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Protection of the Atmosphere

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GRI Standards:

305-6, 305-7: Emissions

EXECUTIVE SUMMARY

Some of Sanofi's chemical and pharmaceutical processes involve the use of solvents and fuel oils that may be a source of air pollution that can impact local air quality.

In line with our commitment to limit and gradually reduce our emissions of carbon dioxide (CO₂), volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sulfur oxides (SO_x), Sanofi has developed an environmental reporting tool to accurately account our footprint, as well as to set up adapted actions on our sites and operate specific equipment to meet our objectives.

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1. Background

Sanofi is concerned not only about carbon dioxide (CO₂) emissions, but about all air emissions responsible for impacting local air quality, including:

- volatile organic compounds (VOCs);
- sulfur oxides (SO_x);
- nitrogen oxides (NO_x); and
- ozone depleting substances (ODS).

Some of our activities may be a source of air pollution:

- VOCs are primarily emitted by chemical processes and by some pharmaceutical processes involving the use of solvents;
- fuel oils used in boilers for heating and steam production at Sanofi sites may be a source of SO_x and NO_x; and
- the use of heavy fuel oil and coal can be a source of fine dust emissions.

2. Policy

In line with our commitment to limit emissions resulting from our activities, Sanofi's objective is to gradually reduce emissions of VOCs, SO_x, and NO_x released into the atmosphere, in compliance with regional regulations. Thanks to our new environmental reporting tool, we are able obtain an accurate accounting of our footprint.

The calculation of VOC emissions at our sites is based on the solvents' mass balance by considering organic solvent consumption and end of life.

The annual reporting of NO_x and SO_x emissions is linked to liquid fuels, gas and coal consumption reported by the sites. This data is then compared to the site's energy consumption data.

3. Actions

3.1. VOCs

In the past, sites used different methods to calculate VOC emissions. In 2015, in order to ensure the reliability of our VOC emissions data, Sanofi changed reporting methods by sending a specific questionnaire focusing on sites that reported solvent consumption of five tonnes or more in 2014 (representing more than 68 sites). In 2016, Sanofi continued implementing its solvent management plan to improve solvent reporting and extend the reporting scope to all Sanofi sites. In 2017, following the audit comments, an updated release of the IS tool was deployed. Our management plan entailed:

- an update of the VOCs standard: clearer definitions with more guidance on methodology (update of Key Performance Indicators, adjustment of definitions, etc.);
- review of guidance to help the sites comply with the standard;
- eLearnings and webinars to share new documents;
- annual reporting;
- improvement of the survey: clearer, more detailed, and expanded to include all Sanofi sites; and
- conference calls for assistance as needed.

In order to reduce VOCs, our strategy focuses on:

- reducing emissions at the source by adapting processes and limiting the use of solvents; and
- capturing and treating residual VOC emissions.

To capture VOCs, Sanofi has set up and operates specific equipment in accordance with European regulations, encompassing the best available technologies:

- equipment to condense and trap common VOCs;
- scrubbers;
- active carbon filters; and
- thermal oxidizers for VOCs that cannot be recovered by simpler means.

3.2. SO_x & NO_x

SO_x emissions are caused by liquid fuels and coal consumption. To reduce emissions of SO_x (and also CO₂), most of our sites have replaced coal with natural gas as their primary source of fossil fuel in boilers. The fuels are used to produce electricity for emergency generators and very occasionally for heat production. Generally, by setting up means to reduce carbon emissions, we reduce SO_x emissions at the same time. Therefore, the CO₂ initiatives implemented at our sites also have an impact on SO_x and NO_x emissions.

For more information, see our [Document Center](#) : Carbon Footprint (Scopes 1, 2 & 3) Factsheet.

To date, SO_x & NO_x emissions have been calculated from energy consumption using formulas developed to over-estimate emissions and measurements for large combustion plants (>50MW).

Emission factors for SO_x and NO_x were updated and adjusted for sites that are unable to provide direct measurements.

4. Key figures

The indicators for VOC were reviewed by Statutory Auditors, who expressed an assurance specifically concerning these data as part of their review of the Universal Registration Document, which addresses the new requirements of the European directive on Non-Financial Information (transposed in French law in the Déclaration de Performance Extra-Financière - DPEF). Their assurance statement, describing the work they performed as well as their comments and conclusions, is available at the end of the URD 2021.

For more information, see our [Publications](#).

4.1. VOCs AND SOLVENTS

An internal Sanofi standard based on European directives is applied in all regions.

Volatile organic compounds (VOCs) (tonnes)	2021	2020	2019 (baseline year)	Change vs 2019 (%)
VOCs (estimated)	2,708	2,861	2,932	-8%
SO _x - direct emissions	110	176	203	-46%
Solvents (tonnes)	2021	2020	2019 (baseline year)	Change vs 2019 (%)
Solvents used	164,938	190,691	184,456	-11%
% regenerated	57%	63%	62%	-8%

4.2. NO_x AND SO_x EMISSIONS

NO_x and SO_x are calculated through natural gas consumption and by direct measurement for large combustion plants.

NO _x (tonnes)	2021	2020	2019 (baseline year)	Change vs 2019 (%)
NO _x - direct emissions	471	490	493	-4%

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