

WASTE MANAGEMENT

GRI Standards: 306-2, 306-4: Effluents and Waste

The Earth's resources are limited. The circular economy is the obvious approach to take concerns about resource depletion.

Waste has an impact on the environment, causing direct and indirect pollution and greenhouse gas emissions that contribute to climate disruption.

Industrial waste management generates substantial costs to the environment and to our business, since waste must be collected, sorted and transported before being treated. Proper waste management including appropriate reuse, recycling and energy recovery is a key factor in optimizing resource efficiency.

I. STRATEGIC APPROACH

Sanofi takes a multifaceted approach to waste management, designed to limit the amount of waste generated by our activities and to encourage appropriate sorting, reuse and recycling to minimize the need to extract additional natural resources. As a pharmaceutical company, we believe it is important to reduce both environmental and health impacts of waste and to improve resource efficiency.

Our direct waste stream generally includes:

- Hazardous waste (including solvents), solid and liquid residues mainly from the chemical synthesis of active pharmaceutical ingredients, and other production and research activities;
- Non-hazardous waste generated by production (industrial) and administrative activities.

One of our indirect waste streams consists of unused and expired medicines, which contain active pharmaceutical ingredients with a potential environmental impact.

Each Sanofi site is in charge of its own waste management initiatives based on the following waste hierarchy:

- Avoid waste production and reduce waste flow at the source;
- Reuse, recycle and recover on-site or with selected validated providers;
- Incinerate, with energy recovery wherever possible;
- Send waste to authorized landfills as a solution of last resort, provided that the landfill complies with local regulations and control systems. Landfills should be audited on a yearly basis for hazardous waste landfilling, and audited every three years for non-hazardous waste landfilling.

We have designed a waste management program with procedures to characterize process streams and identify, organize, collect, sort, treat, store, transport and dispose of different types of waste as appropriate and in compliance with applicable laws. In addition, we keep records to ensure the traceability of disposed waste. Before engaging a new waste contractor, Sanofi sets up a purchase agreement that includes a preliminary control to ensure that the contractor has the necessary qualifications, competence and compliance for the type of waste to be handled.

The Planet Mobilization project highlights robust initiatives around waste with the ambition of considering waste from industrial processes as a potential resource. As a result, it has been suggested to have sent less than 1% of operational waste to landfills and to achieve a recycling rate of more than 90% by 2025.

For more information, see our [Documents Center](#):

- *HSE Policy*
- *HSE Management System*
- *Packaging Factsheet*
- *Office Printing Factsheet*
- *Circular Economy Factsheet*

II. HIGHLIGHTS

1. Our results in 2018

Table 1 : Hazardous waste in tons

	2016	2017	2018
Hazardous waste recycled	36 079	34 824	27 242
Hazardous waste incinerated with thermal recovery	48 530	52 075	58 119
Hazardous waste incinerated without thermal recovery	110 430	52 437	37 280
Hazardous waste sent to authorized landfills	3 013	3 309	2 769
Total hazardous waste of Sanofi	198 057	142 645	125 410

The decrease for hazardous waste compared to 2017 (-12%) is mainly due to an internal biological treatment for slurry at the Elbeuf site^(a) (implementation of the new wastewater treatment plant enabling the increase of on-site treatment).

Hazardous waste disposed of in a landfill represents 2.3% of the total quantity of hazardous waste emitted by the company. This ultimate stream is only used when local incineration treatment infrastructure is not available

Table 2 : Non-hazardous waste in tons

	2016	2017	2018
Non-hazardous waste recycled	89 140	90 062	91 642
Non-hazardous waste incinerated with thermal recovery	24 653	28 320	18 846
Non-hazardous waste incinerated without thermal recovery	17 427	17 103	12 929
Non-hazardous waste sent to authorized landfills	17 467	20 532	19 008
Total non-hazardous waste of Sanofi	148 687	156 017	142 425

It should be noted that non-hazardous building waste is not included in the data below, even though Sanofi focuses on recovery after treatment.

The amount of non-hazardous waste (excluding canteen waste) is down by - 9 % compared to 2017. This decrease is mainly due to a decrease of activity on fermentation site.

Globally, the generation of total waste has decreased by 10% compared to 2017.

2. Actions to combat food waste

In France, many sites (tertiary, R & D and industrial) have already starting taking action to avoid food waste. They implemented organizational initiatives that can be classified into three categories:

- Reduction of waste at the source, in particular by respecting precise weights set out in contracts and by regular surveys, particularly during low attendance periods;
- Responsible food management and more closely adapting quantities to needs, establishing a “just in time” flow for certain stands, asking people pay for bread to avoid routinely taking bread that then goes to waste, reducing offerings at the end of the service and introducing payment by weight (salad and fruit self-service);
- Management of leftovers and waste at the end of the chain by reusing vegetables from the day before, installing sorting bins for better waste recovery, and setting up contracts for food donations with approved associations for people in need.

In addition, awareness-raising campaigns are regularly carried out for 69.5% of French sites, which include weighing leftovers (notably bread) and communicating this information to diners, raising awareness about waste sorting thanks to the establishment of sorting bins, and sharing anti-waste best practices.

3. Optimizing solvent use for better waste management

At different steps of manufacturing our products we use solvents, which may contribute to emissions of volatile organic compounds (VOCs) and result in the output of hazardous waste. Sanofi has developed tools and performance indicators to optimize the use of solvents in our industrial processes (chemical synthesis, cleaning equipment, etc.) while minimizing their environmental impact. It is crucial to make sound choices at the earliest stages of product development, since it is often difficult to change processes later on. To help our teams make decisions on a daily basis, we updated our internal standards in 2013 with the aim of providing guidance to choose the most appropriate solvents:

- Selecting the least toxic solvents;
- Reducing the quantities of solvents used;
- Promoting the use of recycled solvents whenever possible.

4. Making the best use of blister packaging materials

To reduce waste at the source, we seek to optimize the utilization of blisters made of PVC/aluminum and aluminum/aluminum, which provide the packaging for many of our products. This optimization initiative concerns 46 Sanofi production sites. We carry out studies to limit package sizes in order to decrease the consumption of cardboard, PVC and aluminum. Another aspect of our optimization approach involves increasing the number of boxes per pallet transported and filling trucks, barges and other means of transportation to maximize occupancy.

We also perform life cycle analysis of packaging approaches using specially-designed software. An expert third party reviews the resulting analysis to help quantify the environmental impact of our packaging materials.

5. Supporting take-back programs to collect unused medicines

If unused medicines are not disposed of properly, they may potentially be found in the environment. Sanofi considers it to be our responsibility to contribute to the protection of natural resources and local ecosystems by providing support for targeted local take-back programs to collect unused medicines. We encourage the use of incineration instead of landfilling

to dispose of our products. Sanofi supports take-back programs in many countries and issues recommendations for consumers about what to do with their unused medicines.

For more information, see our [Documents Center](#):

- *Green Chemistry Factsheet*
- *Packaging Factsheet*
- *Protection of the Atmosphere Factsheet*
- *Water Resource Management Factsheet*
- *Disposal of Unused Medicines and User Recommendations Factsheet*