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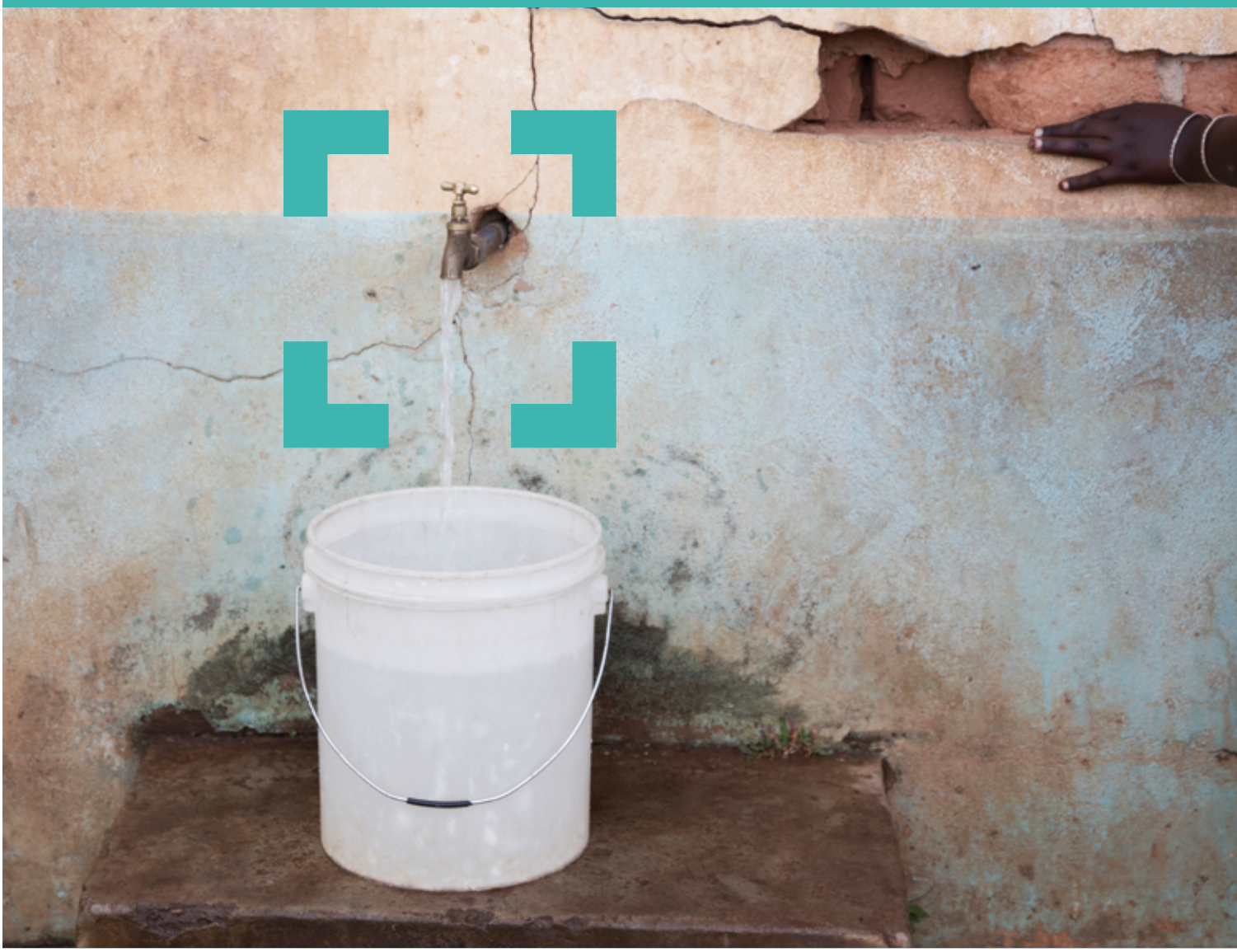
FOCUS

WATER SANITATION

SECTORAL INTERVENTION FRAMEWORK



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FOREWORD

The operational scope of this sector-specific focus for the AFD Group covers access to water and sanitation services, the sustainable management of the resource, and the management of urban flood risks. It does not cover hydro-agricultural or watershed planning, nor hydro-electric infrastructures, which respectively fall under the AFD's "Agriculture – Rural Development – Biodiversity" and "Energy" focus. These issues are nevertheless incorporated into the description of the context, the definition and the implementation of sector-specific policies and integrated water resources management. Lastly, this document does not cover the management of solid waste, which is treated in the "Sustainable Cities" focus.

The geographical perimeter corresponds to the territories where AFD provides its contribution, ie the "All Africa" zone, the emerging regions of the "Americas" and the "Orients", as well as the overseas departments and territories included in the "Three Oceans" zone, which also groups the island territories of the Indian, Pacific and Atlantic oceans.

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Summary

At the heart of the equilibrium of ecosystems and societies, water is an essential factor for biodiversity, food security, health, dignity and peace.

Faced with the combined effects of demographic growth, the evolutions of lifestyles and climate change, the water resource is under pressure, both in terms of availability and quality: nearly 4 billion people today live in zones affected by water scarcity[1] and, on the global scale, 80% of wastewater is released into the natural environment without treatment. Flooding could threaten up to 20% of the world's population in 2050[2]. Reconciling the satisfaction of human and environmental needs and building the resilience of populations thus become major challenges for the 21st century.

Access to quality drinking water and sanitation services is a specific challenge. Although recognised by the United Nations as a human right in 2010, much progress remains to be made: two billion people do not benefit from quality drinking water at home, and nearly one person in two does not have access to suitable sanitation[3]. This lack of access to services is a marker of geographic and social inequality. Every year, it costs the lives of 840,000 people, including 300,000 children, due to diarrheal diseases and its major impact in terms of public health has been highlighted by the Covid-19 pandemic.

In 2015, the adoption by the United Nations of a Sustainable Development Goal dedicated to water and sanitation (SDG 6) constituted both a recognition of the importance of these issues and a real hope. The international mobilisation around climate and biodiversity, of which water is a lever, is also an opportunity. Nevertheless, it must be observed that the sector suffers from a glaring lack of funding to reach its targets due to an often significant deficit of governance.

Expressing France's international strategy for water and sanitation (2020-2030) and the vision of the AFD Group (in particular its ecological and territorial transition strategy), this sectoral intervention framework renews the Group's mobilisation in favour of the water and sanitation sector. It is built around three focuses of action:

- Reducing inequalities of access to water and sanitation: AFD will continue to invest in the development of services, via both collective and decentralised infrastructures. Its action will resolutely focus on the necessary effort to close the gap in terms of sanitation (collection and treatment) and the reduction of geographical and social inequalities (including for the emancipation of girls and women). A specific approach will be developed for crisis and conflict zones;

- Improving governance for efficient and sustainable services: support for sector-specific governance reforms and capacity building for all stakeholders will remain at the heart of AFD's action. This will consist in supporting the implementation of adequate financial and institutional frameworks, the improvement of operators' activities and the development of human capital in order to guarantee the sustainability of infrastructures and the quality of the service provided. Raising the awareness of the populations and their participation will also be considered as keys for change;

- Acting at the territorial level for greater climatic and ecological resilience: with respect to the governance of water resources, the integrated management by basins, which allows the concerted and sustainable distribution among usages, including for transboundary basins, is reaffirmed as a priority to guarantee water security. Flood risk mitigation for the benefit of cities will also be treated at this scale and will emphasise the complementarity among grey and green infrastructures as well as the importance of institutional issues. Finally, AFD's actions will aim to promote the territorial insertion of water and sanitation services: this consists in developing their efficiency, sobriety and contribution to the circular economy as well as to maximise their environmental co-benefits, notably through nature-based solutions.

This sectoral intervention framework is structured around three accelerators: partnerships, in particular with French stakeholders, innovation and knowledge will all provide levers to reach the goals set. They will be deployed in the technical, institutional, social and financial sectors.

[1] *Four billion people facing severe water scarcity* By Mesfin M. Mekonnen, Arjen Y. Hoekstra, Science Advances12 Feb 2016, https://doi.org/10.1126/sciadv.1500323
[2] Data on persons in vulnerable situations, OECD Environmental Outlook to 2050, OECD, 2012.
[3] Progress on household drinking water, sanitation and hygiene 2000-2020. Special focus on inequalities. New York, United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2021.

1. THE OPPORTUNITIES AND CHALLENGES OF THE SECTOR

1.1. Water and sanitation: a public benefit and a human right

1.1.1. WATER, A NATURAL RESOURCE UNDER PRESSURE

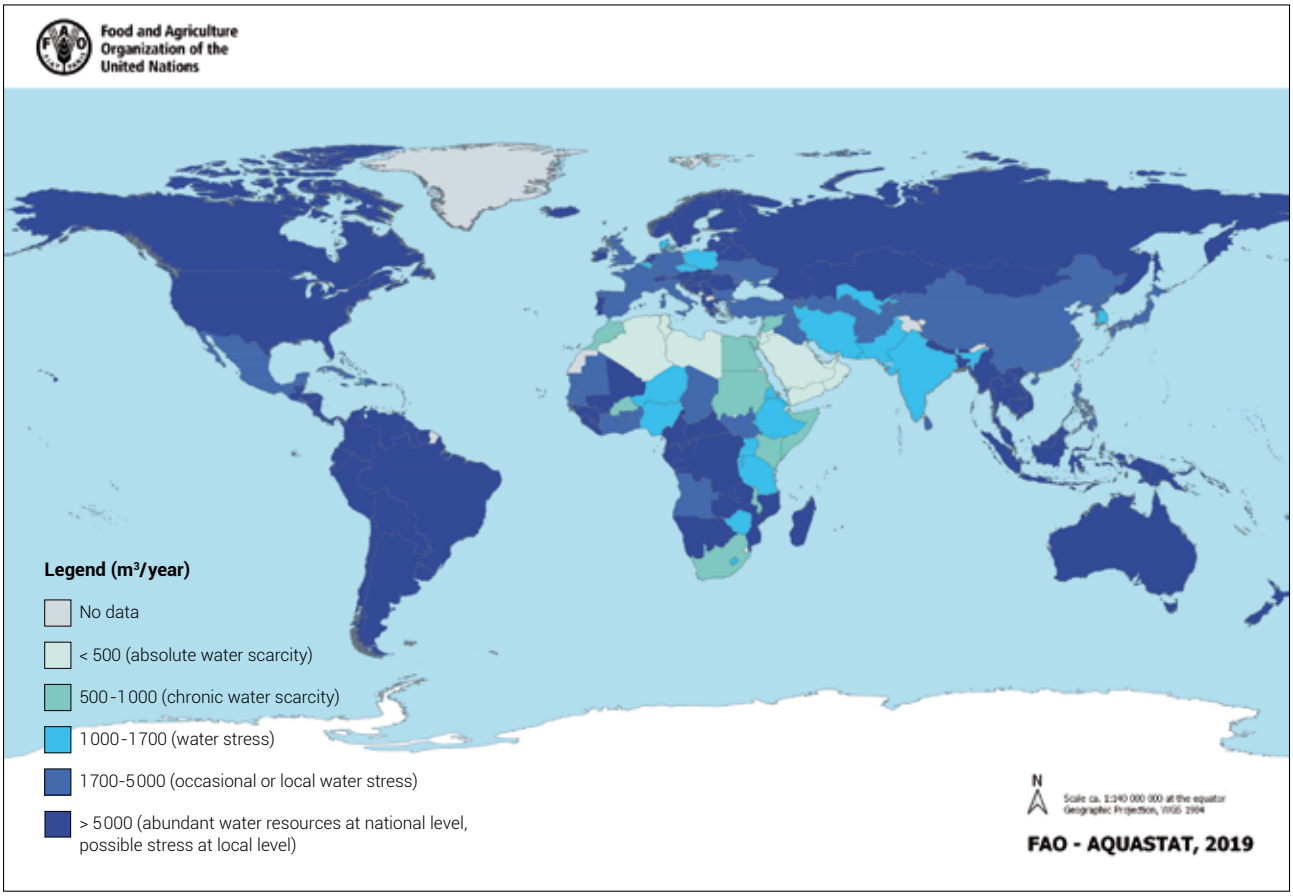
At the heart of the equilibrium of ecosystems, water is by nature a resource that is shared among the environments and species and the various uses of human populations. Climate and social changes seriously disrupt this aquatic balance. Faced with these two interdependent effects, reconciling the satisfaction of the needs of ecosystems with all human needs and the protection of the populations appears as one of the major challenges of this century.

a. The necessary management of increasing scarcity

A the global scale, the use of water for the various agricultural, livestock, industrial and household usages has increased by nearly 1% per year since 1980[4] due to demographic growth, economic development and the evolution of consumption patterns (meat-based diets, industrialisation, etc). On average, 69% of water abstraction is for agriculture, 19% for industry, and 12% for household water consumption[5]. Nevertheless, domestic consumption has undergone the greatest growth, increasing by more than 600% over the last fifty years[6].

The availability of water for all these needs is very unequal according to the region: it varies from 93,000 m³per year per inhabitant to less than 1000 m³ in certain countries[7] and its distribution can vary greatly even within countries themselves.

FIGURE 1 RENEWABLE WATER RESOURCE PER YEAR AND PER PERSON IN M³ (2017)



Source: http://www.fao.org/aquastat

[4] Source AQUASTAT, http://www.fao.org/aquastat
[5] Ibid.
[6] Source WRI https://www.wri.org/our-work/topics/water
[7] http://www.fao.org/3/y4473e/y4473e08.htm#TopOfPage, web page consulted on 02 December 2020.

THE WATER-ENERGY NEXUS

Under the effect of climate change, water and energy interdependence should increase. The water and sanitation sector accounts for 4% of the global electricity consumption[12] and the amount of energy used should more than double by 2040. Among the causes of this increase, the decreasing availability of freshwater resources can lead to greater dependence on energy intensive sources of water supply such as desalination.

Furthermore, the scarcity of water resources will weigh on energy security. It could have an impact on sectors dependent on cooling systems (thermal or nuclear power plants) and on hydroelectricity production.

However, the water-energy nexus also offers some encouraging prospects. Energy optimisation, leakage reduction in the networks or the use of sanitation by-products for biogas production would make it possible to reduce the energy consumption of the water and sanitation sector by 15% by 2040[13]. In addition, while their impact on the environment must be carefully considered, all the hydroelectricity production opportunities are far from having been exploited or even explored. Multi-purpose dams (only 30% of dams today[14]) are an interesting opportunity to improve integrated water resource management: they benefit all uses by often drawing their financing from the higher profitability of the hydroelectric component.

On the whole, this optimisation of the water-energy nexus is an important factor of climate change mitigation and adaptation. It is also a necessary requirement to prepare for the long-term challenges of a post-carbon world, which will imply drastically more energy-efficient infrastructure and more constrained sharing of resources.

Thus, this availability per inhabitant has become inferior to the needs in many regions, placing them in a situation of vulnerability, stress or absolute scarcity. This is particularly the case for a geographical arc that stretches from the western Mediterranean to China, as well as the south-western part of North America, the Pacific coast of South America, and part of southern Africa and Australia. Water abstraction now exceeds over 80% of the available resources in 17 countries, representing nearly a quarter of the world's population[8].

These situations of stress and scarcity will accentuate and multiply with the continuing demographic growth as well as rising temperatures and the modification of rainfall patterns due to climate change. This creates a factor of risk for political tension and destabilisation, or even geopolitical crises when these resources are transboundary, as they are for example in Asia Minor or on the African continent, where transboundary basins occupy 60% of the territory and cover 80% of water needs.

Because it is to be considered as a common asset, ie non-exclusive but a subject of rivalry among users, the water resource must be shared with a guarantee for its social, economic and ecosystemic functions. Establishing joint management on the scale of watersheds and territories thus participates in the strategies of adaptation to the effects of climate change and the construction of more resilient development paths. However, in 2020, only one quarter of the world's nations have implemented the integrated management of water resources at all levels, and barely 22 out of 153 have set up transboundary agreements covering all concerned watersheds[9].

The majority of the levers of action towards more water-efficient models will continue to be found in the agricultural and food sector (modes of production and consumption, irrigation efficiency at constant perimeter, alternative water resources such as the reuse of treated wastewater), especially as this use will continue to grow to meet the needs for food and their globalisation. In the industrial sector, there is also significant scope to save water or to reuse waste-water (in the mining sector in particular). The securing of household use, which is a priority and will lead to the consumption of a greater part[10] in situations of scarcity, will in any case be mostly linked to the optimisation of all uses, especially agricultural. Thus, over a quarter of the world's 500 largest metropolitan areas have been listed as vulnerable to the risk of chronic scarcity by 2050[11], but their number could be halved with an adequate prioritisation of water use.

b. Curbing the degradation of water resources and ecosystems

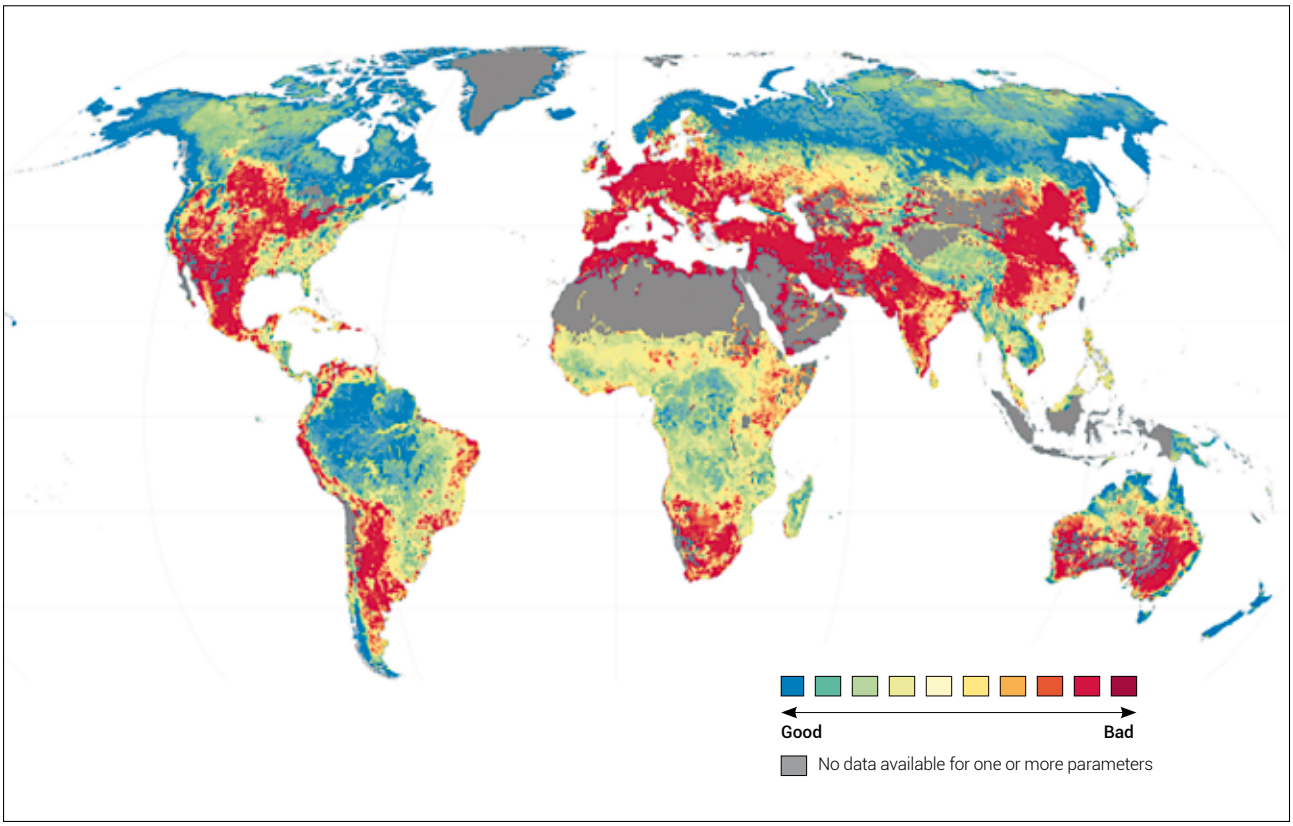
The quality of water resources is deteriorating under the effect of several combined phenomena. Wastewater, whether it be household, agricultural or industrial, carries several types of pollutants: these consist of macro-pollutants (especially organic materials), which lead to the depletion of the dissolved oxygen that is essential to aquatic life and self-purification of the environments, and micro-pollutants, the toxicity of which affects millions of persons and living creatures[15]. At the global scale, it is probable that 80% of this wastewater is discharged into the natural environment without any treatment and this proportion reaches 91% in low-income countries[16]. This is compounded by

[8] World Resources Institute, 2019, https://www.wri.org/blog/2019/08/17-countries-home-one-quarter-world-population-face-extremely-high-water-stress
[9] UN-Water, 2020: Summary Progress Update 2021 – SDG 6 – water and sanitation for all. Version: 1 March 2021. Geneva, Switzerland
[10] Household consumption increased by more than 600% between 1960 and 2014, Betsy Otto and Leah Schleifer, *Domestic Water Use Grew 600% Over the Past 50 Years*, World Resource Institute, February 2020.
[11] Flörke, M., Schneider, C. & McDonald, R.I. Water competition between cities and agriculture driven by climate change and urban growth. *Nature Sustainability*, 51–58 (2018), https://doi.org/10.1038/s41893-017-0006-8
[12] Water Energy Nexus, Excerpt from the World Energy Outlook 2016, International Energy Agency.
[13] Ibid.
[14] Policy Perspectives, Multi-Purpose Water Infrastructure, OECD, October 2017.
[15] Heavy metals, solvents, pharmaceutical residues or microplastics belong to the category of micropollutants that are a source of new health risks.
[16] WWAP (World Water Assessment Programme). 2017. The United Nations World Water Development Report 2017. Wastewater – The untapped resource. Paris, UNESCO, 2017.

significant diffuse pollution caused by the use of fertilisers and pesticides in agriculture, with the same effects. Some of these effects (like the proliferation of pathogens) are also reinforced by the rising water temperature related to climate change. Deforestation and the deterioration and artificialisation of the soil lead to the increased transport of mineral pollutants in water bodies. Excessive groundwater abstraction causes their salinisation, notably through seawater intrusion in coastal areas.

Thus, the proportion of water bodies that are unfit for both human consumption and the sustainability of living organisms are increasing considerably. Since 1970, the populations of freshwater animals (amphibians, reptiles and fish, in particular) have on average decreased by 84% (ie 4% per year)[17] and oxygen-depleted sites located in coastal areas (including estuaries) have multiplied tenfold since 1950[18].

FIGURE 2 OVERALL WATER QUALITY ACCORDING TO THREE COMBINED CRITERIA (NITROGEN, WATER SALINITY AND BIOCHEMICAL OXYGEN DEMAND) FOR THE 2000-2010 PERIOD



Source: World Bank and Le Monde infographics.

As for the quantitative aspects, this deterioration of the quality of water resources and ecosystems calls for a substantial evolution of agricultural models and land use, as well as the modes of industrial production. Expanding the treatment of domestic, agricultural and industrial wastewater is also an essential element.

c. Dealing with increased flood risk

For nearly three decades, natural catastrophes caused by climate-related hazards (drought, cyclones, torrential flooding, coastal submergence, rainfall) have generated 90% of the estimated damage[19]. It is expected that, due to climate change and its consequences on hydrological patterns, their frequency and intensity will increase. In terms of flooding, a destructive cocktail combines increased risk with growing vulnerability due to urbanisation and its effects,

[17] The Freshwater Living Planet Index 2020, Living Planet Report 2020 WWF, https://www.wwf.fr/sites/default/files/doc-2020-09/20200910_Synthese_Rapport-Planete-Vivante-2020_WWF-min.pdf
[18] Breitburg, D. *et al.* Declining oxygen in the global ocean and coastal waters, Science, 4 January 2018.
[19] *The human cost of weather* related disasters, UN Report, November 2015.

such as land artificialisation and the occupation of flood-prone areas. They already form one of the most damaging natural catastrophes in terms of material damage and, to a lesser extent, of human lives due to both their frequency and the displacement of populations and the economic losses they cause. The OECD considers that they could threaten up to 20%[20] of the world's population and USD 45,000 billion of assets, with particularly high risks in South Asia. By contaminating water resources and destroying infrastructures, floods also create an additional challenge to the sustainable access to water and sanitation.

In this context, developing the resilience of populations in terms of flooding implies building a capacity to respond to these catastrophes and especially to rethink land occupation in order to reduce the vulnerability of populations and assets. Doing so involves drawing on the knowledge of risks and reconnecting human installations with their environments in order to benefit from the protective ecosystem services they provide.

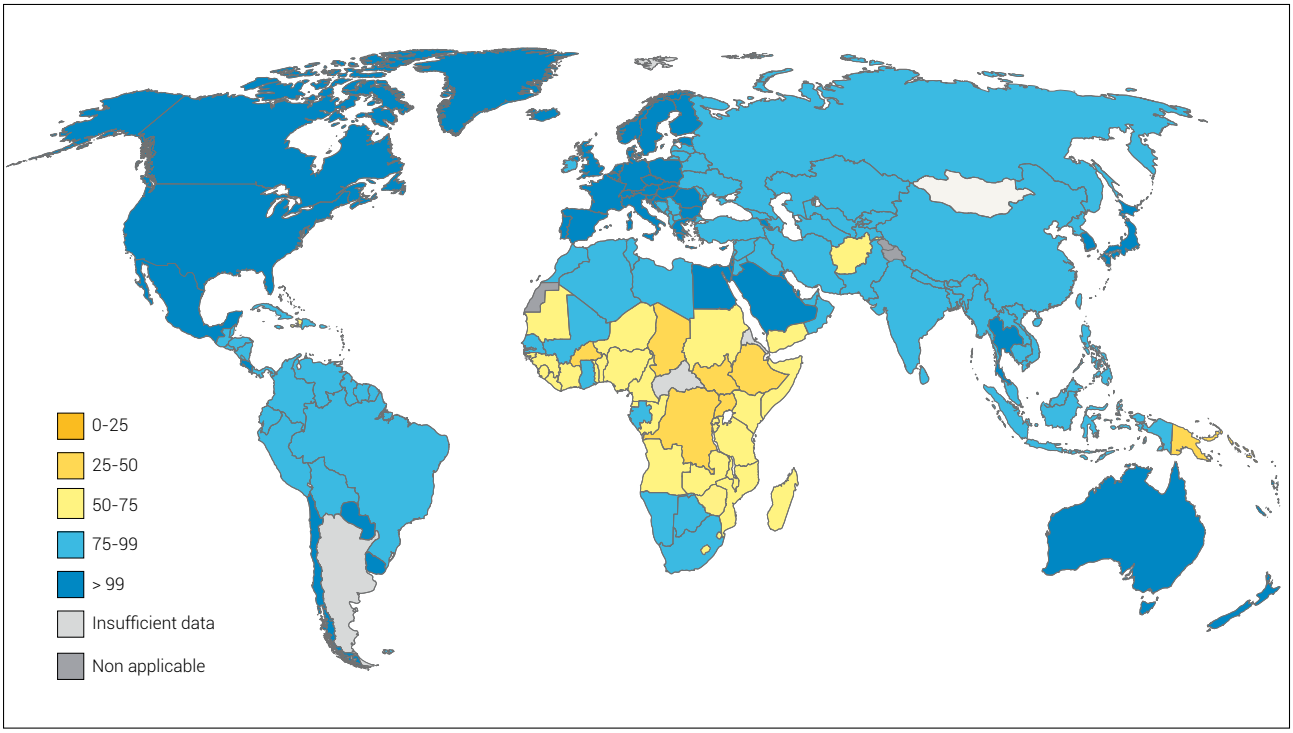
1.1.2. WATER AND SANITATION: A VITAL NEED FOR POPULATIONS

In 2010, the United Nations recognised access to drinking water and health as a "fundamental right, essential to the full enjoyment of life and all Human rights"[21]. The full application of this right implies services that are available, accessible, safe, acceptable and affordable, without discrimination. It is a factor of dignity and good health for each person, as well as a condition for the emancipation of all.

a. An unequally satisfied right

Despite major progress within the framework of the Millennium Development Goals (MDG)[22], 1 person in 10 still did not have access to a basic service[23] in 2020. Two billion people did not have a safely managed water service, ie one that is accessible at home with sufficient quality and quantity.

FIGURE 3 PERCENTAGE OF THE POPULATION USING AT LEAST BASIC DRINKING WATER SUPPLY SERVICES, 2020

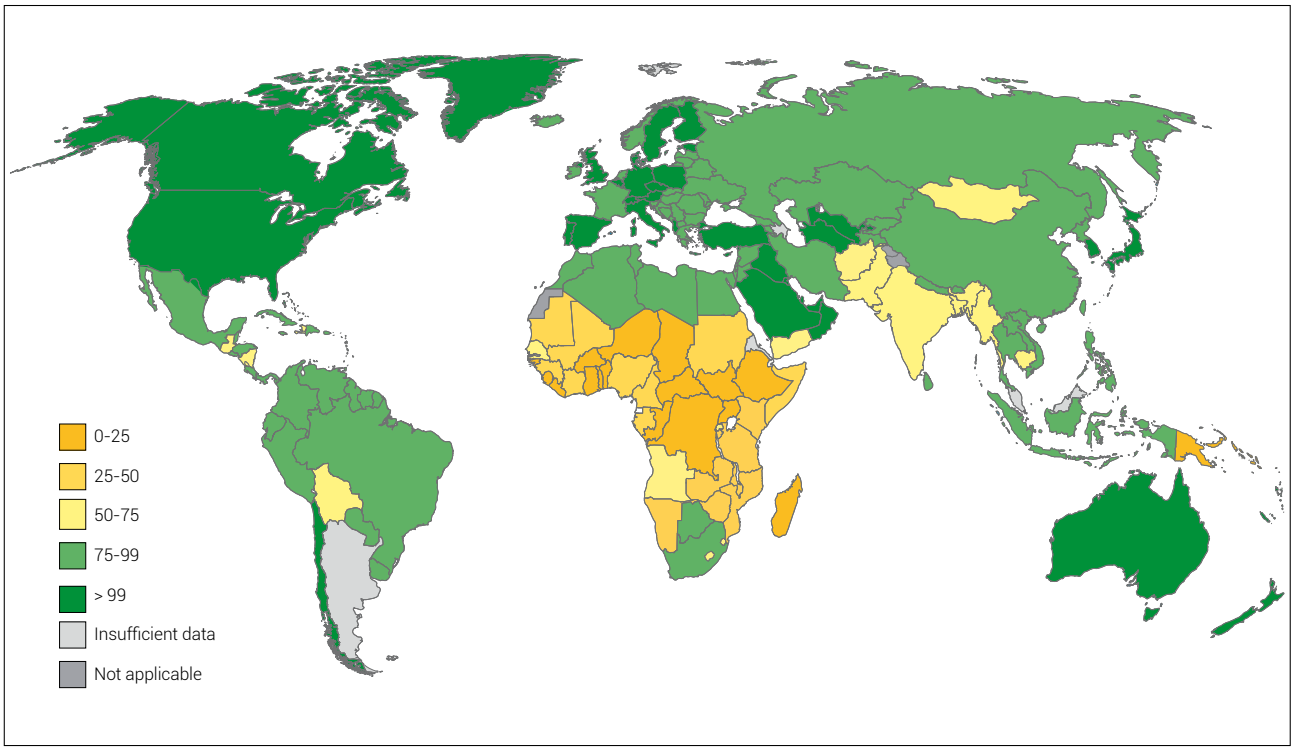


Source: JMP[24]

[20] Data on persons in vulnerable situations, OECD Environmental Outlook to 2050, OECD, 2012.
[21] Resolution of the United Nations General Assembly dated 28 July 2010.
[22] 2.6 billion people gained access to a basic water service between 1990 and 2015 and the water MDG (which aimed at halving the proportion of the world's population lacking access to an improved water source) was achieved in 2010, Progress on sanitation and drinking water: 2015 update and MDG assessment, UNICEF and World Health Organization, 2015.
[23] A basic water service corresponds to access to an improved waterpoint, that is: (i) which, by the nature of its construction, adequately protects from outside contamination, particularly faecal matter (individual connection to the network, public tap, borehole, protected well or spring, rainwater harvesting) and (ii) with an accessibility criterion (within a 30-minute round trip, including waiting time).
[24] Progress on household drinking water, sanitation and hygiene 2000-2020. Special focus on inequalities. New York, United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2021.

As for sanitation, the situation is even more worrying and calls for an effort to close the gap. The MDG has not been met and 2 persons in 10 still did not benefit from a basic service (improved toilets)[25] in 2020. 494 million persons had no alternative to open-air defecation. If we look at the entire sanitation sector, nearly one half of the world's population does not benefit from safely managed sanitation services, ie consisting of non-shared sanitary installations associated with the treatment of excreta.

FIGURE 4 PERCENTAGE OF THE POPULATION RELYING ON AT LEAST BASIC SANITATION SERVICES, 2020



Source: JMP[26]

Access to water and sanitation is a marker of inequalities: firstly, among the world's regions with particularly low indicators in Sub-Saharan Africa[27]; among urban and rural zones, to the disadvantage of the latter28; and within the same city or territory, with rates of access for the poorest populations that are lower and progress more slowly.

The burden of the lack of access to water and sanitation infrastructures weighs more heavily on women and girls. It is mainly they who fetch water[29], limiting their available time for other social or economic activities. Open-air defe-cation and the absence of toilets (at home, in schools and health centres) are factors of school absenteeism and expose people to risks of harassment and aggression. The satisfactory management of menstrual hygiene is only possible with adequate access to water and sanitation. The lack of water, sanitation and hygiene is, generally speaking, a specific factor of illness for women and girls, especially in terms of maternal health[30]. Finally, the management of the resource or services often leaves little room for women's voices to be heard[31].

[25] The MDG global target for water and sanitation, which aimed at halving the proportion of the population without access to improved sanitation showed a deficit of nearly 700 million people in 2015. A basic sanitation service corresponds to an improved system, that is, one that ensures hygienic separation of human excreta (flush lavatories, pit latrines with a slab, ventilated latrine, dry latrine with compost, etc.). Shared and public installations are not considered as improved.

[26] Progress on household drinking water, sanitation and hygiene 2000-2020. Special focus on inequalities. New York, United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2021.

[27] 70% of the population of Sub-Saharan Africa has no access to a safely managed service for water and 82% for sanitation.

[28] 86% of the population in urban areas compared with 60% in rural areas has access to safely managed water services across all regions of the world; the rate of open air defecation is 1% in urban areas compared with 13% in rural areas.

[29] This chore represents each day 200 million hours, or over 22,000 years, UNICEF, Sanjay Wijesekera, 29 August 2016, https://www.unicef.org/media/media_92690.html

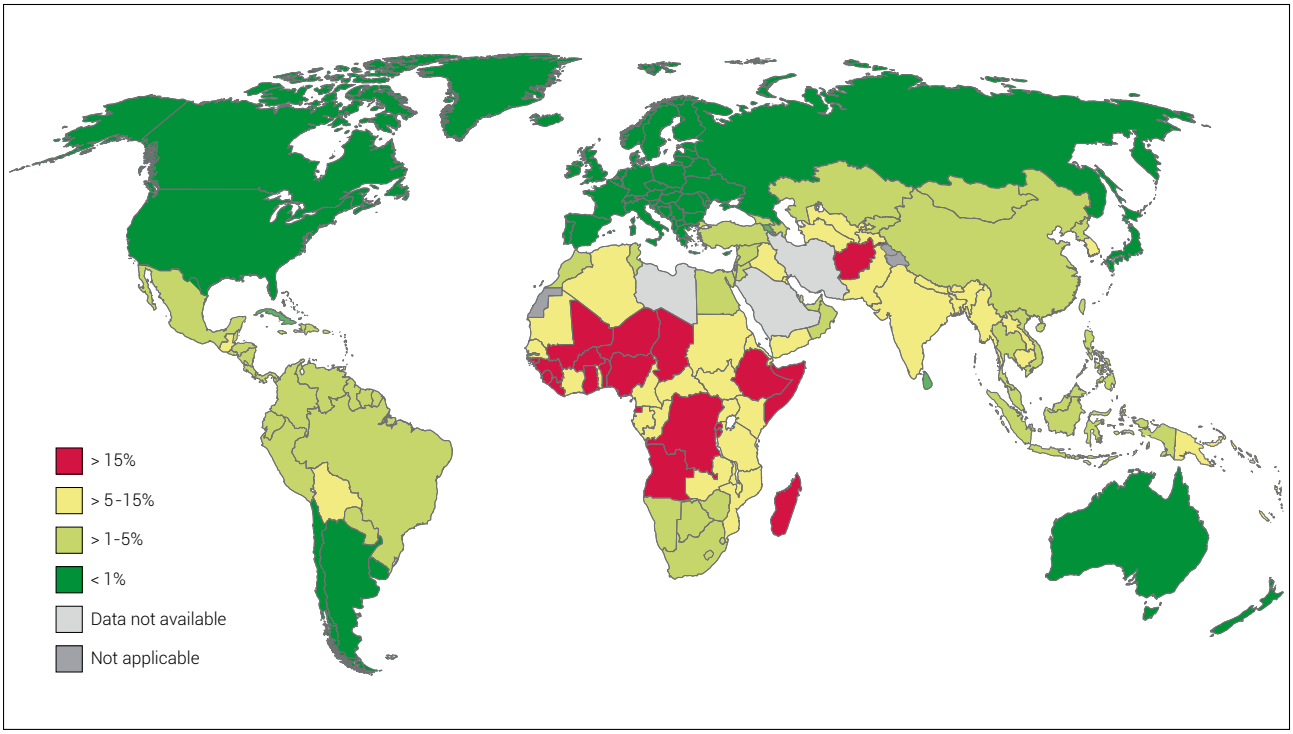
[30] It is estimated that 15% of maternal deaths occur due to poor hygiene conditions; WHO Water, Sanitation and Hygiene Strategy 2018-2025. Geneva: World Health Organization, 2018.

[31] Women in Water Utilities: Breaking Barriers – World Bank, 2019.

b. Responding to a major public health challenge

The consumption of contaminated water and insufficient conditions of hygiene and cleanliness are causes of serious waterborne diseases (cholera, typhoid, dysentery, A and E hepatitis, malaria, dengue, scabies, etc). Despite a significant decrease in the last twenty years, 840,000 deaths[32] (including 300,000 children[33] under the age of 5) are still recorded every year due to diarrhoea-related diseases linked to conditions of water supply, sanitation and hygiene. Insufficient access to quality services is also one of the underlying causes of malnutrition and remedying this is an important lever for the improvement of nutritional status

FIGURE 5 PPERCENTAGE OF DEATHS DUE TO AN ILLNESS OR INJURY RELATED TO INSUFFICIENT WATER, HYGIENE AND SANITATION SERVICES



Source: Prüss-Ustün, *et al* (2008) – 2012 GLAAS Report.

Because the bacteriological quality of water often deteriorates between where it is abstracted and where it is consumed, household connection and the continuity of service reduce the risk of diarrhoeal morbidity. The same applies to access to sanitation and handwashing[34]. These observations point towards a raised ambition with respect to the quality of the service offered to the populations.

Already very high, the incidence of all waterborne diseases is aggravated by the rising temperatures caused by climate change (which could cause nearly 250,000 additional deaths per year between 2030 and 2050[35]). In many contexts, developing access to quality services is thus an aspect of the adaptation to the effects of climate disruption.

If the absence of water and sanitation is a problem at home, it is just as significant in schools and health establishments. For example, one quarter of health establishments in 2016[36] and 31% of schools in 2019 did not have basic drinking water services. Here too, there are glaring geographical inequalities, with particularly low levels in least developed countries[37]. Building links between water and sanitation policies with those of health and education also appears as a necessity.

[32] Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries, Geneva: World Health Organization, 2014.
[33] World Health Organization webpage, https://www.who.int/fr/news-room/fact-sheets/detail/diarrhoeal-disease, consulted in 1st December 2020.
[34] Diarrhoeal morbidity risk is reduced by 75% by home connection and by 36% by the continuity of the service compared to a more basic service; a better coverage rate for sanitation services and handwashing with soap decreases the risk by 25% and 30%. Impact of drinking water, sanitation and handwashing with soap on childhood diarrhoeal disease: updated meta-analysis and meta-regression, J. Wolf *et al.*, https:// doi:10.1111/tmi.13051, Tropical Medicine and International Health, 2018.
[35] https://www.who.int/fr/news-room/fact-sheets/detail/climate-change-and-health
[36] WASH in health care facilities: Global baseline report 2019, World Health Organisation and United Nations Children's Fund (UNICEF), 2019.
[37] The proportion of health care facilities lacking access which reaches 50% for water and 75% for sanitation in Sub-Saharan Africa. In least developed countries, half of the schools have no basic sanitation and water supply services; WASH in health care facilities: Global baseline report 2019, World Health Organisation and United Nations Children's Fund (UNICEF), 2019.

The Covid-19 health crisis has reminded us that efficient water and sanitation services must be considered as an integral part of public health policy. Although it is a key factor for the fight against the pandemic, 29% of the world's population does not have home access to handwashing facilities with soap, which is the first protective measure against the spread of the virus. Moreover, the health crisis has placed water and sanitation operators under pressure in many countries: they have had to deal with additional needs, difficult access to the field and supplies, not to mention the weakening of their economic balance (moratorium on invoices, decreased capacity to pay, etc).

The share of domestic water abstractions representing much less than agricultural uses, inequalities of access to water and health services only slightly correlate with the availability of water resources. Lack of planning and investment in infrastructures as well as deficiencies in technical and financial management of these services are more common explanations for these inequalities. They imply specific efforts in the most poorly served geographical zones, for the most disadvantaged populations and in order to bridge the gaps, notably in terms of sanitation.

1.2. **Ambitious but difficult to achieve international commitments**

1.2.1. WATER AND SANITATION AT THE HEART OF THE SDGS

In 2015, the United Nations adopted 17 Strategic Development Goals (SDG) for the 2015-2030 period, thus establishing for the first time a universal and integrated vision of the Sustainable Development Agenda. Water and sanitation are among these 17 priorities, via goal 6, which aims to "Ensure access to water and sanitation for all and implement the sustainable management of water resources". This goal breaks down into 8 targets and 11 indicators (see appendix 1).

In accordance with the human right to water and sanitation, SDG 6 demonstrates a strong renewal of the ambition of the international community: while the Millennium Development Goals (MDG) aimed to halve the part of the population without access to a basic service[38], the focus now is to ensure a quality service, ie one that is safely managed, for the entire population, including the most vunerable[39]. Moreover, the SDG encompasses the entire water cycle, emphasising the necessity for the optimised and sustainable management of the resource, from both a quantitative and qualitative point of view, including on the transboundary scale.

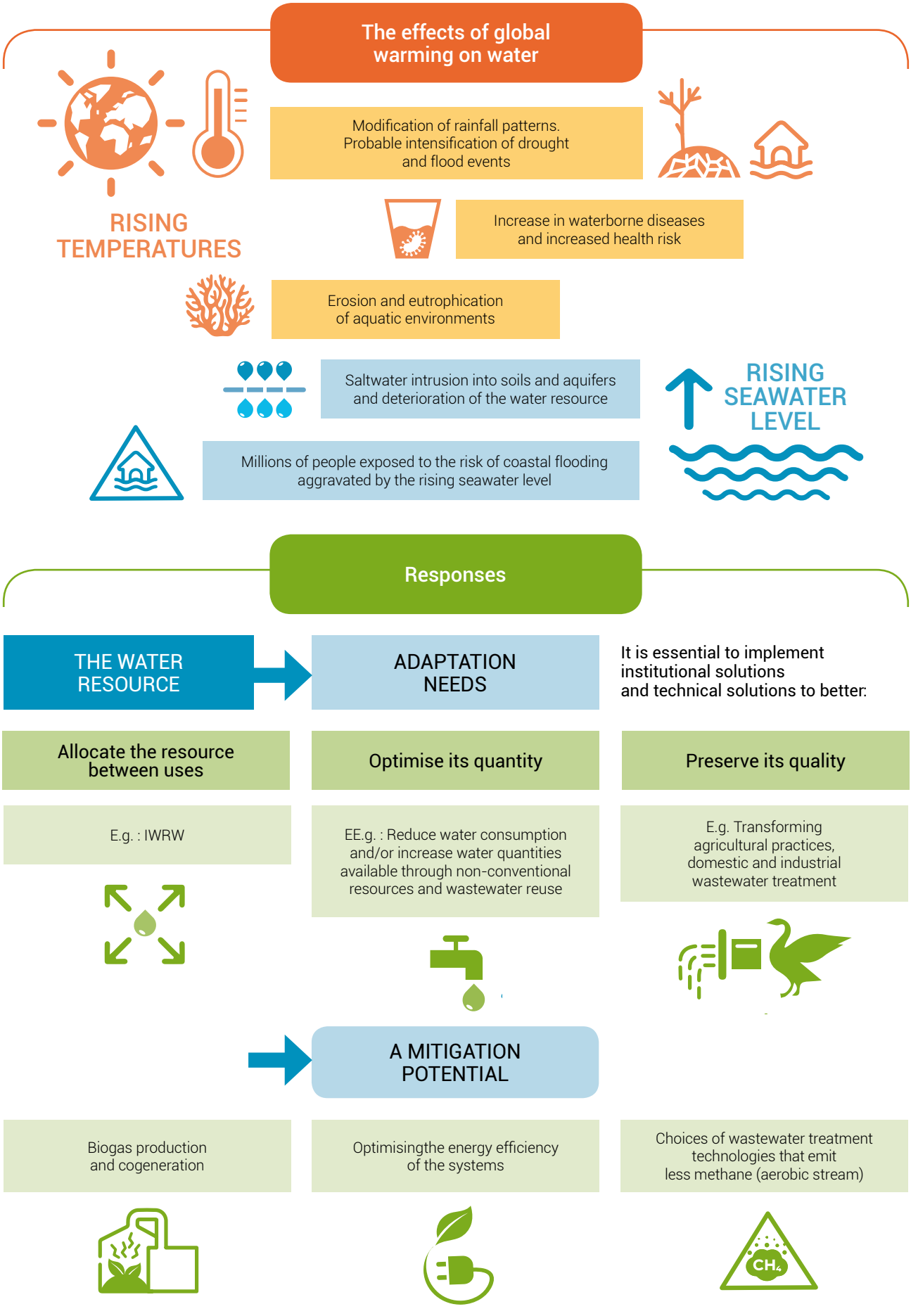
Transversal by nature, the issues related to water and sanitation participate in reaching the 17 goals of the 2030 Agenda (see appendix 2) and are explicitly included in many targets of other SDGs, such as SDG 3 concerning good health and well-being, SDG 13 concerning the measures to combat climate change, and SDG 14 and 15 concerning the conservation of aquatic and terrestrial life. These issues are also important to meet SDG 5 on gender equality, SGD 4 concerning quality education, SDG 11 related to sustainable cities and communities and SDG 10, which concerns the reduction of inequalities.

1.2.2. CLIMATE AND BIODIVERSITY AGREEMENTS

Acting in favour of SDG 6 also means contributing to the fulfilment of the goals of the Paris Climate Agreement adopted in 2015. Indeed, water is closely related to climate change (see figure 6). Through each component of its cycle, it is one of the main vectors by which it impacts societies and ecosystems. With rising temperatures come (i) rising ocean levels and the intensification of the water cycle, which increases flood risks, (ii) an increase in evapotranspiration and the disappearance of glaciers, which accentuates drought, and (iii) the proliferation of pathogenic agents, which increases the incidence of waterborne diseases. The fact that the evolutions of rainfall patterns are more difficult to predict forces us to reconsider the methods and infrastructures for mobilising water resources and mitigating flood risks. Water is thus clearly identified as a major issue in 91% of the adaptation actions[40] of the nationally determined contributions (NDC). Since 2011, it has represented 43% of the funding for climate change adaptation but only counts for 3% of total climate funding due to the imbalance of the latter in favour of mitigation. Although more limited, sector contributions to mitigation nevertheless do exist (avoidance of methane emissions, biogas production and cogeneration, the energy optimisation of systems).

[38] Drinking water from an improved source with a collection time within a 30-minute round trip, including queuing.
[39] Drinking water from an improved source on premises and available in case of need, free of faecal matter contamination (and chemicals of priority interest).
[40] 83% of the 162 contributions determined at national level include an adaptation component.

FIGURE 6 WATER AND CLIMATE INTERDEPENDENCE



The water and sanitation sector contributes to the goals of the United Nations Convention on biological diversity set in Aichi in 2010, through the optimisation of usages in order to limit the overexploitation of resources, the beneficial impact of wastewater treatment on aquatic environments and the protection of watersheds.

Finally, acting towards the prevention of floods and droughts, both via better knowledge of the hazards and by a reduction of vulnerabilities, greatly contributes to the goals of the Sendai framework for disaster risk reduction (2015-2030).

1.2.3. GOALS THAT WILL REMAIN OUT OF REACH WITHOUT RENEWED MOBILISATION

a. Significant financial needs

The road is still long to meet all water and sanitation targets of the International Agenda for 2030. The amount of the investment required for universal access to a safely managed service is estimated at USD 200 billion/year[41], ie 0.55% of world GDP (1.6% of GDP in Sub-Saharan Africa and 0.9% in North Africa and the Middle East). In terms of infrastructure in Africa, the sector is the one with the greatest lack of funding[42].

Even if estimates differ among studies, it would require at least doubling the current level of investment. Operation and maintenance costs should be added to these amounts, they represent at least the equivalent of investment expenditure[43].

With respect to watershed protection, investments would have to be quadrupled within the next 10 years[44].

Whilst the costs of investment to reach universal access to water and sanitation as well as sustainable resource management are high, the cost of non-investment is even higher. Environmental deterioration and pressure on the water resource would, for example, threaten 45% of global GDP by 2050[46].

THE SOURCES OF FUNDING FOR THE SECTOR

The sector's funding relies on three sources, often called the "3 Ts":

• The tariffs encompass all the contributions directly paid or invested by the users of water, hygiene and sanitation services. Their share in the sector's funding is particularly significant in contexts where collective infrastructure is poorly developed;

• The taxes are the funds from domestic taxation, whether national or local. They account for two thirds of the volumes mobilised for the sector outside tariffs[45];

• The transfers correspond to the contributions of the international community (donations or elements including loans) such as the funds provided by international funding agencies or NGO projects. The official development assistance dedicated to the sector accounts for a negligible share of the needs, amounting to almost USD 10 billion in 2019 and 6.15% of the total ODA, all sectors combined.

There are other sources of funding in some contexts, such as equalisation from other sectors such as electricity or added land value capture tools.

Whereas the weight of each source of funding is the political choice of each country and relates to the sector's degree of maturity, the "3 Ts" are not fully interchangeable: it is recommended that the tariffs cover *at least* operating and maintenance costs to encourage efficient management. The stability and predictability of the amounts available from these three sources of funding is a major issue to allow for investment planning and the development of repayable forms of funding.

Conversely, the expected economic benefits of these investments are considerable: although the transversal nature of water and sanitation make precise measurement difficult, several studies converge towards an estimation of USD 4 for every USD 1 invested in water and sanitation services47. Households are among the main beneficiaries, through a decrease in health expenditure, a higher school enrolment rate, time savings and better productivity[48].

[41] Rozenberg, Julie; Fay, Marianne. 2019. Beyond the Gap : How Countries Can Afford the Infrastructure They Need while Protecting the Planet. Sustainable Infrastructure; Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/31291 License: CC BY 3.0 IGO.

[42] In Africa, annual estimates of infrastructure funding needs range from 130 to 170 billion dollars: the water and sanitation sector has the largest funding deficit, with a requirement of 56 to 66 billion dollars and an average 13 billion commitments in 2016-2018; source: Trends in infrastructure financing in Africa, ICA, 2018.

[43] https://openknowledge.worldbank.org/bitstream/handle/10986/31291/33267_Policy_Note_2.pdf?sequence=5&isAllowed=y

[44] Watershed funding flows should be increased by 27 to 104-138 billion USD annually by 2030; source: Deutz *et al*, 2020, Financing Nature: Closing the global biodiversity financing gap.

[45] GLAAS report 2019.

[46] International Food Policy Research Institute (IFPRI) (n.d.). Project on water futures. Available from http://www.ifpri. org/project/water-futures.

[47] *Guy Hutton Global costs and benefits of drinking-water and sanitation interventions to reach the MDG target and universal coverage* OMS, 2012.

[48] Global costs and benefits of drinking-water and sanitation interventions to reach the MDG target and universal coverage, Hutton, 2012; OMS.

b. The deficit of governance as an inhibitor to investment

How can we explain the lack of funding for a sector whose utility and positive externalities are not in doubt? The persistence of deficient governance and the lack of performance in many countries undeniably participate in this paradox. In the absence of a clear institutional structure, a suitable regulation framework, a robust financial model and stakeholders with sufficient capacities available, it is not possible to operate, maintain and renew infrastructures to provide and expand quality services. The risks of investing increase (lack of sustained impact, low profitability, etc) for public funders and *a fortiori* for private financiers, for whom the sector lacks attractiveness (notably due to a delayed return on investment). For example, in least developed and middle income countries, it has been estimated that only 15% of operators (out of a total of 700)[49] reach a sufficient level of profitability to be able to qualify for loans from commercial banks. Private funding (debt or capital) for the sector remains marginal: 5 to 10% of private infrastructure investment[50] is devoted to water and sanitation, as is only 1.36% of the commercial finance[51] mobilised thanks to development funding between 2012 and 2017.

Creating effective and sustainable conditions for investment thus implies strong political will to improve the governance framework and in particular to ensure cost recovery. Official Development Assistance stakeholders have an important role to play in these dynamics by engaging in dialogue over public policy and by providing resources to reinforce stakeholders' capacities. Moreover, it is a question of (i) targeting these transfers on actions whose profitability is too remote to interest commercial finance and (ii) positioning them as a lever to address the deficiencies of the market and to mobilise all available sources of funding.

1.3. The French international commitment to the water and sanitation sector

1.3.1. ASSESSMENT OF AFD'S WATER AND SANITATION ACTION BETWEEN 2014 AND 2019

Initially planned for the 2014-2018 period, the period of application of the Sectoral Intervention Framework was extended to 2019.

a. Annual commitments

On average, the AFD committed €1 billion per year between 2014 and 2019 in the water and sanitation sector, thus going well beyond the target of €750 million set under the previous intervention framework. Annual commitments doubled over this period, going from €632 million in 2014 to €1.3 billion in 2019. This growth reflects the activity of the AFD in all sectors combined (the Group's yearly commitments went from €8 billion in 2014 to €14 billion in 2019). Thus, the water and sanitation sector aggregates 10% of the commitments of the AFD group over this period.

In total, loans represented 85% of the funding granted by volume. The average annual amount of subsidies is €155 million, ie 15% (which is higher than the target of 10% provided for in the 2014-19 framework). This average of subsidies was pushed upwards by very high amounts in 2019 (€425 million), which is partially explained by the increase in allocations to AFD by the French state and, on the other hand, by a large volume of subsidies granted by the EU.

Although the regional targets that AFD set itself were met in absolute values over the period, the share of funding devoted to Sub-Saharan Africa grew at a slower pace than in other zones. It reached 40% of average funding, with an annual fluctuation (only 29% in 2019) and a tendency towards erosion , which can be explained by constrained financial tools and weaknesses of project owners. During the 2014-2019 period, the Asia and Middle East zone was the main relay for the growth of the activity with annual commitments multiplied by 5 (from €147 million in 2014 to €757 million in 2019).

[49] Leigland, James, Sophie Trémolet, and John Ikeda. 2016. "Achieving Universal Access to Water and Sanitation by 2030: The Role of Blended Finance." World Bank, Washington, DC

[50] Alaerts, G.J. Financing for Water—Water for Financing: A Global Review of Policy and Practice. *Sustainability* 2019, 11, 821. https://doi.org/10.3390/su11030821

[51] OCDE (2019), *Making Blended Finance Work for Water and Sanitation: Unlocking Commercial Finance for SDG 6*, OECD Studies on Water, OECD Publications, Paris, https://doi.org/10.1787/5efc8950-en

b. Focuses of action

The 2014-2019 water and sanitation intervention framework was structured around four focuses of action:

- The first focus placed high priority on sector-specific governance: it was implemented in 41% of the projects and represented 6% of the volumes of funding;
- The preservation of the water resource, which constituted the second focus, represented 11% of new funding through (i) actions to support the implementation of a management framework for this resource and (ii) wastewater treatment.
- Access for all to efficient and sustainable services, the third focus and the main pillar of AFD-funded projects, counted for 76% of financing approvals.
- Flood risk management, a new priority that forms the fourth focus, represented 7% of funding, with substantial growth in the volumes allocated (€90 million in 2019 compared with €55 million in 2014).

c. Impacts

The new funding granted by AFD between 2014 and 2019 will enable a total of 70 million people to benefit from an improvement in their drinking water and/or sanitation services. It is also planned to raise hygiene awareness for 8 million people as well as the installation of a capacity of 3.7 million m^3/day for drinking water production and 4.6 million population equivalent for wastewater treatment.

During the 2014-2019 period, the projects implemented have had an effective impact on the improvement of services for a total of 22 million people. Hygiene awareness campaigns reached 2.8 million people. An aggregated capacity of 1.7 million m^3/day for drinking water production and 1.4 million population equivalent for wastewater treatment was built or rehabilitated.

d. Thematic goals

AFD had set a goal to devote one third of its new funding to sanitation. Progressive growth made it possible to reach an average of 28% of the funding over the period, mainly in the Mediterranean area and Asia.

In order to improve the performance of services, capacity strengthening was defined in the 2014-2019 intervention framework as an integral tool for action complementing infrastructure funding. It was planned for 80% of the projects to implement activities in this field, and the target was largely met (91%).

50% of the annual funding authorised during the 2014-2019 period generated a climate co-benefit. The sector is one of the major contributors to AFD adaptation funding: it represented 46% of the Group's funding commitments in this area.

In terms of biodiversity, the water and, above all, the sanitation sector, with an average annual contribution of €94 million over the period, represented 29% of the AFD Group's biodiversity commitments.

Regarding gender equality, on average 51% of the projects funded planned for a positive impact (for a target of 50%).

Finally, the water and sanitation sector presents a very high percentage of AFD funded contracts awarded to French companies, both in proportion and in volume.

1.3.2. FRANCE'S INTERNATIONAL WATER AND SANITATION STRATEGY

In accordance with the conclusions of the CICID (Interministerial Committee on International Cooperation and Development), France has developed a new water and sanitation strategy for the 2020-2030 period. It reaffirms the position of this priority sector in French official development assistance and has set two goals for its international action:

(i) universal and equitable access to drinking water, sanitation and hygiene;

(ii) Integrated Water Resources Management (IWRM) at the watershed level.

These goals will be met through the implementation of the following strategic orientations:

1. Improving the governance of the water and sanitation sector, at both the local and the global level;

2. Reinforcing water supply safety for all in the context of growing pressure on the resource and the multiplication of water-related crises;

3. Reinforcing the efficiency of the means and tools by favouring the development of innovative solutions and inclusive funding mechanisms.

This new strategy repositions France's intervention in the field of water and sanitation within the integrated framework of the SDG: it emphasises the transversal nature of the sector as well as its contribution to the issues of food security, health, gender equality, education and economic development. It provides for balancing funding between water and sanitation by 2030 (and thus increasing the part of sanitation to 50%).

It also aims to increase funding, in particular in the form of bilateral grants, for the 19 priority countries for French public aid as well as through increased funding transiting via NGOs in LDCs.

1.3.3. THE GENERAL STRATEGIC FRAMEWORK OF THE AFD GROUP

The 2018-2022 Strategic Orientation Plan (SOP) IV expresses the orientations of the CICID for the AFD group around five commitments: 100% Paris Agreement, 100% Social Link, a 3D (development-diplomacy-defence) approach in crisis zones, priority for non-sovereign stakeholders and a reflex of partnership.

Within the framework of this SOP, AFD's strategic vision can be broken down into six main transitions organised around the 17 SDGs of the 2030 Agenda. The water and sanitation sector is attached to the strategy for the territorial and ecological transition adopted in October 2020. The aim of the latter is to reconcile models of development that preserve nature and which are the least unequal possible while acknowledging the territory as the relevant scale for action.

In order to reflect the importance of biodiversity to reach the goals of the Paris Agreement, AFD has committed to ramping up "climate" solutions that are favourable to biodiversity: by 2025, 30% of its funding with climate co-benefits shall thus be favourable to biodiversity. Moreover, it aims to double its funding with biodiversity co-benefits by 2050 to bring them from €500 million to €1 billion. Finally, it has set orientations for its action in favour of the oceans to which the water and sanitation sector largely contributes (notably through treatment).

2. SECTOR-SPECIFIC STRATEGIC ORIENTATIONS

2.1. **Strategic approach**

The AFD Group has renewed its commitment to contributing to universal access to water and sanitation, to the sustainable management of the resource and to flood prevention in accordance with the ambitions of the SDGs and the obligations set forth in international agreements on climate and biodiversity. It will meet the demands of its partners by seeking to develop solutions that best reconcile the very high social and environmental challenges related to this sector.

AFD thus intends to continue the development of quality services in order to contribute to the realisation of the right to water and sanitation. Its action will resolutely focus on the reduction of multidimensional inequalities in terms of access to services, especially between men and women, and to promote social cohesion. To do so, the complementarity of centralised and decentralised approaches should be sought for, as well as the inclusion of the most disadvantaged populations. The necessary effort to close the gap in terms of sanitation will require a specific proactive approach in this sub-sector.

In parallel to the construction or rehabilitation of infrastructures, the support to sector-specific governance reforms and capacity building for all stakeholders will remain at the heart of its action in order to consolidate effective and sustainable services. It will continue its reflection on the approach to change by recognising the importance of the long term, the need to develop pragmatic and progressive approaches and the use of complementary tools (continuous sector-specific dialogue, funding for technical assistance or equipment, public policy loans, etc).

These efforts to develop services must accompany demographic and urban growth, but it will remain crucial to control the impacts of such growth on water resources over its entire interface with biodiversity and climate change, which is under increasing stress. AFD will develop an approach at the territorial level in order to better align the sector with this essential environmental transition. It will devote reaffirmed attention to the management of the demand and the concerted and sustainable distribution of water resources among all usages, including ecosystemic ones. It will promote investments that limit the carbon and ecological footprint of the services and which contribute to the protection or restoration of drinking water sources and wastewater outlets. For example, the control of losses in drinking water networks, which improves the efficiency of abstraction, will specifically continue to be prioritised. The potential of nature-based solutions or the local recovery of sanitation by-products will be favoured whenever local contexts make this possible.

Thus, the AFD group's water and sanitation sectoral intervention framework, which is the expression of the strategy for territorial and ecological transition, is structured around three focuses of action, which guide the action and are intended to work together, and three accelerators, acting as levers to achieve these strategic ambitions. These focuses and accelerators are summarised below:

LOGICAL INTERVENTION FRAMEWORK

Focuses of action		Accelerators		
Reduce inequalities in access to water and sanitation	• Improve the level of service, in particular for sanitation • Include the most poorly served zones and populations • Reduce gender inequalities • Adapt the solutions in crisis and conflict zones	Partnerships	Innovation	Knowledge
Improve governance for efficient and sustainable services	• Clear and effective sectoral frameworks: a must • Reinforce the virtuous performance cycle for the operators • Develop human capital and raise public awareness			
Act on the territorial scale for more resilience	• Promote management on the basin scale for water security • Improve resilience to flood risk • Reduce the ecological footprint of the sector and reinforce its contribution to the circular economy			

2.2. Focuses of action

FOCUS 1. REDUCE INEQUALITIES IN WATER AND SANITATION ACCESS

1. Improve the level of service, in particular for sanitation

With the adoption of the SDGs, the challenge is to extend access to water but also to offer a high level of "safely managed" service to all. AFD's action aligns with this goal. It will nevertheless continue to fund projects aimed at an elementary level of service in contexts such as rural areas and disadvantaged urban neighbourhoods where this step is desired by the authorities and relevant from a technical and social point of view.

As far as drinking water is concerned, funding will be directed towards the construction, rehabilitation or extension of a wide range of infrastructures: reservoirs and dams (including multi-purpose facilities), groundwater and surface water abstraction, water treatment plants, storage facilities, transfer pipelines and distribution networks in urban areas; wells, boreholes, spring water collection and mini-networks in rural areas and small urban centres. The subject of monitoring the quality of the water abstracted and distributed will be systematically examined within the project framework. It should be noted that bottling solutions and services are not, a priori, considered among the goals of this sectoral intervention framework because they are not drinking water services as such, ie services that meet all the basic individual needs (water for drinking, cooking, hygiene and maintenance). Their insertion and complementarity with the logic of public services could nevertheless be analysed on a case-by-case basis.

Concerning sanitation, the low rate of access to a safely managed service, the impact of this delay on health, hygiene and the environment as well as an often limited demand from countries should lead AFD to devote particular attention to this sub-sector. It will fund, as often as possible and depending on the contexts, sanitation infrastructures at the same time as those for drinking water. It will also fund projects that will be entirely devoted to sanitation. To adapt to the diversity of the situations in the countries where it is active, projects will cover both collective and individual sanitation solutions, emphasising the complementarity of both sub-sector. Master planning including both approaches (zoning) will be systematised.

For collective sanitation, AFD funding will focus on the collection, evacuation and treatment of household and industrial wastewater through the construction, rehabilitation or extension of networks and treatment plants. It will consist in adapting to local issues, whether they be technical, financial, land-related, social or environmental (housing density, quality of the receiving environment, operational capacity, etc) by promoting a logic of progressive equipment, if necessary. Nature-based solutions (reed filters, lagoons in the continuity of wetlands, etc) and those that contribute to the reduction of methane emissions will be favoured whenever found relevant.

Whether they be for rural territories, mid-sized cities or for the fringe neighbourhoods of large cities, on-site sanitation is an adapted and complementary solution to that of collective networks, considering the dispersion of the habitat and the lack of technical and financial capacity to operate complex facilities. To guarantee a level of service that is equivalent to a collective system, AFD will strive to reinforce the entire value chain: the containment of excreta and/or effluents in pits and latrines, the collection and transport, followed by treatment and recovery. On-site sanitation depends on a variety of stakeholders, frequently informal, which are more difficult to fund and regulate in order to ensure the quality and accessibility of the services. AFD will thus focus particular attention on the suitability of the financing tools mobilised, the sustainability of financial arrangements, as well as the strengthening and regulation of the public, private, community and associative stakeholders concerned.

A PARTNERSHIP WITH THE BILL & MELINDA GATES FOUNDATION FOR ON-SITE SANITATION

Since 2016, the Bill and Melinda Gates Foundation (BMGF) and the French Agency for Development (AFD) have come together to form a partnership which covers, for the water and sanitation sector, on-site wastewater treatment in all the components of its value chain. In December 2020, based on work carried out as part of this partnership, AFD provided funding worth €25 million for the on-site wastewater treatment (or autonomous sanitation) project of the Dakar region in Senegal. Implemented by the National Sanitation Office of Senegal, this project will enable i) improved access to toilets and hygiene systems for households and public establishments (schools, health centres, commercial public spaces) by promoting the creation and structuring of a local sanitation service market, ii) the treatment and recovery of faecal sludge by defining a commercialisation strategy for by-products.

Other feasibility studies are also being prepared with funding from the BMGF in Burkina Faso, Niger and Côte d'Ivoire.

Finally, in terms of industrial sanitation, AFD has until now undertaken little action in this area due to, on one hand, the lack of regulatory frameworks for the protection of the water resource and environments ("water police") to foster investment from industrialists and, on the other hand, the fragile economic models and the specific nature of the necessary financial tools. It will nevertheless seek to develop this activity through the support provided to authorities for the definition and application of adapted regulations, and, if possible, infrastructure funding or support for less polluting processes in industrial production.

2. Include the most poorly served zones and populations

Territorial balancing

The equity of access to the water resource and services at the national scale constitutes a major challenge to legitimate public action and to safeguard social cohesion. In accordance with the demands of its partners and the available financial tools, AFD will seek, whenever possible, to balance its action between capital cities, mid-size cities and rural areas.

In rural areas, special attention will be given to (i) the transformation of water services, when the density of the population allows it, to evolve from basic services (based on human-powered pumps) towards safely managed services, (ii) the sustainable and efficient management of these services through adequate modes of operation (which may include delegation to small private operators), and (iii) their regulation. Regarding sanitation, AFD will work to stimulate demand by supporting change management among users (with methods such as Community-led Total Sanitation (CLTS)) and to structure the offer of sanitary equipment.

It is expected that mid-size cities of less than one million inhabitants and informal settlements located on the outskirts of the main cities will absorb 75% of future world urban growth. In these zones that are less well equipped than capital cities (in infrastructures or local skills), the challenges of investment planning and the implementation of sustainable operating solutions must receive special attention.

To maximise the impacts on living conditions, AFD will seek to align its actions with integrated strategies: for example, in areas where malnutrition is a major issue, it will consist in combining actions on water, sanitation, agriculture and health.

Pro-poor mechanisms

Success in serving the most disadvantaged is a condition to meet SDG 6. These persons are indeed subject to a threefold penalty: only slightly or poorly served by formal services, they resort to costly and frequently poor quality informal services. This is why AFD intends to maximise the impact of the projects it funds by including pro-poor mechanisms as much as possible. For this purpose, socio-economic analyses could be undertaken to better target project beneficiaries and secure improved social inclusion.

The upfront cost of network connections or individual equipment (latrines) is often a major obstacle to access these services. The subsidising of network extensions, connections or individual equipment in zones with a low level of profitability could be included in the funding. In this respect, AFD will strive to support the integration of these mechanisms into the price policy of the operators and will in every case seek the structuring of a viable market for the supply of individual equipment. Social engineering expertise will be mobilised and good coordination with the actions of the authorities and donors will be ensured. AFD will also seek to develop the implementation of adapted financial tools (micro-finance, revolving *funds*).

Beyond the connection issue lies the question of paying the water and sanitation bill. The setting up of tariff grids or social measures that are adapted to the population's ability and willingness to pay (social bands, equalisation between categories of users, water cheques, etc) will be supported. The interest of innovative tools to reconcile social needs and cost recovery targets will be examined (meters with decreasing flow rates, prepayment, etc).

Schools and health care facilities

AFD-funded water and sanitation projects will ensure the inclusion of access to schools and care establishments to enable the continuity of service throughout the day. Coordination with the authorities of the health and education sector will be necessary to prioritise the areas to be equipped, the standards applicable to the equipment and the deployment of sustainable maintenance systems. Taking into account their particularities, decentralised infrastructures, such as wastewater treatment facilities of hospitals, could be considered.

3. Reduce gender inequality

The development of water and sanitation services at home, in schools and in care establishments, induces positive impacts on living conditions and on the emancipation of women and girls not only in terms of health, dignity and education, but also for the reduction of gender-based violence. AFD will first seek to document as best possible these impacts in the context of the projects it funds.

It will also aim to maximise the contribution of the sector to the reduction of male-female inequalities through specific actions, including:

- The design of infrastructures adapted to the needs of women and girls, in particular for public toilets, in schools and health centres;
- The definition of gender-sensitive awareness campaigns on hygiene and the uses of water in order to target the messages and adapt implementation arrangements, as well as to integrate specific topics, such as menstrual hygiene;
- The consideration of gender in subsidised connections policies and campaigns;
- The consideration of women's voices in the decision-making process for project implementation, as well as for resource and service management;
- The evolution of the human resources policies of the operators and the implementation of strategies to develop women's access to training and employment opportunities and to promote the development of inclusive working environments.

WATER, SANITATION AND GENDER IN RURAL SCHOOLS AND HEALTH CENTRES IN TOGO

In Togo, in the rural regions of Savanes and Kara which concentrate the poorest populations in the country, AFD provided, in 2020, a €10 million grant to finance the second phase of the PASSCO project: it provides for the installation of 600 human-operated pumps in schools, communities and health centres and the construction of 400 ECOSAN latrine units in schools. The expected impacts of this project for reducing gender inequalities are manifold: reducing the chore of fetching water, maintaining young girls at school, improving maternal and infant health. The project is also designed to promote women's participation in water management and to support the Ministry of Advancement of Women in the deployment of its action on the themes of access to water, sanitation and hygiene.

4. Adapt the solutions for crisis and conflict zones

Many of AFD's zones of operation are today faced with the progressive deterioration of their security contexts (eg the Sahel sub-region) or are in a context of prolonged crises (eg the Middle East). However, water, which is a vital and non-substitutable resource, is both a "source" of crises, when it is combined with factors of tension that can degenerate into conflict, and a "victim" of crises, when it is instrumentalised or targeted by the parties of a conflict. Crisis-related population migrations also lead to the displacement of the needs in terms of access to water and sanitation. An improved sharing of the resource and access to the service thus participates in both the prevention of and exit from the crisis.

Although AFD remains a stakeholder in development rather than humanitarian emergencies, these heterogeneous and volatile contexts force it to rethink its modes of operation. In these zones, more emphasis will be placed on a thorough situation analysis in order to better understand the local dynamics and issues and to align with integrated planning. Water and sanitation actions will materialize in dedicated operations or will be included in broader multi-sectoral projects. They will be designed in a conflict-sensitive way and the "do no harm" approach should be applied in order not to aggravate tensions but rather strengthen cohesion factors. If necessary, the deployment of social engineering actions will be reinforced. AFD will work to mobilise the skills of the field operators (notably international and non-governmental organisations) with good coordination and for the benefit of the national stakeholders. The combination between quick win activities and more long-term structuring actions will be sought. Global approaches including the needs of host, refugee and displaced populations will be privileged as far as possible.

REHABILITATION OF URBAN WATER SYSTEMS IN IRAQ WITH THE ICRC

In Iraq, AFD provided two envelopes of €10 million (in 2017) and then €13 million (in 2021) to the ICRC, for the rehabilitation of drinking water systems in urban centres affected by Daesh occupation and the fighting for their recapture. Beyond emergency actions required to bring essential infrastructure such as pumping and water treatment stations back into operation, this multi-year funding enabled the ICRC to launch in-depth technical, financial and institutional diagnostic studies in view of rebuilding a more sustainable and effective water service. In connection with this funding, a global partnership between AFD and the CICR for interventions in crisis areas was signed in November 2019.

FOCUS 2. IMPROVE GOVERNANCE FOR EFFICIENT AND SUSTAINABLE SERVICES

1. Clear and effective sectoral frameworks: a must

Sector-specific policies, planning and regulations

AFD will provide support for the diagnoses and evaluations of public policies, for the development of a body of legislative and regulatory standards, for the formulation of sector-specific strategies (on technical, social and environmental, economic or financial aspects) and for the definition of the institutional architecture and its implementation.

The clarity and effectiveness of the transfer of skills from the State to other stakeholders (operators, local authorities) is an important issue that will be treated in the context of sector-specific dialogue. The non-sovereign funding that AFD may grant will in turn contribute to the establishment of the autonomy of these stakeholders. Decompartmentalisation and links (coordination of inter-ministerial public policies) with other sectors (health, agriculture, industry, etc), which are often insufficient, must also receive attention.

AFD will finance the development of strategic planning tools such as master plans, which allow, on the national or local level, the transformation of sector-specific strategies into investment plans. It is important that these plans promote investments that correspond to the demand, are financially viable and are linked to adapted institutional plans. They must also align with the more general planning documents of territorial coherence or those of other sectors (local urban planning, etc).

Because these are essential decision-making tools for the authorities, AFD will support the preparation of multi-annual financial models, which define the modalities to cover investment and operating costs through different sources of funding. They will be completed by tariff studies, which enable the reconciliation of social (the population's capacity to pay) and environmental (optimisation of usages) requirements and to balance the costs of the services.

AFD will also finance the improvement of sector-specific regulation systems that enable the definition, control and application of a body of standards and goals. It will notably consist, according to the context, in providing support for (i) the establishment of regulators or their capacity building and (ii) the formalisation and monitoring of contracts (of goals and means in the case of public stakeholders, of the delegation of public service for private players).

Civic dialogue and accountability

As a principle of the human right to water and sanitation and a specific target for SDG 6, civic participation contributes to improving the sustainability and effectiveness of the investments and nourishes more democratic processes for a reinforced social link. In addition to aligning all its funding with the policies and strategies of the authorities, AFD will seek to develop convincing pilots for civic participation at various levels (information, consultation, dialogue and co-decision-making).

Although social evaluations are provided for within the framework of AFD's safeguard policies, the challenge is to go further when the context allows it, in terms of public consultation and the involvement of users in project formulation and implementation (service level, location of standposts, composition and governance of users' associations, etc). These efforts will target rural areas, informal settlements and crisis and conflict zones in priority. The systems that enable the development of transparency with respect to users and to mobilise them in the co-construction of projects, the setting up of participative modes of governance or the civic control of public policies (civil society collective actions, tools for communication and accountability) could also be explored, with due respect to the existing legal framework and by taking advantage of the possibilities provided by digital innovations.

INNOVATION FACILITY FOR NGOS (FISONG) ON CITIZEN PARTICIPATION

Within the framework of the FISONG (Innovation Facility for NGOs), AFD published in 2020 a call for projects on the theme of citizen participation in the water and sanitation sector. This initiative, financed via a €2.5 million grant, aims to support innovative approaches to citizen participation in i) the co-construction and implementation of public policies and ii) the control and regulation of these policies. Four projects were selected, in Senegal, Madagascar, Côte d'Ivoire and Benin. They will be overseen by a monitoring-assessment– capitalisation system, to draw lessons from these experiences and enhance knowledge on citizen participation.

Generally speaking, the fundamental values of the fight against corruption in the sector, ie transparency, accountability, integrity and participation, will be ensured and will be based whenever necessary on the tools of the Water Integrity Network (WIN).

GOVERNANCE IN KENYA WITH THE *WATER INTEGRITY NETWORK* (WIN)

In Kenya, to support a project portfolio of €390 million centred on the development of drinking water services in urban environments, AFD entrusted to the Water Integrity Network (WIN) the undertaking of a governance diagnosis of this sector, in partnership with KEWASNET (local users association) and OECD. Starting with a description of the institutional landscape (framework and stakeholders), policies and practices in terms of accountability and integrity, the analysis aims at anchoring good TAPA (*Transparency, Accountability, Participation, Anti-corruption*) practices in existing regulatory processes, through interviews and workshops. This work began in 2019 and was completed in 2021, and a second phase is under preparation. It could lead on to a pilot programme on the promotion of good TAPA practices in the water sector in Kenya and to a more ambitious regional programme, particularly in Tanzania and Uganda.

2. Reinforce the virtuous performance cycle for the operators

A water and sanitation service is performing well when it meets users' needs in terms of service level (quality, quantity and continuity of the drinking water supply on one hand; continuity of the collection and quality of wastewater treatment on the other hand), and when the financial flows it benefits from ensure its sustainability. Performance is highly variable and difficult to compare among countries and operators. Nevertheless, it is essential to prevent the installation of a vicious cycle: low level of service, weak revenue collection, reluctance to raise rates, increasing financial dependency on taxes and transfers, and under-investment.

In order to ensure that the investments in infrastructures participate in the improvement of performance, AFD will give special attention to the proper sizing of the facilities according to the demand, and to the best technological choices based on the analysis of the life cycle and the operational maturity of the services, favouring the most energy-efficient solutions that consume the fewest chemical products. A balanced definition of the needs for investment will be sought, for example between the increase in production capacities and the rehabilitation of networks in order to reduce losses. Moreover, operations that generate a rapid return on investment and thus an improvement of technical-economic performance will be prioritised (improved metering, sectorisation, renewal and optimisation of pumping, pressure management and targeted network rehabilitations to limit physical losses).

The support provided in terms of the improvement of performance will be based on the definition of progressive approaches that set realistic and attainable goals that result from shared diagnoses and a long-term vision. This implies the strong, high-level involvement of the operators and will concern all their functions, whether they be technical or commercial but also financial and administrative (including human resources). Certain evolutions of the institutional environment may also be necessary. The funded actions will be based on full operational diagnoses and may include the supply of tools and equipment, the definition of modes of organisation and working methods as well as strategic consultancy and knowledge transfer. AFD will not fund the operating costs of the services except in exceptional cases, such as, in a transitory and decreasing way, within the framework of "Design – Build – Operate" contracts. Finally, the definition of plans for the continuity of activity will be considered with respect to the importance of water and sanitation services in times of crisis, including health crises.

THE DOM WATER PLAN

Faced with the recurring difficulties of the water and sanitation services in the French Overseas Departments (DOM), the State, AFD and all the financial and technical partners of the local authorities initiated an approach for sustainable service performance improvement: the DOM Water Plan. This approach takes the opposite stance to usual interventions, focused on investment, and which have not generated a sustainable effect on service quality. Local authorities have therefore been engaged in a virtuous process, combining medium-term investment, operational performance improvement and capacity building as well as budget path control. The ambitions, formalised in progress contracts, were time-limited (5 years), and calibrated according to the capacities of organising authorities.

AFD is now guided by the DOM Water Plan to structure its intervention in the water and sanitation sectors in the overseas territories.

3. Develop human capital and raise public awareness

The academic and professional training for sector stakeholders

The stakeholders – or institutions – of the water and sanitation sector (administrations, contracting authorities, operators, design consultancies, research centres, contractors and equipment suppliers, etc) rely on a multitude of profiles and skills that draw on nearly 150 different trades. The existence of suitable personnel in terms of quantity and qualifications is a key element for the quality and sustainability of the services provided, even though the water sector lacks attractiveness due to the image of a deficient public service and low levels of remuneration. Thus, only 40% of countries have sufficient staff for their urban drinking water systems and 20% for the services in rural areas[52].

AFD's actions in terms of both initial and further training will cover all the stakeholders of the business and at various levels of skill. Training for administrations and the strategic management of services will remain a priority to foster the often necessary sector-specific reforms. With respect to the training of technical staff (qualified workers, engineers, technicians), AFD will support growth in the local offer of initial and further training entirely devoted to water and sanitation trades, including through targeted university partnerships. It will also seek to explore the possibilities to support the training of the formal and informal businesses and service providers, often of small size, that are necessary for the functioning of ecosystems, in particular for decentralised water and sanitation services.

THE "WATER FOR ALL" CHAIR

Founded in 2009 by ParisTech and the SUEZ Foundation, the teaching and research Chair "Eau pour Tous – OPT" (Water for All) led by AgroParisTech, has developed an original training offer for future leaders and executive managers of water and sanitation services. This offer includes an Executive Master and short specialised training courses. AFD has provided financial (total €5.5 million) and educational support to the Chair since it was launched.

After more than 10 years of existence and a proven educational path, the Chair initiated in 2020 several structural developments, in particular to develop its partnerships with training organisations in the South and to strengthen its e-learning offer.

MARKET-BASED RURAL SANITATION IN BURKINA FASO

Following a successful experiment in the west of Burkina Faso implemented by GRET, the draft market-based approach to on-site wastewater treatment (Ohangu) aims to accelerate access to basic sanitation and hygiene services in the regions of the East, Boucle du Mouhoun and Hauts-Bassins. It pays renewed attention to the implementation of large scale awareness and marketing campaigns (900,000 people targeted). It will mobilise local associative skills and will train the municipality's technical services to allow for the replication of this type of actions.

Different modes of training will be used: ad hoc training given by providers or peers, definition of training policies and plans within utilities, reinforcement of the human resources functions of the operators and professional organisations in the sector, creation and reinforcement of training centres, and support for university diploma courses, with due care for the development of an offer backed by southern institutions.

Awareness raising as a key to change

AFD will continue its efforts to include actions of information, education and communication, including social marketing, in its projects. These actions will be ad hoc or integrated into the framework of the operators' communication policies. Related to both hygiene (handwashing, menstrual hygiene) as well as water uses and savings, they are complementary to infrastructure investments: they enable, through behavioural changes, to maximise impacts on health, malnutrition and the environment. They are particularly important in countries where open-air defecation remains high or in the context of flood and drought risks prevention policies. As they are also a lever for gender equality, these actions must systematically take gender issues into consideration during their design and implementation. Whenever necessary, they will draw on specific expertise (civil society organisations, researchers, etc) and community approaches in order to better adapt to local contexts. Finally, they will have to take into account the multiplicity of institutional stakeholders to engage in these subjects (ministries of health, education, etc) and may use the potential of innovative digital tools.

[52] Glaas Report, UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water, 2012.

FOCUS 3. ACT ON THE TERRITORIAL SCALE FOR GREATER RESILIENCE

1. Promote management on the basin scale for water security[53]

In order to preserve and properly share this common asset, the water resource must be managed in an integrated way, ie one that takes into account the variety of uses (agriculture, drinking water, industry, energy, tourism) as well as the needs of ecosystems at the different relevant and complementary scales of territories, watersheds and aquifers.

Understanding for better decision-making and planning

The vast majority of resource monitoring data are insufficient or of poor quality and are difficult to access. Networks of functional measuring devices and regularly updated and shared databases are lacking. This is a paradox in these days of digital revolution and despite the fact that in order to efficiently manage and plan the resource it is essential to have sufficient information available for modelling (hydrological, hydrogeological, hydraulic), to quantify hazards and to define adequate prevention measures against the risks of drought and flooding. AFD will thus strive to develop the knowledge of the resource by supporting the competent authorities for access at lower cost to the existing data and the establishment of quantitative and qualitative monitoring networks of surface and groundwater, as well as searching for robust and innovative solutions in technical and institutional terms.

SPACE IMAGERY AND HYDROLOGY

In 2014, a working group of French stakeholders was created on the initiative of the French National Centre for Space Studies (Centre National d'Études Spatiales - CNES) and AFD on the altimetry measurement of watercourses by satellites. In close cooperation with potential users (such as African transboundary basin organisations), it works in particular around the SWOT ("Surface Water and Ocean Topography") satellite programme. This French-American Earth exploration satel lite programme will provide by 2023 the spatio-temporal water height variations of large rivers, lakes and water courses, and ocean level variations. The data produced and value chains developed will complement the information acquired by ground-based networks, and thereby improve the management of hydrological information and its uses.

Develop a governance framework for the resource

The governance framework is one of the major challenges to reconciling usages with conflicting interests, supported by different institutions, but for which, in fact, there are synergies, as in the case of multi-purpose storage infrastructures. In order to share and preserve the resource, watersheds and their biodiversity, AFD will support the deployment of Integrated Water Resource Management (IWRM) for both surface and groundwater. Based on a principle of multi-sectoral mobilisation of all stakeholders, this approach will be particularly sought for in regions under water stress or scarcity, where optimising the use of the resource is a must. It will be based on dialogue and co-decision-making, drawing from the "commons" approaches, which emphasise the empowerment and involvement of users as well as the reconciliation of individual and collective interests on the local level, thus promoting social cohesion. The financialisation of the water resource, based on the logic of the highest offer, entails serious risks for abuse in the distribution among uses and territorial development. It is a priori not considered as compatible with an IWRM-based approach and will not receive AFD's support.

Although the IWRM principle is acknowledged in the framework of international agreements and the SDGs, its actual implementation in countries where AFD operates is unequal and often limited. In addition to the knowledge of the water resource, AFD will support the development of public IWRM policies, the creation and structuring of basin organisations, environment and groundwater contracts and financial mechanisms (like those of the French water agencies or *water funds*), or the planning and implementation of infrastructures for resources mobilisation and protection, including by promoting nature-based solutions and by positioning itself at the suitable local territorial level.[54] Support will be provided for approaches that are both descending (public policies, institutions, etc) and ascending (support to local stakeholders).

[53] UN Water defines water security as "The capacity of a population to safeguard sustainable access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-related pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability."

[54] AFD also funds multi-sector watershed development projects (protected areas, agricultural practices, etc.) which are not addressed in this document.

A WATER FUND IN KENYA

In Mombasa, which suffers from a chronic and alarming water deficit, AFD and the World Bank jointly fund a complete water supply system, from the dam on the Mwache River to the users' water connection. In order to safeguard the water resource, both in quantity and quality, AFD and the NGO *The Nature Conservancy* launched a study to (i) demonstrate, through modelling, the impact and viability of conservation activities related to the watershed that contributes flow to the impoundment (reforestation, alternative agricultural practices, etc.) (ii) establish a long-term funding mechanism (in the form of a *Water Fund*, mobilising in particular the contributions by industrial consumers of the watershed) for these long-term investments, assessed at $30 million.

EUTROPHICATION OF LAKE VICTORIA AND WATER TREATMENT

Since 2008, AFD has funded several water supply and sanitation projects for the main cities along the shores of Lake Victoria: Jinja, then Kampala in Uganda, Kisumu in Kenya, Bukoba, Musoma, and then Mwanza in Tanzania. These projects, for a total of nearly €450 million, are part of a national and regional momentum to preserve the quality and optimise the management of Lake Victoria's waters in a context of urbanisation and increasing eutrophication. To support this investment strategy, AFD launched a study programme (WaSAf) with the FGEF on the status of the resource and algae blooms, entrusted to a research consortium led by INRAE. The results demonstrated to the local operators and decision-makers the necessity to resort to more efficient treatment solutions, which promoted French know-how, particularly for the new drinking water treatment plant in Kampala.

Furthermore, the support to transboundary basin organisations to which French cooperation (AFD, MEAE and FGEF) has already dedicated nearly €40 million over the last fifteen years will continue, in accordance with France's commitments under international agreements.

Better incorporate water access and sanitation projects in the challenge of the resource

In a context of growing scarcity and degradation of water resources, greater attention will be paid to the sustainability of water abstraction for any AFD-funded drinking water project.

In quantitative terms, the new production and regulation structures will have to be accompanied by control over demand and losses while ensuring the establishment of mechanisms for resource allocation among uses (including environmental ones) especially in the case of conurbations threatened with water shortage. Coming to terms with the multiplicity of authorities is one of the major issues of these necessary transactions between sectors (in particular irrigation and hydropower).

In qualitative terms, the choice of water treatment processes will have to take into account the resource degradation dynamics, including salinisation and eutrophication of water bodies, and actions to preserve groundwater and upstream watersheds will be sought. Downstream, wastewater collection and treatment efforts will be adapted to preserve the status of aquatic receiving environments, with the establishment of their baseline status and systematic discharge monitoring. In the case of a discharge in living water, the assimilative capacity of the watercourse must not be exceeded. In the case of a discharge in lacustrine or marine environments, the protection of wetlands, bays and coastal ecosystems will receive all the necessary attention, given the importance and sensitivity of their biodiversity.

2. Improve resilience to flood risk

Land use planning on a territory has an impact on the water cycle (infiltration, run-off) both in quantity and quality. It also influences people's vulnerability to hydrological hazards (density and nature of the settlement, land use diversity interfering with risks of water scarcity and flood, etc.). Faced with natural disasters the frequency and intensity of which should increase due to climate change, flood risk prevention should be approached on the territorial scale. However, this is a real challenge given the extent of catchments and the multiple competent authorities.

Protect against flood events by promoting nature-based solutions

AFD will fund structural flood hazard reduction measures for the benefit of towns[55], using an integrated approach between the design of public spaces and flood control. These measures will be complemented by studies on the scale of the watershed concerned to identify, in addition to these protection measures which often accelerate flows (recalibration, channeling, etc.), dynamic slowdown measures (flood expansion zones, water retention structures, local obstacles to water flows leading to infiltrations, etc). Indeed, the latter reduce flood peaks and are conducive to the introduction of nature-based solutions offering environmental and biodiversity co-benefits. Wetlands restoration, the recovery of flood expansion zones, the revegetation of towns or development of mangroves in coastal areas are avenues to be explored for using the ecosystem services of natural regulators, by relying as far as possible on the knowledge of local communities on this subject.

[55] AFD also funds flood management projects for the benefit of rural areas, which are not addressed in this document.

NATURE-BASED SOLUTIONS (NBS)

NbSs are embedded in the water cycle and find a natural place (!) in water and sanitation projects. In the field of water treatment, some technologies represent interesting solutions, such as planted reed bed stations or lagoon-based systems, especially when the latter makes it possible to feed wetlands and to restore these fragile ecosystems. The protection of watersheds and aquifers, through improved agricultural practices or adequate reforestation, enables a better retention in soils and an improvement in water quality. This protection is also a way of better regulating low flows and high waters. NbSs also include natural floodplains, green spaces or soil revegetation in urban environments. Although they are a tool for combating climate change and restoring biodiversity, NbSs are still poorly exploited. Therefore, it will be AFD's task to better integrate this approach in its drinking water and sanitation projects.

Limit vulnerability through non-structural measures

In addition to the hazard analysis, a vulnerability analysis will be undertaken to propose measures for reducing vulnerability (land use planning, urban planning regulations, etc). Furthermore, the development of an integrated approach between drainage and solid waste collection will be sought to ensure the effectiveness and sustainability of sanitation networks (by avoiding clogging) and to limit this other form of pollution, particularly by plastics, in the outlet areas.

In addition to the measures specific to a given territory, AFD will contribute to more general institutional and legal reflections to incorporate the operational approaches described above into national flood risk prevention policies.

Strengthen forecasting, crisis management and risk culture

AFD may also support actions on hydro-meteorological systems for warning and disaster management (flood warning, defining emergency plans, mobilising civil security services, crisis recovery, etc.) as well as awareness-raising and risk culture development actions targeting authorities and populations, including the most vulnerable.

STRENGTHEN THE RESILIENCE OF IOC COUNTRIES BY DEVELOPING CLIMATE SERVICES

The ISLAND STATES of the South-West Indian Ocean are highly exposed to climate-related risks: in the last 50 years, the Comoros, Madagascar, Mauritius and Seychelles have been affected by more than 100 natural disasters, of which 94 related to hydrometeorological phenomena. In this context, the project aims at strengthening national hydro-meteorological systems, so that they can produce efficient climate services, in particular thanks to regional cooperation which enables the sharing of data and models. A better understanding and forecasting of hazards will help the States to structure resilient public policies and to develop adequate prevention measures to preserve persons, property and natural resources. Prepared with the technical and financial support of the Adapt'Action Facility, the project, for an amount of €71 million, is jointly funded by AFD, through a grant of €5 million, the European Union and the Green Climate Fund (through two grants amounting to €5.6 million and €54.2 million, respectively, delegated to AFD) and lastly the beneficiary countries (€6.7 million).

3. Reduce the ecological footprint of the sector and reinforce its contribution to the circular economy

Use the potential of treated wastewater

The reuse of treated wastewater is an opportunity to extend the water cycle by making better use of effluents instead of releasing them directly to the natural environment. Widely available nearby in towns and in the rural environment (and often already used even in the absence of treatment), these waters participate in the development of short agricultural circuits. Beyond agriculture, they are usable in the industrial sector (production processes in closed circuit or integrating treated effluents), in the tourism sector (irrigation of green spaces, golf courses, etc.) or can contribute more generally to groundwater recharge.

In areas where fresh water availability is limited, AFD will seek to develop treated wastewater reuse, when it is possible, through the funding of suitable treatment, groundwater recharge and irrigation infrastructures. It will work upstream on requirements for the sustainability of these systems: fostering the emergence of regulatory frameworks (treatment standards, agricultural practices, health monitoring, etc), ensuring the capacity to operate such systems, identifying the needs and analysing the demand in the agricultural sector, conducting hydrogeological studies in the event of groundwater recharge.

WASTEWATER TREATMENT AND REUSE IN GAZA

In March 2018, the new wastewater treatment plant in North Gaza, co-financed by AFD, was put into operation with a treatment capacity of 36,000 m^3/d. In 2019, AFD provided funding worth €13 million, along with a contribution of €24 million from the Green Climate Fund, to ensure the reuse of treated effluents. After infiltration into the water table, treated effluents are pumped back by boring and stored in two reservoirs intended for agriculture. This system enables both the recharge and decontamination of Gaza's coastal aquifer as well as the water supply of a 1500-hectare irrigated perimeter. The installation of a solar plant, funded by Irish cooperation to the amount of €8 million, complements this infrastructure.

Energy recovery and efficiency for climate protection

Wastewater treatment plants are real urban metabolism enhancement factories and can be designed to transform effluents into bioenergy (methane and energy recovery) and raw materials (treated sludge that can be used in spreading or composting) to supply the surrounding areas. AFD will seek to develop its financing on the entire sanitation value chain. Where appropriate, the existence of required skills for operating these structures will be systematically assessed. Furthermore, the implementation of certain purification processes (in particular aerobic ones, such as activated sludge) significantly decreases GHG emissions (particularly methane) compared to other systems. This aspect will be taken into account in the choice of technological solutions for wastewater treatment funded by AFD.

Beyond the priority given to gravity-fed systems, improving the energy performance of water and sanitation facilities can allow operating cost savings and the reduction of GHG emissions from the services. AFD will support its partners on this topic and for the use of renewable energy from nearby sources, thereby contributing to climate change mitigation. Reducing water losses is also seen as an important lever towards a greater sobriety of water and sanitation services.

The funding of sea water desalination projects, whose ecological footprint and energy consumption can be significant, will be considered in compliance with the 100 % Paris Agreement commitment made by the AFD Group and under the following conditions: when existing conventional resources are insufficient; when demand management and physical loss control efforts are manifest; when the energy mix used is part of a low carbon strategy; provided that environmental impacts on the marine environment are controlled and are subject to appropriate mitigation or compensation measures.

THE ADAPT'ACTION FACILITY

The Adapt'Action Facility has invested approximately €9 million in studies and capacity building concerning water-related issues since 2017. This support aims at consolidating climate governance, better integrating adaptation to climate change in public policies, and encouraging the emergence of structuring adaptation projects. The aim is in particular to strengthen climate systems and early warning systems (for example in the Indian Ocean or Eastern Caribbean), reduce flood risks and better understand the vulnerability of towns (for example in Mauritius, Congo Brazzaville and Cameroon) or develop the reuse of treated wastewater (for example in Tunisia) and nature-based solutions (for example in Senegal).

2.3. **Accelerators**

ACCELERATOR 1. THE PARTNERSHIPS

As a development platform, strengthened by the integration of Expertise France, the AFD Group considers partnerships as a key factor to improve its positioning, increase the impact of its action, enable mutual learning and develop its ability to exert influence on the international stage.

1. The French expertise

The water and sanitation know-how of French stakeholders, whether public or private, is internationally recognised. The French stakeholders pioneered the implementation of regulation by contract and a model based on authority decentralization; they also have a very rich experience in terms of public service delegation. Furthermore, their expertise covers water resource management: with its 1964 water law, France was a forerunner in the approach by watershed for an Integrated Water Resource Management (IWRM). It was able to maintain in-depth expertise and an innovation capacity on these subjects as well as on those of hydrological and meteorological information.

French private companies are internationally established across the whole water cycle. France has many renowned engineering companies, several construction companies in a leading position (particularly treatment plant builders and pipe and network contractors) as well as equipment manufacturers. French water companies generated revenues of almost €11 billion in 201756. 240 million inhabitants in the world are served by French water and sanitation service management groups57. This added value of French private players allows them to be positioned successfully on a significant part of AFD-funded contracts. The fact remains that they face strong competition and the challenge of upholding their expertise. With due respect to the principles of untied aid, active dialogue will be pursued between AFD and these companies to mobilise their skills optimally (selection and contractual methods allowing for more innovation, quality and sustainability; interventions in crisis areas, etc).

As regards public stakeholders and in particular the regional development companies and local authorities, proper coordination and complementarity with AFD's actions will be pursued. Mobilising the potential of the Oudin-Santini law, which enables local authorities and Water Agencies to dedicate up to 1% of water and sanitation[58] to international cooperation, will be encouraged, for instance through the French Local Authorities Financing Facility (FICOL). Given the know-how of local authorities as implementing agencies, the sharing of experience between counterparts (including partnerships between operators) can be promoted.

Finally, AFD will maintain its involvement in platforms such as the French Partnership for Water (Partenariat Français pour l'Eau - PFE), which has 200 members operating internationally and has been advocating for water and sanitation on the international agenda since 2007 by promoting French know-how and expertise. The very rich expertise of the French academic world and research will also be mobilised.

2. The donors

The major stakeholders of official development assistance (ODA) for the water and sanitation sector include the World Bank ($1.6 billion payments in 2019), German cooperation with the KfW and the BMZ (€855 million payments in 2019), the Japan International Cooperation Agency (JICA) (€799 million payments in 2019) and the European Commission ($709 million payments in 2019). Some foundations are very active, such as the Bill & Melinda Gates Foundation (€102 million paid in 2019 for the sanitation sector).

AFD will strive to pursue its systematic coordination efforts with the other donors present in the countries where it operates, particularly in view of strengthening local sector-related dialogue. Exchanges will be particularly active with the traditional partners of AFD but new alliances will also be built. Co-financing (parallel or joint) will be sought. It can also take the form of delegations of funds, particularly from the European Union and the Green Climate Fund, whose grants are necessary for the implementation of some strategic priorities which are difficult to fund through loans.

Beyond co-financing, AFD will seek to develop strategic international dialogue and joint reflections with its donor counterparts, for example on the issues involved in the funding of the sector by public development banks.

[56] Water and sanitation public services in France – Economic, social and environmental data, FP2E/BIPE Report (7th edition), 2019.
[57] *Ibid.*
[58] In 2019, €31.9 million were mobilised, of which €16.4 million by local authorities and €15.5 million by water agencies.

3. The international networks

In order to promote the achievement of the SDG 6 and all the water-related SDGs, AFD will be mobilised within the framework of international events in the sector. It will defend there its strategic priorities and the possible solutions. As a member of the Word Water Council, AFD participates in particular in the World Water Forum which takes place every three years.

AFD will continue to participate in international networks like the *Sanitation and Water for All* (SWA) initiative, a multi-stakeholder platform bringing together members from more than 150 countries and working for the facilitation of high level political dialogue at an international scale. It will pursue its commitment to the advancement of knowledge in the water and sanitation sector at global level, by supporting for example the initiatives of *the Joint Monitoring Program, GLAAS* and *TrackFin* led by the United Nations.

4. The civil society organisations

AFD will continue to mobilise civil society organisations in all their diversity. The latter can lead both projects and international advocacy actions for the sector. AFD will rely for this on time-tested financing tools:

- The "CSO Initiatives" mechanism, dedicated to French CSOs, which is based on the principle of a right of initiatives and preservation of their independence. Beyond specific field projects, AFD will thus continue to support in this way structuring stakeholders such as the Water Coalition and the Water Solidarity Programme (pS-Eau);
- The sectoral innovation facilities for NGOs (FISONG), which make it possible, through calls for projects, to finance and experiment with new approaches;
- Awarding ad hoc grants to CSOs that act as AFD-funded project operators, in particular for emergency-development continuum contexts;
- Formalising partnerships to support certain institutions on topics of shared interest with AFD;
- Mobilising NGOs as social engineering providers to support infrastructure projects.

ACCELERATOR 2. INNOVATION

1. Technological and digital innovations

Whereas water and sanitation services are essentially based on mature technologies, they benefit, nevertheless, from regular incremental innovations, aiming at improving operational performances (effectiveness of treatment techniques, increased network performance, decreased costs of works, reduced energy consumption, etc). AFD will ensure that the funded projects enable the use of this type of innovations. Nevertheless, and in order to avoid any technological mirage, a gradual and contextualised approach will be promoted. The potential of low tech innovations, allowing for more sobriety and robustness, in particular for adapting existing technologies to the specific contexts of developing countries, will be examined as far as possible.

Digital technology is now indispensable for business tools (desktop tools, account management, customer software, remote management – SCADA, MIS, metrology, CMMS, EDM or ERP). However, its deployment will have to (i) take into account the digital maturity of operators (existing tools, available connectivity, energy supply, etc), (ii) be based on a cost-benefit analysis of these tools by giving preference to proven technological breakthroughs (such as the use of the mobile phone), (iii) work systematically towards incorporating them into the organisation (interoperability of the data, procedures, sufficient and trained human resources, data transparency and governance, etc).

SMART METERING

The use of *smart-meters* which enable the real time transmission of metering data is an example of a possible application of new technologies in the water sector. In particular, smart metering can make it possible to implement a regular monitoring of large consumers, or remote prepayment for the most disadvantaged users. However, these technologies should only be deployed within a clear and appropriate legal and institutional framework. Furthermore, they have a substantial implementing and operating cost, as well as significant impacts on the service management (mastery of new skills) and on users' relation to the service. A specific cost/benefit analysis is therefore necessary prior to their implementation.

The use of technological and digital innovations will also be encouraged for needs assessment, design, and for monitoring the execution and results of AFD-funded projects so as to maximise their impacts. Drawing upon the many innovations in terms of data acquisition, processing and modelling improves, for example, the territorial analysis (resources, constraints, sensitivities) to optimise the projects. In contexts of difficult access (safety, costs, health crisis) digital tools also provide project execution monitoring opportunities for assessing the fulfilment of commitments, the progress of operations and the impact achieved.

2. Financial and contractual innovations

In terms of financial tools, the full range of AFD's instruments will be enhanced to meet the needs of the various stakeholders of the water and sanitation sector. The development of banking intermediation activities with development and commercial banks or microfinance institutions will be sought for example (credit lines, guarantees, technical assistance to structure both the demand and the offer). The challenge is to bring these financial stakeholders on market segments that are now little covered by loans, guarantees or technical assistance. This concerns in particular investments by small formal or informal operators (such as cesspool emptiers), manufacturers and households. It is also a question of offering appropriate tools for financing the budgets of local authorities.

Result-based funding will continue to be used when the context allows for this and will be complemented by pilot initiatives around impact-based funding (development impact contracts).

As regards contractual innovation, AFD can support, in countries that seek to move towards this type of solutions, the setting up of public-private partnerships (PPP) under a variety of contractual schemes (performance-based, construction-operation-transfer, lease, concession contracts, etc). These arrangements are based on the clarification of the allocation of responsibilities between private and public players and aim at improving the skills and performances of service operators. They imply a precise and balanced definition of the parties' obligations and sufficient capacities of the delegating authorities. The weakness of the governance frameworks and of the profitability level of the services in actual fact limits their deployment in many countries where AFD operates. However, when the context allows it, AFD can (i) support public authorities in defining appropriate governance frameworks as well as in the design, contracting process and running of contracts, (ii) contribute to the funding of investments supported by the public partner or the private partner (through its subsidiary Proparco) and/or mobilise its guarantee instruments to reduce risks. In semi-urban, peri-urban or rural areas, the mobilisation of small private operators has proved successful: the setting up of innovative contracts to fine-tune the financial model of these services and ensure their effective regulation will be particularly sought.

MANAGING MENSTRUAL HYGIENE THROUGH A DEVELOPMENT IMPACT CONTRACT

Poor Menstrual Hygiene Management (MHM) has many implications for women's sexual and reproductive health, education, empowerment, mobility, self-confidence and, therefore, their capacity to actively contribute to the economic, social and political life of their country. Through a Development Impact Contract (DIC) deployed on a pilot basis in Ethiopia, AFD intends to develop the knowledge base on this topic which has up to now been neglected. The DIC is based on a payment for results mechanism: a private investor (here BNPP) prefinances an operator (here a consortium of NGOs led by CARE France) which deploys an innovative intervention programme on all the MHM components (access to sanitation infrastructure, awareness-raising and advocacy, and access to sanitary protection). They will be reimbursed by final payers (here, AFD and possibly other donors) according to the results achieved and based on an independent assessment (carried out by ITAD).

ACCELERATOR 3. KNOWLEDGE

To respond to the triple challenge of contributing to international reflections, continuous learning and accountability, AFD will keep producing knowledge in the sector. This production will require multidisciplinary research and studies, as well as an effort to assess and capitalise on its action (assessments by projects or clusters of projects, by themes or tools, scientific impact studies, etc).

Based on various partnerships, in particular with academic and research stakeholders from the North and the South, it will consist of two nexuses:

Water resources, climate and biodiversity

Knowledge will first be sought on a large scale, that of the large water cycle. Strong cycle disturbances are observed and anticipated over the long term, under the combined pressures of human activities and climate change. This approach will be complemented with further reflection on data acquisition and management, in particular with the working group on the space sector's contribution in the monitoring of water resources, and the cooperation with the WMO.

Since the Mediterranean region is particularly exposed to climate risk and to the shortage of water resources, AFD will continue to develop its knowledge production activities there. It will cover topics such as desalination (with, for example, the Plan Bleu (Blue Plan)), integrated watershed management, the historical and prospective analysis of resources and their uses (working group on groundwater resource exploitation, partnership with the Sahara and Sahel Observatory, etc).

TWO AFD-IRD PARTNERSHIPS ON WATER

Collaborations between AFD and IRD are the subject of a three-year framework partnership agreement renewed since 2012, covering many areas.

A specific partnership started in 2021 on the topic of the water cycle. In the context of anthropogenic pressure and climate change, the aim is to produce knowledge and tools jointly built with the beneficiaries, particularly in the Sahelian area, to anticipate the evolution of water resources and hydrological risks (drought and water scarcity, flooding). It should also take this evolution into account in adaptation strategies on various scales and in different types of territories.

Moreover, the ACE Partner project, led by IRD, currently supports the RES-EAU, a network of academic excellence on the sustainable management of water resources which brings together 5 African centres of excellence supported by the World Bank and AFD in 4 countries of West Africa. This project includes a research programme, a training programme and actions to bridge the gap between the academic and socio-economic sectors.

Furthermore, works will we conducted in the sphere of water quality: eutrophication of water bodies (WaSAf programme co-funded with the FGEF), reflection on industrial sanitation.

Finally, as we understand the importance of nature-based solutions to respond to the convergent commitments on climate and biodiversity, a range of actions will be deployed for their identification, their feasibility and their promotion (including through the partnership with the environmental NGO The *Nature Conservancy*).

Governance and Social link

AFD will be interested in public policy reforms and in the methods for organising and regulating institutions and operators. The reflection on the creation of a favourable environment for investment in the sector, including for the most vulnerable, will be pursued. The issue of the mobilisation of public and private funding will be given particular attention, by taking into account the traditional (capital intensity, long-term profitability, etc.) or more emergent financial characteristics of the sector. This will involve, for example, exploring the role that public development banks can play.

THE *WATER FINANCE COALITION*

At the Finance in Common Summit of November 2020, which brought together for the first time 450 Public Development Banks, AFD, in partnership with EIB, the World Bank, CAF and Sanitation and *Water for All* launched a call to action for public development banks. This initiative, the *Water Finance Coalition*, starts from the observation that the water and sanitation sector's investments, in many developed countries, have been largely funded by national public development banks. It seeks to bring to light, including to governments, the solutions that public development banks can provide to achieve the SDG 6. The Coalition took the form of a working group drawing, in particular, on a study funded by AFD.

The potential of decentralised or so-called "off-grid" approaches will also be given special attention. Developed by private and associative stakeholders according to market logics, these models provide solutions to meet the demand but can raise issues of equality and equity, economic-financial balance or negative environmental externalities. AFD will also seek to capitalise on the subject of social mechanisms such as the subsidizing of connections.

3. ACTION PLAN – 2020-2025 ACCOUNTABILITY FRAMEWORK

3.1. Principles and timetable

A pioneer sector in terms of accountability, AFD's water and sanitation action has been the subject of a public annual review since 2013 following pilot exercises as early as 2010. These efforts will be pursued with the preparation of an annual review of commitments and ongoing projects. This review will monitor indicators of allocated financial means and their thematic and geographic distribution, expected and actual results indicators and the cross-cutting contribution of AFD's water and sanitation action to the achievement of SDGs. These indicators will be applied at the level of each new project and their monitoring will be incorporated into the operational supervision mechanisms.

A mid-term review (2020-2022) will be produced to measure progress towards the targets, to capitalise and define reorientations or adjustments, when necessary. A completion report will be produced at the end of the period for accountability, capitalisation and prospective purposes.

3.2. Framework for activities

AFD plans (i) to monitor the sector's contribution to the various cross-cutting themes addressed by AFD's Strategic Orientation Plan (SOP) and (ii) to provide itself with a guiding compass to follow the sectoral strategic orientations proposed by this document. Two major types of indicators will subject to monitoring:

RESULT INDICATORS

Indicators	Sources	References to focuses of action			AFD strategic framework	SDG framework
		Areas of focus				
		1	2	3		
Number of people benefiting from a safely managed drinking water service*	AFD database: Aggregated indicators	■	■	■		SDG 6.1
Including the number of pupils and/or patients	AFD database: Aggregated indicators	■			100% social link	SDG 6.1 SDG 3 - SDG 4
Number of people benefiting from a basic drinking water supply service*	AFD database: Aggregated indicators	■	■	■		SDG 6.1 SDG 1
Including the number of pupils and/or patients	AFD database: Aggregated indicators	■			100% social link	SDG 3 - SDG 4
Funded drinking water production capacity (m^3/day)	AFD database: Aggregated indicators	■				SDG 6.1

Indicators	Sources	References to focuses of action			AFD strategic framework	SDG framework
		Areas of focus				
		1	2	3		
Drinking water savings (m^3/year)	AFD database: Aggregated indicators				100% climate	SDG 6.4
Number of people benefiting from a safely managed sanitation service*	AFD database: Aggregated indicators					SDG 6.2 and 6.3
Including the number of pupils and/or patients	AFD database: Aggregated indicators				100% social link	SDG 6.2, 6.3 and 6.6 SDG 3 - SDG 4
Number of people benefiting from a basic sanitation service*	AFD database: Aggregated indicators					SDG 6.2 SDG 1
Including the number of pupils and/or patients	AFD database: Aggregated indicators				100% social link	SDG 6.2 SDG 3 - SDG 4
Wastewater treatment capacity financed	AFD database: Aggregated indicators				Transition territoriale Biodiversité	SDG 6.3 and 6.6
Number of people educated on hygiene and proper water use	AFD database: Aggregated indicators				100% social link	SDG 6.2
Number of beneficiaries totals of the project in crisis and/or fragile zone	AFD database: SOP Meta-Indicator				3D	SDG 6.1 and 6.2 SDG 16
Reduction of greenhouse gas emissions ($TeqCO_2$)	AFD database: SOP Meta-Indicator				100% climate	SDG 13
Number of people whose climate resilience is increased by the project	AFD database: SOP Meta-Indicator				100% climate	SDG 13
Number of people benefiting from an improvement of essential services applied to developments/equipment for managing (preventing/ mitigating) flood risk (ie drains, infiltrating swales, under-driveway storage, dikes, flood control dams, vertical gates, pumping stations, etc.) and flood forecasting developments	AFD database: Aggregated indicators				100% climate	SDG 13

** These indicators are aligned with the calculation methodology for monitoring SDGs defined by the WHO/UNICEF Joint Monitoring Programme.*

INDICATORS OF MEANS

Financial production indicators	Sources	AFD strategic framework
Amount of commitments ***Target: between €1 and €1.2 bn in annual average over the period subject to the maintenance of AFD Group's activity level between €12 and €14 bn***	AFD database	
Amount of grants	AFD database	
Amounts of grants in the 19 Priority Poor Countries (CICID 2018) **Amount of non-sovereign loans (including Proparco)**	AFD database	Non-sovereign
Amount of payments and signature	AFD database	
Amount of disbursements	AFD database	

Other indicators of means	Sources	References to focuses of action			AFD strategic framework	SDG framework
		Areas of focus				
		1	2	3		
Amount of commitments dedicated to sanitation by 2025 ***Target: 40% of commitments***	DAC Code 14022: Sanitation – Large systemsDAC Code 14032: Sanitation – Basic systems	■		■	Territorial transition Biodiversity	SDG 6.2, 6.3 and 6.6
Number of projects including governance-related actions ***Target: 90%***	DAC Code 14010: Water sector policy and administrative managementDAC Code 14081: Education and training in water supply and sanitation AFD database		■			SDG 6.a
Amount of commitments in Africa ***Target: at least 30 %***	AFD database	■	■	■		
Amount of commitments dedicated to urban territories (including secondary towns, peri-urban areas, informal settlements) and rural territories	AFD database	■			Territorial transition	
Commitments (in number of projects) including social mechanisms	AFD database (subsidized connection, latrines and equipment, progressive pricing support, etc.)	■			100% social link	SDG 1 SDG 10

Other indicators of means	Sources	References to focuses of action			AFD strategic framework	SDG framework
		Areas of focus				
		1	2	3		
Amount of commitments with a gender equality co-benefit Commitments (in number of projects) DAC 2 Gender *Target: 55% of annual commitments DAC 1 or 2 Gender*	Marker DAC Gender	■			100% social link	SDG 5 SDG 6.1 and 6.2
Amount of commitments on water and sanitation MINKA	AFD database	■			3D	SDG 16
Amount of commitments dedicated to IWRM	DAC Code 14040: River basins' development: DAC Code 14015: Water resources conservation			■	Territorial transition Biodiversity 100% climate	SDG 6.5
Amount of commitments dedicated to flood management	DAC Code 43060: Disaster risk reduction			■	Territorial transition 100% climate	SDG 11
Commitments (in number of projects) including NbSs	AFD database			■	Territorial transition Biodiversity 100% climate	SDG 6.6 SDG 13
Commitments (in number of projects) Treated wastewater reuse and circular economies	AFD database			■	Territorial transition 100% climate	SDG 6.4
Amount of commitments with climate co-benefits *Target: 75 %*	AFD database	■	■	■	100% climate	SDG 13
Amount of commitments with biodiversity co-benefits *Target: 20 %*	AFD database	■	■	■	Territorial transition Biodiversity	SDG 6.6 SDG 14 SDG 15
MoAmount of commitments with climate-biodiversity convergence	AFD database	■	■	■	Territorial transition	SDG 6.6 SDG 14 SDG 15
Commitments (in number of projects) with an awareness-raising component	DAC Code 12261: Health education AFD database		■			SDG 6.b
Commitments (in number of projects) with a citizen participation approach	AFD database		■		100% social link	SDG 6.b
Commitments (in amount) with joint financing	AFD database	■	■	■	Partnership reflex	SDG 6.a SDG 17

Knowledge production and partnerships will be annually followed up through a qualitative review.

3.3. **Communication**

AFD will be committed to systematically publicizing and sharing its contributions and its know-how in the water and sanitation sector. It will strive to make its methods and its range of intervention better known to its partners and to the general public by:

- feeding its website and its social networks;
- participating in the production of communication materials (documentary films, computer graphics, etc.) on its actions;
- producing publications;
- organising conferences and events relating to the water and sanitation field.

APPENDICES

Appendix 1.
The SDG dedicated to water

Goal 6 aims to "Ensure access to water and sanitation for all and ensure the sustainable management of water resources" and is broken down into 8 targets

Target 6.1

Access to drinking water

"By 2030, achieve universal and equitable access to safe and affordable drinking water for all."

Target 6.2

Access to sanitation and hygiene services

"By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situation."

Target 6.3

Water quality

"By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally."

Target 6.4

Sustainable water resource management

"By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity."

Target 6.5

Integrated resource management

"By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate."

Target 6.6

Ecosystem protection and restoration

"By 2030, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes."

Target 6.a

Cooperation and capacity building

"By 2030, expand international cooperation and capacity building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies."

Target 6.b

Collective water management

"Support and strengthen the participation of local communities in improving water and sanitation management."

The AFD Group has a wide range of financing tools to adapt to each context, according to the geographic area, the intervention sub-sector, the nature of the project and the sectoral maturity level.

These tools are grants (AFD or delegated by third parties), sovereign loans (more or less subsidised according to geographic areas), non-sovereign loans (AFD or Proparco, subsidised or not, granted to public or private operators, public or private banks and local authorities), guarantees (portfolio, public payment guarantee), equity investments (Proparco). In addition, Expertise France is mobilised.

Appendix 2. **Water in the SDGs**

SDG 1 Prioritize the water and sanitation needs of the poorest

SDG 2 End malnutrition thanks to sanitation, quality water and good hygiene practice

SDG 3 Improve health through improved water, sanitation and hygiene

SDG 4 Increase school attendance by providing water, sanitation and hygiene in schools

SDG 5 Improve work and education opportunities for women and girls by reducing the time spent fetching water

SDG 7 Produce sustainable energy by using water and faecal sludge

SDG 8 Protect employees by providing water, sanitation and hygiene in their workplaces

SDG 9 Encourage innovation to enable efficient water use

SDG 10 Réduire les inégalités dans la santé, l'éducation et le travail en fournissant un accès universel à l'eau et à l'assainissement

SDG 11 Promote cleaner environments by improving water and sanitation infrastructure

SDG 12 Encourage a better management and consumption of water resources

SDG 13 Manage water responsibly to limit risks of flooding and drought

SDG 14 Prevent the pollution of aquatic environments

SDG 15 Protect life on Earth and the water that allows it to exist

SDG 16 Build strong and transparent institutions, promoting peace through fair and equitable access to water and sanitation

SDG 17 Mobilise the partners to commit themselves to responsible processes for universal access to water

Appendix 3. **The AFD's financial tools**

The following grid gives indications on the most suitable tools according to the intervention context:

FINANCIAL CAPACITY OF THE COUNTRIES / SECTOR-SPECIFIC MATURITY	NATURE OF THE PROJECT						
	Studies – Expertise – Technical Assistance	Infrastructures					
		Water		Sanitation		Flood events	
		Urban	Rural	Collective	Individual		
Low	Grants Expertise France	Grants	Grants	Grants	Grants	Grants	
Average	Grants Expertise France Sovereign loans	Sovereign loans	Grants	Sovereign loans	Grants Sovereign loans	Grants Sovereign loans	
High	Grants Expertise France Sovereign loans Non-sovereign loans	Sovereign loans Non-sovereign loans (operators and banks) Guarantees Equity investments	Sovereign loans	Sovereign loans Non-sovereign loans (operators and banks) Guarantees Equity investments	Grants Sovereign loans Non-sovereign loans (banks) Guarantees	Grants Sovereign loans Non-sovereign loans (local authorities and banks) Guarantees	

What is AFD?

The Agence française de développement (AFD) implements France's international development and solidarity policy. Through its public sector and NGO financing activities, its research and publications (AFD Publications), training on sustainable development (AFD Campus) and awareness-raising activities in France, AFD finances, supports and accelerates the transition to a fairer and more resilient world.

We build shared solutions with our partners, with and for the peoples of the South. Our teams are involved in more than 4,000 projects on the ground, in French overseas departments, in 115 countries and in regions in crisis, for the common good – climate, biodiversity, peace, gender equality, education and health. We thereby contribute to the commitment of France and the French people towards achieving the Sustainable Development Goals (SDGs). For a world in common.

For a World In Common.

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