

Water Stewardship

GRI Standards:

303-1, 303-2, 303-3: Water

306-1: Effluents and Waste

PLANET CARE

Beyond healthcare, Sanofi cares for the planet by minimizing the environmental impacts of its products and activities while strengthening its resilience to environmental changes.

Sanofi is driven by passion and science to continuously minimize the environmental impacts of its products throughout their life cycle and engaging employee, patients and partners to transform healthcare practices for a more sustainable future.

Sanofi is committed to:

- **Fight climate change**: build the road to carbon neutrality by 2030 and net zero emissions by 2045 by engaging Sanofi towards the 1,5°C global warming trajectory
- **Limit our environmental footprint and aim for circular solutions** by optimizing the use/reuse of resources and reducing impact of emissions
- **Improve environmental profile of products** by delivering eco-innovative products and by fostering a sustainable use of medicines
- **Mobilize our people for environmental sustainability** by promoting an environmentally conscious culture in the workplace
- **Engage our suppliers in our environmental ambitions** by sourcing responsibly and leading by example

TABLE OF CONTENTS

<i>1. Our commitments to Water Stewardship</i>	3
<i>2. Performance</i>	4
2.1. THE DIFFERENT USES OF WATER	4
2.2. SOURCES OF FRESHWATER	4
2.3. WATER RECYCLING/REUSE	4
2.4. THE SITUATION IN 2022	5
<i>3. Actions</i>	6
3.1. MANAGEMENT OF WATER-RELATED RISKS	6
3.2. WATER STEWARDSHIP IN OUR DIRECT OPERATIONS	7
3.3. RESPONSIBLE MANAGEMENT OF WASTEWATER	8
<i>4. 2022 Highlights</i>	9
4.1. NEW WASTEWATER RECYCLING PROJECT COMPLETED	9
4.2. MODERNIZATION OF COOLING SYSTEMS	10
4.3. OPTIMIZATION OF CIP PROCEDURES	10

1. Our commitments to Water Stewardship

Water stewardship is an important goal for Sanofi. We are committed to responsible management of water, to have an environmentally sustainable and a socially equitable usage of this essential resource.

The responsible management of water resources concerns key aspects of our business, such as our license to operate our facilities, ensuring our business continuity to guarantee a permanent availability of our products, and our relations with several stakeholders in a regional context.

As part of Sanofi's Planet Care program, our strategy for water stewardship program is based on:

- A Global reduction of 15% of our freshwater withdrawals between 2019 (baseline year) and 2030,
- For each industrial site, the implementation of a water efficiency management system supplemented by context-based targets,
- A focus on priority sites, presenting higher water-related risks such as increased water scarcity and for which Sanofi implements specific actions for mitigation,
- The continuous assessment of water-related risks, and
- A better knowledge of the water footprint of our products.

At global level, we define our target for reducing water withdrawal by aggregating our local targets (rather than vice versa) which are set based on a careful evaluation of the local context.



As a public engagement Sanofi signed the pledge to **the CEO Water Mandate in 2021**.

The Mandate is a special initiative of the United Nations Secretary- General and the UN Global Compact, implemented in partnership with the Pacific Institute. Established in 2007, the initiative was created out of the acknowledgement that global water challenges create risk for a wide range of industry sectors, the public sector, local communities, and ecosystems alike. As such, cross-sectoral collaboration is the most effective and credible path to water security. <https://ceowatermandate.org/>



In January 2023, Sanofi joined **the Alliance for Water Stewardship (A4WS)**, a global network of public, private and civil society organizations actively engaged into effective water stewardship initiatives.

As a company committed to a responsible and sustainable use of water, we want to consider our membership to the A4WS and the CEO Water Mandate as an opportunity to align with the world's best practices on water stewardship, to identify new opportunities for collective action at watershed level, and to share knowledge and experience within the global water stewardship community.



Water purification systems in our Production site of Suzano, Brazil

2. Performance

2.1. THE DIFFERENT USES OF WATER

Water is one of the major commodities used by the pharmaceutical industry. At Sanofi, there are two major usages for water:

- **Domestic uses** – water used for irrigation, bathrooms, cafeterias, drinking water, etc.; and
- **Industrial applications**, that can be summarized as:
 - > heat transfer systems to control temperature of fabrication processes, essentially cooling water applications. In this case, quantity prevails, and the chemical (salinity) and physical (temperature) properties of water discharged are only slightly changed after usage,
 - > water that is directly used in the synthesis of ingredients or in the manufacturing processes of pharmaceuticals: high grades of water are required, and water quality is closely monitored at all stages of production and use, and
 - > water that is used for cleaning equipment and vessels: high quality of water is considered as well, to ensure efficiency of the cleaning process. After usage, the effluents are collected and transferred to dedicated facilities for treatment (internal or external).

Compendial waters are pharmaceutical waters complying specific pharmacopoeias requirements. Water for Injection (WFI) is the highest grade of pharmaceutical water, usually obtained after distillation of purified water (PW). The source water supplying the PW treatment system must meet adequate drinking-water standards and is closely monitored as per company quality procedures.

2.2. SOURCES OF FRESHWATER

Sanofi exclusively uses freshwater for all applications and has no reference of seawater withdrawals. Sources of freshwater vary from one plant to another depending on many factors. Sanofi has three main sources of freshwater supply:

- **municipal and third-party supply** has become our main source of water following the spinoff of Euroapi sites, accounting for 69% of our total withdrawals in 2022,
- **surface water** (lakes, rivers) now represents 16% of our withdrawals, and
- **ground water** (water pumped from water tables located immediately below Sanofi sites) accounts for 15% of withdrawals.

Sanofi is committed to sustainable use of water. Regardless of the source, each site must identify potential threats on their source and report issues and events to Corporate HSE.

2.3. WATER RECYCLING/REUSE


Recycling water is a great opportunity to reduce our water footprint and demonstrate our efforts for sustainable water use. We encourage our sites to recycle water in local applications.

Several methods exist to recycle/reuse water: harvesting rainwater, optimizing cooling water systems with multiple loops, implementing quaternary treatments in our wastewater treatment plants so the reclaimed water can be used as make-up for cooling towers or boilers, etc.

In 2022, 22 of our sites report practices of water recycling/reuse for all applications.

We have estimated that implementing our sustainable water management program will **reduce our global water withdrawals by 15% by 2030** versus the 2019 baseline, despite continuous industrial capacity growth.

2.4. THE SITUATION IN 2022



water stewardship

Our objectives


- Reduce our *global water withdrawals* by 15% by 2030
- Implement *water stewardship and water efficiency plans* for 100% of our manufacturing sites by 2030

Global Performance 2022


13% reduction of global water withdrawals since 2019

13% reduction of water withdrawals in scarcity areas

Sanofi was scored A- on the CDP Water Security questionnaire



CEO WATER MANDATE



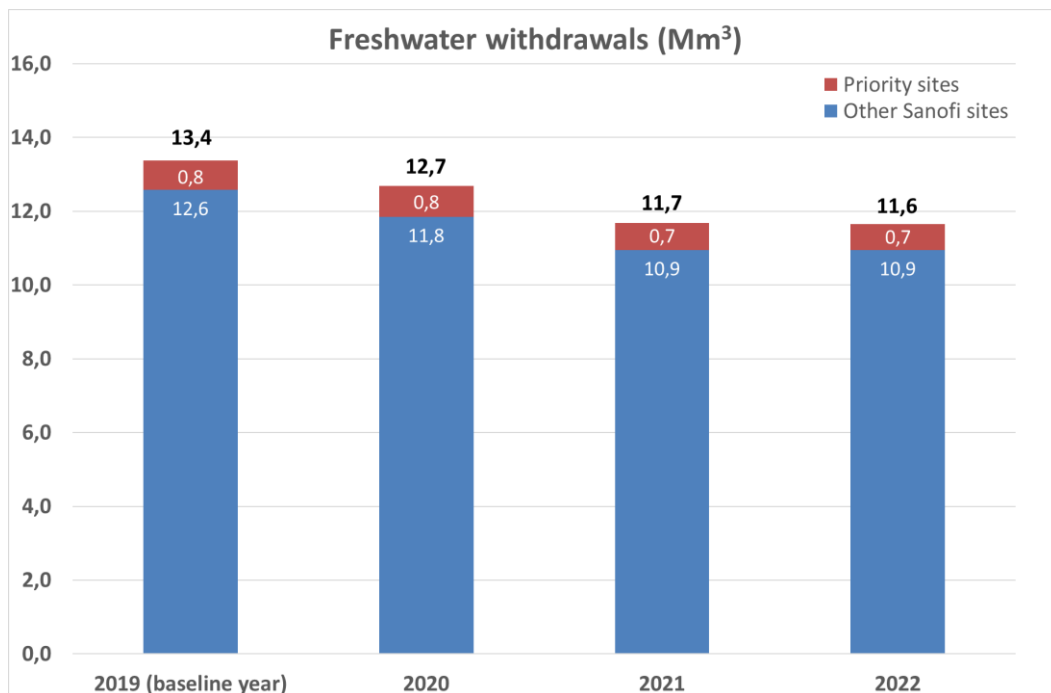
ALLIANCE FOR WATER STEWARDSHIP

Sanofi is on the right path to achieve a reduction of 15% on global water withdrawals in 2030 (considering the 2019 baseline of 13.4 million of m³).

In 2022 we have:

- achieved a 13% of reduction vs 2019 (baseline year), and
- demonstrated the leadership of our water program as highlighted by our A- score at the CDP Water Security Questionnaire.

The water demand of our priority sites for water risks (including water scarcity) account for 6% of our total withdrawals in 2022 and is continuously decreasing since 2019, with a -11% reduction.



3. Actions

3.1. MANAGEMENT OF WATER-RELATED RISKS

3.1.1. Identification of priority sites

Our objective is to define appropriate responses for sites facing water stress risks.

In 2015, Sanofi has defined its first list of priority sites. In 2020, our Company implemented a new program, WRAP (**Water Risks Assessment Program**). The objective is to have a relevant analysis of the water risk at our sites. We have created a specific tool with the support of an external consultant. We asked each site to evaluate through a survey how they address water risks considering three categories: Physical, Regulatory and Reputational risks. The ensuing vulnerability scores were compared to results from the World Resources Institute (WRI) and World Wildlife Fund (WWF) databases.

In 2020, we were able to update our list of priority sites which is composed of 10 sites located in Algeria, South Africa, Mexico, India, China and Saudi Arabia.

3.1.2. Environmental risk assessments

As a Company rule, every site must manage a program to identify, evaluate, prioritize and control the impacts of its past and present activities on the environment. Some specific risks on water may be directly reported by sites during these assessments: these risks will then be incorporated into a broader environmental risk matrix.

This assessment is updated regularly. An annual action plan is established and implemented to improve and control the prioritized actions identified. Beyond the annual plan, long-term opportunities to optimize resources and expenditures dedicated to better protecting the environment are, when appropriate, identified in the local capital expenditure action plan.

Depending on the conclusions of the environmental risk assessment and regulatory requirements, the action plan may include:

- Internal or external audits on water use, comprised of a detailed water balance and the characterization of all effluents produced by the site,
- Water withdrawal and water consumption reduction plans, based on the modernization of some equipment, of water treatment facilities or on the change in operational procedures, and
- the installation of additional in-line analyzers and instruments to increase monitoring, and track efficiency.

3.1.3. Due diligence processes

During site purchasing due diligence, water intake and discharge are taken into consideration as one aspect of overall Health, Safety and Environment (HSE) actions.

Our key water concerns are related to regulatory compliance for water usage and discharge and assessment of local sensitivity.

3.1.4. Health, Safety and Environment (HSE) audits

HSE internal audits of all Sanofi facilities are led by a team of Experienced Auditors and supported by the Sanofi HSE Expertise Community.

These audits are performed over a rolling three-year program covering all HSE internal requirements and related standards – of which two are dedicated to water management and wastewater management.

3.1.5. Suppliers

We acknowledge that our environmental responsibility is extended all along the value chain of our products, and with this purpose Sanofi is engaged with its suppliers and subcontractors and has mobilized a dedicated Taskforce to coordinate all the actions engaged by the Company.

Sanofi is actively working on different initiatives to increase water security in its value chain:

- **Water Stress Risks Assessment** of our key API suppliers is of very high concern, as it is intended to anticipate and/or mitigate the immediate and long-term adverse consequences on the availability of some of our key products, including life-saving medicines. Impacts of climate change on our direct operations and in our value chain are continuously assessed by a dedicated Taskforce within the Company;
- **Onboarding** of Suppliers and Contract Manufacturing Organizations (CMOs) on good practices in water management:
 - > as a Pharmaceutical Supply Chain Initiative (PSCI) active member, Sanofi has very recent history of inviting our key API suppliers to seminars focusing on water-related issues, including the release of pharmaceuticals in the environment and wastewater treatment technologies.
 - > We also continue to progress on our commitment to fight antimicrobial resistance, by raising awareness, clarifying our requirements and by sharing with our Partners good practices on risk management.
- **HSE Audits** (internal & external) of suppliers include questions on water and wastewater management. The risks identified are communicated to business leadership for decision-making. Despite the context of a global pandemic, we have preserved activities to ensure high level of control on management of environmental risks.

3.2. WATER STEWARDSHIP IN OUR DIRECT OPERATIONS

3.2.1. Water efficiency management plans

Water efficiency is a key pillar of water stewardship.

In 2021, Sanofi launched a new program to have Water Efficiency Management Plans (WEMPs) implemented at all our sites. The objective is to define a global methodology to map water usage and to identify opportunities to reduce withdrawals, power, and chemical consumptions specific to each site.

We started this program in the manufacturing site of Ploërmel (France). A strong water stewardship program was already in place, nevertheless, this study showed several levers to optimize water efficiency. The project was carried out using a toolbox (tools, templates, guidelines, etc.) prepared after the ISO 46001 standard and was supported by a consultant for the performance review of equipment/processes using water.

Our objective is to have the methodology implemented at 100% of our industrial sites before 2030, starting with all priority sites before 2025.



Overview of Sanofi site in Ploërmel

3.2.2. Context based targets

We acknowledge that water challenges are specific to each watershed and need to be addressed at local level. Context-based targets are defined after thorough review of water usage and related risks in the water basin, aligned with the conclusions of the 2020 Sanofi WRAP study.

Our goal is that context-based targets enrich action plans of each WEMP with sustainable solutions contributing to improve local water resources condition.

In 2021, we worked with the Water Council, a non-profit organization, to prepare a reference document that provides guidance for all Sanofi sites to better grasp the water issues at local scale.

The same year, we experimented the methodology in two of our priority sites located in Mexico. As of 2023 with our recent membership, we are exploring the alignment of our program with the documentation system of the Alliance for Water Stewardship.

3.2.3. Our new community of practice on water



SWAN
Sanofi Water
Advocates Network

SWAN is the acronym for the **Sanofi Water Advocates Network**, the community of practice on water.

The SWAN project has the objective to contribute to reduce Sanofi water impacts by raising awareness on water risks and using collective intelligence to address our company's key water-related challenges.

As of early 2023, we have opened our own discussion platform and started with the organization of a seminar focusing on wastewater management.

3.3. RESPONSIBLE MANAGEMENT OF WASTEWATER

3.3.1. Key principles

We strive to reduce the impact of our emissions on water bodies by implementing efficient and reliable strategies to limit the presence of contaminants in effluents generated by our manufacturing activities.

Each site implements a specific wastewater management program based on an environmental impact assessment and applicable regulatory framework. These programs include:

- The **quantification and characterization of contaminants**, and
- The **implementation of specific solutions and technologies** to limit adverse effects on aquatic ecosystems.

We dedicate ourselves to a continuous improvement of the efficiency of our wastewater treatment installations. This program is supported by continuous inspections of our sites, by lab-scale testing of existing new solutions and the upgrade of existing facilities.

3.3.2. Monitoring wastewater quality

Sanofi sites are also engaged in monitoring effluents discharged to sewers or water bodies in order to ensure regulatory compliancy and the absence of negative environmental impacts. Chemical Oxygen Demand (COD) is a key parameter to assess the quality of wastewater discharge, as an indicator of organic content (biodegradable and non-biodegradable) in effluents.

Most of our industrial facilities have dedicated wastewater treatment plants, whether the wastewater is discharged directly to the natural environment or not. If discharge is to a public or private sewerage system, then treatment is handled by a third party who complies with locally applicable regulations. Consequently, the overall quantity of COD calculated within our site boundaries (rather than at the point of discharge into the natural environment, as reported in previous years) would appear to be a more reliable and relevant indicator of our efforts to reduce the environmental impacts of our operations on aquatic ecosystems.

In 2022, the residual amounts of COD released by our sites have decreased by approximately 13% (baseline 2019). The many programs under way to upgrade our onsite treatment plants, and the embedding of new environmental criteria into the design of our facilities, suggest that levels will stabilize/decrease in the years ahead despite the ongoing expansion of our industrial capacities.

3.3.3. Pharmaceuticals in the environment

Sanofi focuses particular attention on the challenge of preventing pharmaceuticals from entering the aquatic environment. Sanofi is committed to minimize the potential environmental impacts of its medicines in line with the Planet Mobilization Program. It is materialized through a strategic approach that covers the entire lifecycle of our medicines, from production to their use by patients. It involves all our stakeholders and encompasses several initiatives or programs described in a dedicated factsheet.

For more information, see our Document Center: Pharmaceuticals in the Environment Factsheet.



Wastewater Treatment Plant in our Vaccines Production site of Ocoyoacac, Mexico

4.2022 Highlights

4.1. NEW WASTEWATER RECYCLING PROJECT COMPLETED



In 2022, our project team in Geel (Belgium) has successfully delivered the IDRA project which consists in the upgrade of the site's wastewater treatment plant with a recycling unit.

*IDRA now produces makeup water for the site cooling towers and boilers. It will allow savings up to **40 million liters of water** every year, covering 11% of the site demand.*

The IDRA Project was one of the 2021 winners of the Planet Care Challenge for their water conservation project, along with 2 other sites located in Italy and in France that are currently working on a similar project.

4.2. MODERNIZATION OF COOLING SYSTEMS



Vitry-sur-Seine is an integrated platform with activities ranging from early research to commercial production in small molecules and biotherapeutics, with a strong background on oncology.

Significant volumes of water were withdrawn from wells or the Seine River to continuously feed the water-cooling system of the site's largest Production unit. In 2020, a new cooling tower was installed along with other significant changes in the cooling water distribution system, with the objective to shutdown groundwater pumping.

As of 2022 and after 2 years of continuous operation, we have **saved approximately 2 billion liters** of freshwater.

4.3. OPTIMIZATION OF CIP PROCEDURES



Clean-In-Place (CIP) operations are one of the most important usages of water in the pharmaceutical industry. Water used for CIPs follow high standards to ensure quality and safety in production.

In 2022, our Teams from our chemical production site in Mourenx (France) have managed to optimize CIP procedures, with no impact on production. Thanks to their efforts, **the volume of water required for each cleaning cycle was divided by 2.**

This performance is significantly impacting the site's water demand with a 21% reduction of 2021 water withdrawals.