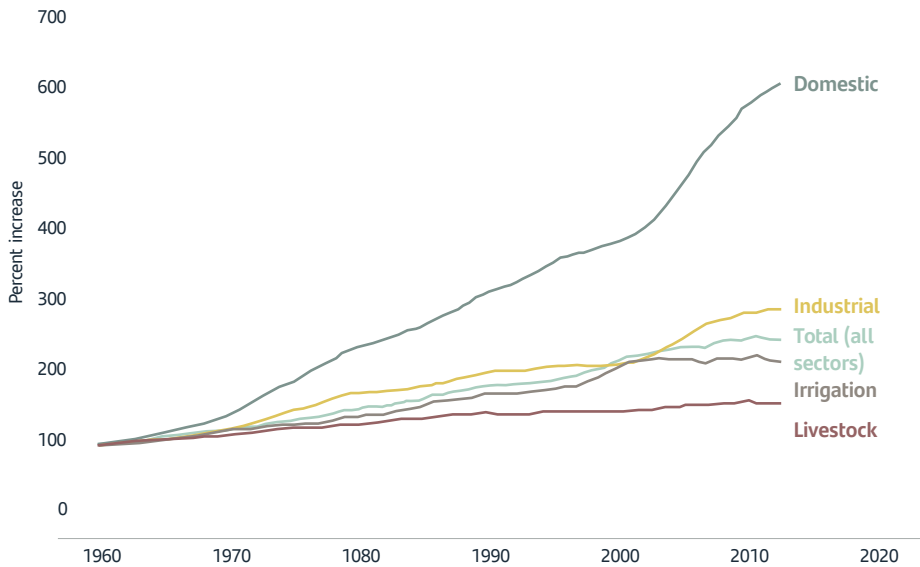
Agriculture amounts to 70% of world's freshwater use [±]. Population growth, inefficient usage, and new fast-growing industries (as data centers) [±] are soaring demand at an unprecedented rate. Global data centers already consume a significant portion of the world's water, with growth accelerating as AI adoption expands [±].

Groundwater is being withdrawn

**3.5x**

faster than it can replenish itself in some major aquifers [±]

Figure 2: Water withdrawals evolution by sector

Source: [Unesco](#)

Global AI demand is projected to account for

4.2–6.6bn

cubic meters of water withdrawal in 2027, which is of 4–6x Denmark annual water withdrawal or half of the UK [±]

## The Result

According to the UN, the planet has entered the “Global Water Bankruptcy era”, as “water stress” and “water crisis” are no longer sufficient descriptions of current situation [±]. Currently 2.2 billion people do not have access to safely managed water supply [±], 1.7 billion people’s water is polluted, and 4 billion people already live with severe water shortages for at least one month a year [±].

Going forward: according to the World Economic Forum, global freshwater demand could exceed supply by 40% in 2030 [±]; and by 2040, already 33 countries are expected to face extremely high-water stress, underscoring a material risk that many populations may no longer enjoy uninterrupted water access [±].

Figure 3: global water stress levels in 2050 scenario

Source: Visual Capitalist

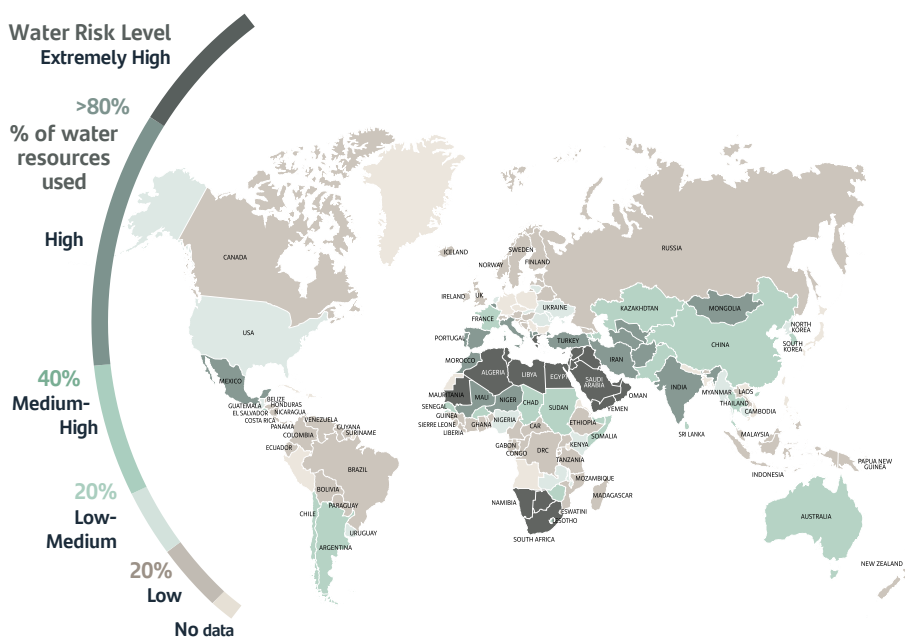
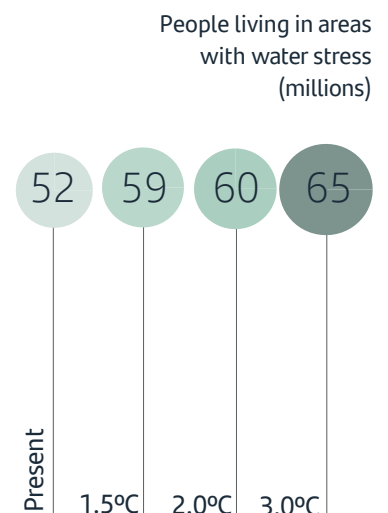


Figure 4: Projected population in the EU and the UK living in water stressed areas according to temperature increase scenarios

Source: European Commission



## 2. The water Investment Gap

Facing these risks present several areas where investments are key to ensure water security and sanitation, in order to avoid economic disruption globally and social deterioration specially in those countries more affected by climate change.

Estimated global costs to achieve universal and equitable access to safe and affordable drinking water for all by 2030 (SDG 6) exceed **annual \$1TR, or 1.21% of global gross product, which is about 3x the current investment levels**. <sup>[+]</sup> Developing countries spend \$164.6bn annually, which amounts to roughly 0.5% of their GDP, of which c. 98% comes from the public sector, including SOEs. **Drought related damages, already amount to about US\$307 billion per year worldwide—larger than the annual GDP of almost three-quarters of UN member states** <sup>[+]</sup>.

Only **c. 3%** of climate tech funding goes towards water projects <sup>[+]</sup>

By sectors, investment efforts should be concentrated in these areas <sup>[+]</sup>:

- 01 Water infrastructure**  
 Related to supply and distribution <sup>[+]</sup>, plus adaptation investment linked to flood/drought defense <sup>[+]</sup>
- 02 Sanitation & healthcare**  
 Such as access to safe drinking water, piped household connections, wastewater collection and treatment <sup>[+]</sup>
- 03 Efficiency increase**  
 Towards leak reduction, better utility governance, reducing agricultural water use, or demand anticipation. <sup>[+]</sup>
- 04 Circular water economy**  
 For water safe reuse and recycling. <sup>[+]</sup>

**Figure 5: Investors interested in sustainability place water solutions as a key thematic, but actual investments are more concentrated in climate solutions**

Source: Morgan Stanley

### Ranked by interest ('very' and 'somewhat interested')

GLOBAL	%	U.S.	%	EUROPE	%	JAPAN	%
Water Solutions	74%	Water Solutions	78%	Water Solutions	77%	Climate Action	68%
Healthcare	74%	Healthcare	77%	Climate Action	76%	Healthcare	67%
Circular Economy	73%	Nature & Biodiversity	74%	Circular Economy	76%	Water Solutions	67%
Climate Action	72%	Education	74%	Healthcare	76%	Circular Economy	64%
Nature & Biodiversity	72%	Community Development	74%	Nature & Biodiversity	75%	Nature & Biodiversity	64%
Education	68%	Circular Economy	72%	Education	71%	Just Transition	59%
Community Development	66%	Climate Action	72%	Community Development	71%	Education	58%
Just Transition	65%	Just Transition	69%	Just Transition	66%	Community Development	55%
Financial Inclusion	61%	Financial Inclusion	66%	Financial Inclusion	65%	Multicultural Diversity	52%

### Ranked by actual investment placements in sustainability thematic

GLOBAL	%	U.S.	%	EUROPE	%	JAPAN	%
Climate Action	15%	Healthcare	14%	Climate Action	17%	Climate Action	15%
Healthcare	13%	Climate Action	14%	Healthcare	12%	Circular Economy	15%
Water Solutions	11%	Education	10%	Water Solutions	11%	Healthcare	14%
Circular Economy	8%	Water Solutions	9%	Circular Economy	9%	Water Solutions	11%
Education	8%	Circular Economy	8%	Nature & Biodiversity	9%	Nature & Biodiversity	8%
Nature & Biodiversity	7%	Faith-Based Values	8%	Education	8%	Community Development	7%
Financial Inclusion	5%	Financial Inclusion	7%	Financial Inclusion	7%	Education	6%
Community Development	5%	Nature & Biodiversity	7%	UN SDGs	5%	Financial Inclusion	6%
UN SDGs	5%	Community Development	5%	Multicultural Diversity	5%	UN SDGs	5%

In this sense, OECD emphasizes the **insufficient investment in efficiency upgrades and utility reform** as a persistent financing barrier, as without it, capital needs to meet service goals rise substantially [±]. Digital monitoring leveraging data and AI could play a key role in optimizing efficiency.

Private investment constitutes less than 10% of total water funding, signaling significant untapped opportunity [±]. **Blended finance may help address these long-term needs strengthening utility governance and increasing private sector participation.** [±] According to WHO, **investments in water infrastructure yield outsized returns: every \$1 invested in water and sanitation delivers up to \$4 in economic benefits**, in the form of reduced health care costs for individuals and society [±].

In Europe various improvements in water supply management and efficiency have led to a decrease of

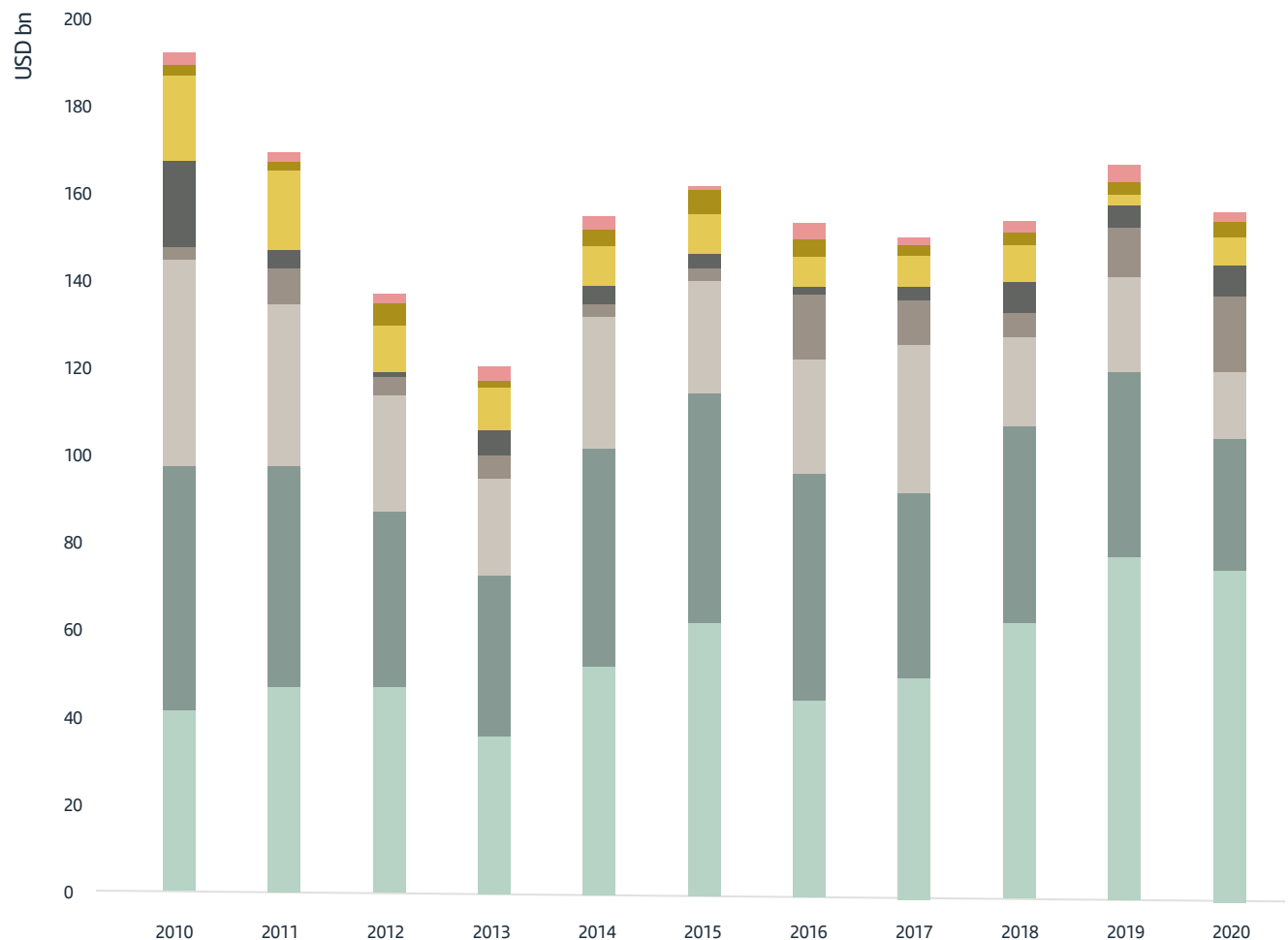
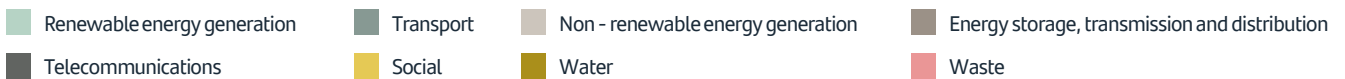
19%

in total water abstraction since 1990 [±]

**Figure 6: underinvestment in water infrastructure could be an area of interest for private investors**

Source: PPIAF

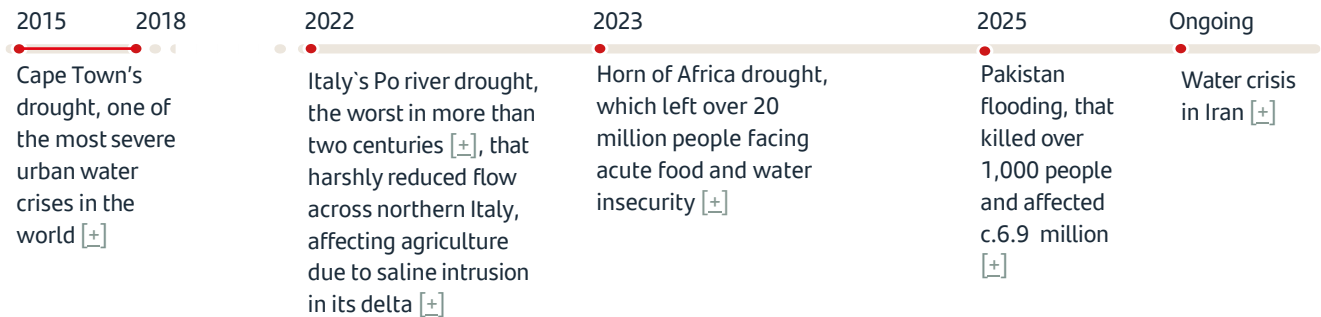
#### Private investment in infrastructure projects by subsector (USD bn)



## 3. Main challenges water crisis faces

### 3.a. Water is not equally distributed amongst countries

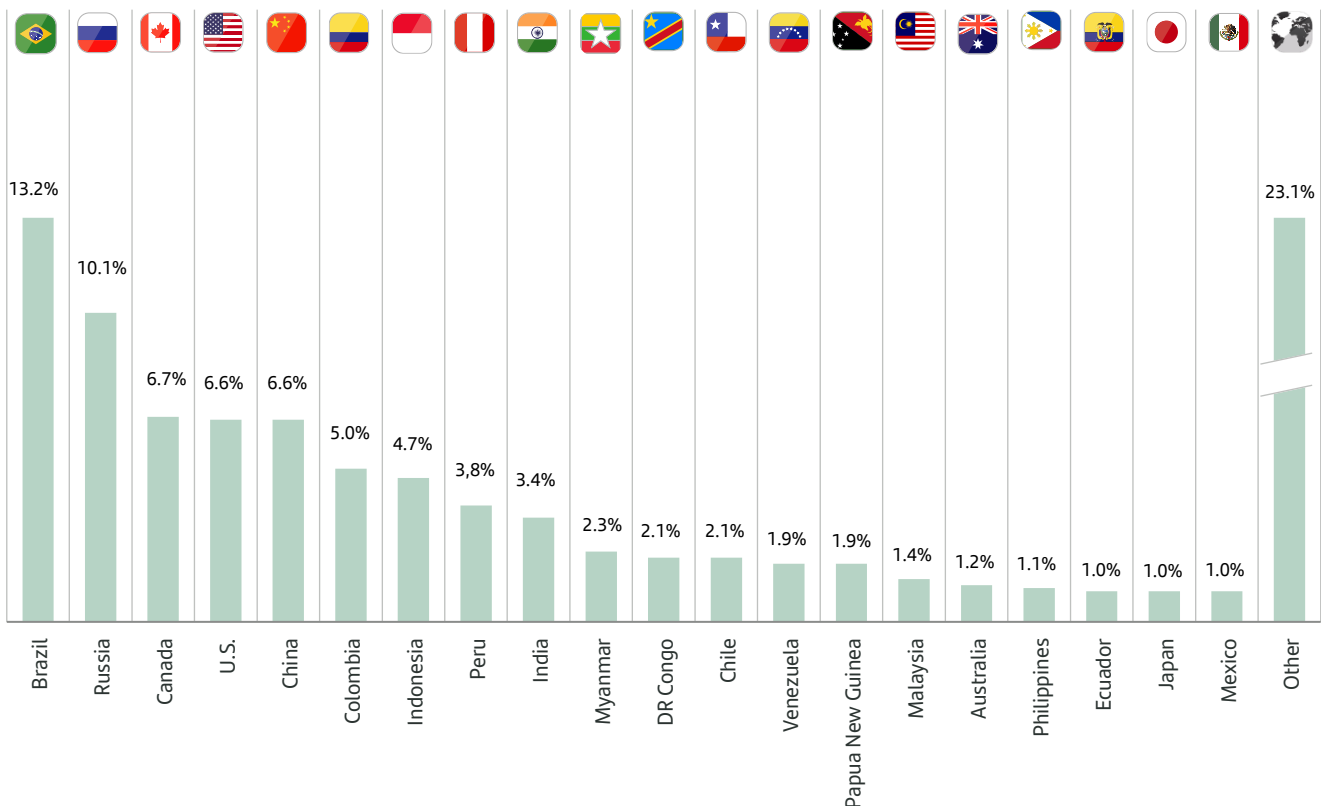
Climate change, biodiversity loss, overconsumption and agricultural impact have led to extreme situations across the world, that are becoming increasingly recurrent. [\[+\]](#) Recent examples include:



**Figure 7: Freshwater by country**

Source: [Visual Capitalist](#). Based on World Bank data on renewable internal freshwater resources by country

Climate change is a disruptor for hydrological cycles but it is not the only one. When biodiversity and ecosystems are disrupted, services like clean air, water, and food are also affected. [\[+\]](#)



### 3.b. Fragmented regulation

Regulation concerning water is highly fragmented and not comparable across countries. Leading nations are adopting integrated water-resource management, digital monitoring, and circular-economy practices.

Some examples include



The European Union's Water Framework Directive [\[+\]](#)



Singapore's holistic national water strategy [\[+\]](#)



California's new groundwater management laws [\[+\]](#)



China's evolving "sponge cities" program for urban flood resilience [\[+\]](#)

**The UN states that the planet should move from water crisis management to water bankruptcy management**

### 3.c. Social aspects

Ensuring universal access to water reduces social inequities and supports a just transition that leaves no one behind [\[+\]](#):

#### Development

The UN links water insecurity to lower educational attainment, reduced productivity, and increased poverty. [\[+\]](#)

#### Gender equality

Water scarcity disproportionately affects women and girls, that globally spend an estimated total 200 million hours daily collecting water. [\[+\]](#)

#### Public health

1.4 million people die each year as a result of inadequate drinking-water, sanitation and hygiene. The vast majority of these deaths are in low- and middle-income countries. [\[+\]](#)

### 3.d. Water governance

According to the global commission of the economics of water, forward looking regulation requires transforming the water economics and restructuring its governance, anchored in 7 points: [\[+\]](#)

01

Manage the global water cycle as a global common good, to be protected collectively and in the interests of all

02

Adopt an outcomes-focused, mission-driven approach to water

03

Cease underpricing water

04

Phase out some of the annual \$700bn subsidies in agriculture and water, which tend to generate excessive water consumption

05

Stablish "just water partnerships" to enable investments in water access, resilience and sustainability in low/middle-income countries

06

Move ahead on the opportunities that can move the needle significantly in the current decade

07

Reshape multilateral governance of water, which is currently fragmented and not fit for purpose



## 4. Water pricing and investment options

One of the most evident challenges regarding water is pricing. Despite most industries and consumers pay for the water they consume, **its value is not correctly reflected in current prices, that remain in many cases artificially below costs**. Proper pricing including impact on nature and affordability in vulnerable communities, will enable water to be used more sustainably. [±] [±]

Due to the absence of a fully developed water market and the limited availability of direct financial instruments, **investors appear uncertain about how to invest in water**. [±]

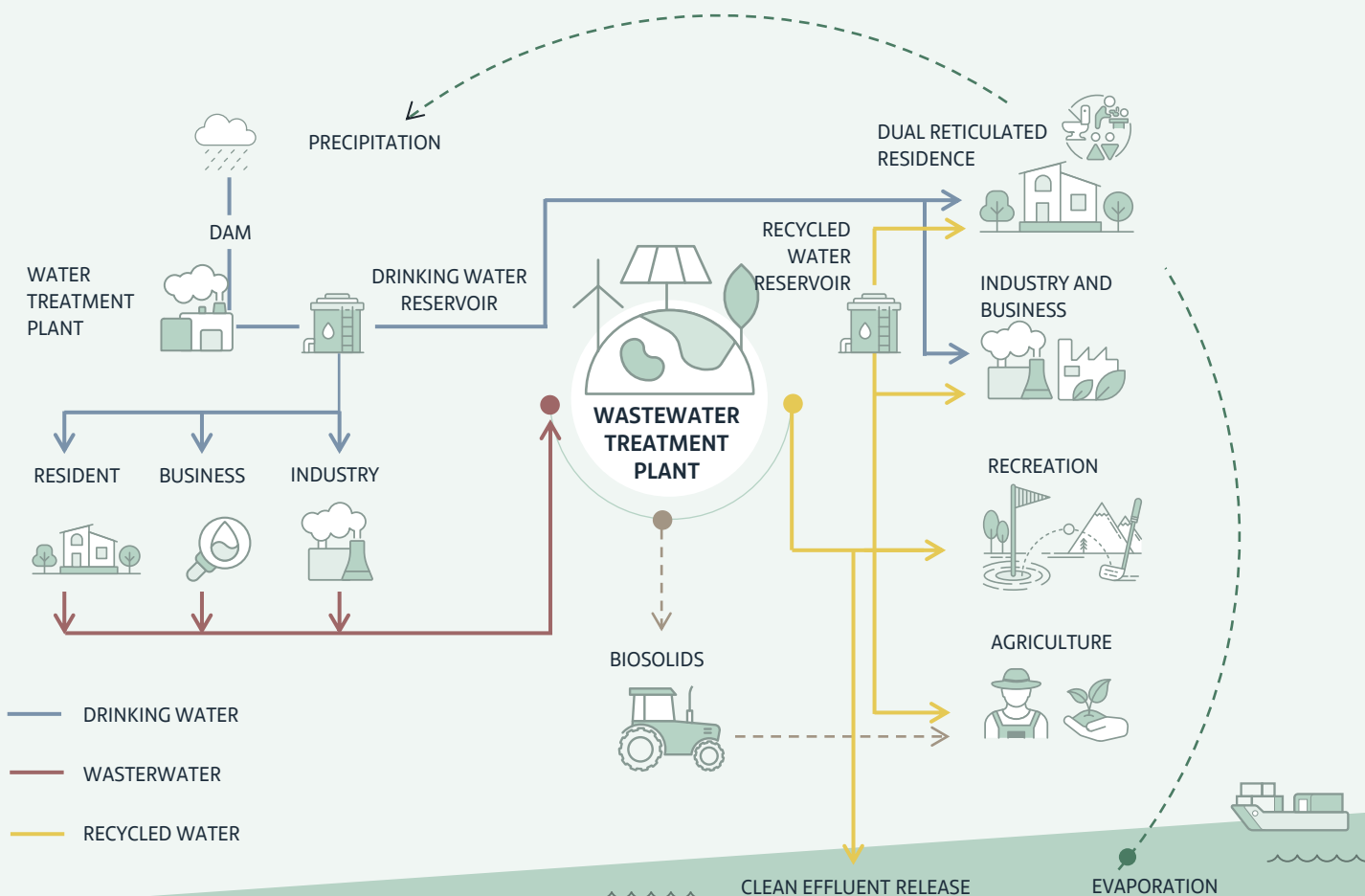
However, investors with sustainability preferences interested in this thematic can still include exposure to water in their portfolios, through **companies operating along the water value chain, including infrastructure, sanitation, reuse, and efficiency solutions**. [±]

**Regarding liquid options:** i) equity investments in water utilities, water infrastructure & engineering companies, or corporates on water technology & efficiency solutions. li) water thematic funds or ETFs alongside iii) green/ sustainable bonds focused on water or blue bonds. [±]

**Regarding private markets:** private infrastructure funds for water projects or sustainable agriculture vehicles focused on water could be also solutions for portfolios.

**Figure 8: Water services full cycle**

Source: Eureau





## 5. Blue Innovative solutions

### 5.a. Increasing supply: desalinization

It is the process that **transforms seawater/ brackish water into potable water through reverse osmosis, thermal distillation, or other desalination membranes.**

Main challenges for these technologies are **their high energy consumption and operational costs**, despite modern desalination plants already produce water at less than \$0.50 per cubic meter. [±] Increasing the use of renewables to reduce emissions and AI-driven cost optimization are making desalination more viable for arid regions.

Additionally, by removing salts from water, **desalinization generates a by-product that should be treated correctly.** The **brine** derived from the process can degrade coastal and marine ecosystems unless treated. [±] Innovative solutions around brine propose untapped opportunities in the pharmaceutical, industrial, and ecological fields. [±] According to IEA, over the next 25 years, the amount of energy used in the water sector will more than double (mostly because of desalination). By 2040, these desalination projects will account for 20% of water-related electricity demand. [±]

On the bright side, it is **one of the most scalable ways to expand water supply** in arid and coastal regions [±]. Several countries, such as the Maldives, Malta and the Bahamas, already meet most of their water needs through desalination processes [±].



### 5.b. Reducing demand: smart irrigation in agriculture

Technologies and practices that optimize water use in agriculture - the largest water intensive sector, could make a significant impact on reducing demand tensions in the future.

Smart agriculture includes **drip irrigation- precision irrigation optimization** [±], or **soil-moisture sensors** [±]. Precision and AI-based irrigation systems are estimated to achieve 30–50% reduction in water use (vs conventional irrigation) and 20–30% improvement in crop productivity. [±]

Prioritizing **drought-resilient crops** in arid areas and leveraging **regenerative farming** benefits would also significantly drop agriculture water demand. [±]

### 5.c. Optimizing the use: water recycling

Water recycling **treats wastewater for both non-potable/potable reuse**, including industrial and agricultural applications, providing local, drought-proof supply. Reclaimed water technologies include **membrane bioreactors** [±], **UV disinfection + advanced oxidation** [±], **industrial water recycling based in circular economy** [±].

Notable projects include Singapore's NEWater initiative, that meets 40% of the city's water demand through recycling [±], or California's direct potable reuse systems. [±] Middle eastern countries like Abu Dhabi recycles daily for treatment c.1 million cubic meters of wastewater, of which c.80% is already being reused aiming to reach 100% reuse by 2026. [±]

In Spain, reclaimed water is widely used in agriculture (61.9%), to irrigate parks, gardens and leisure areas (18%), in industrial processes (17.4%), in sewer cleaning and/or street cleaning (2%) and the recharge of aquifers (0.8%). [±]

Water recycling still faces some negative perception from the public, while it is quite energy intensive process (specially for advanced treatment). It also requires significant investments for infrastructure.

## 6. Conclusions

**Water is a scarce resource**, with profound implications for global stability, economic growth, and social equity. Its inequal distribution among countries can create tensions and conflicts, demand is expected to be significantly higher than the water available in the next decades, while pollution, climate change and biodiversity loss are also stressing its supply. Thus, **it is still undervalued while risks are overlooked**.

**The investment gap to address the upcoming needs derived from water management and sanitation shows that the sector remains underfunded**, with growing opportunities based on innovation, new technologies and data optimization. Investors with sustainability preferences interested in this thematic can increase exposure to water by **incorporating companies along the water management value chain in their portfolios including GSS+ bonds that include water solutions**.

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