

Our SHE goals and performance

Greenhouse Gas Emissions

Energy is a variable and significant long-term cost within our operations. Inefficient use of energy has short term financial consequences via carbon taxes and/or fuel/energy taxes and regulations as well as longer term climate change consequences e.g. extreme weather conditions which could impact on operations. Most of the energy used by Roche is 'generated' via the burning of fossil fuels, which releases the GHG, carbon dioxide (CO₂). Saving energy as well as improving energy efficiency reduces GHG emissions and other pollutants which improve the quality of the air. These opportunities reduce operating costs for the company, increase the profit margin and contribute to Roche's reputation as a socially and environmentally responsible organisation.

Our goal for improving energy efficiency and reducing energy consumption (GJ)/employee (energy intensity), therefore, also applies to GHG emissions: a 15% reduction, measured in tonnes per employee by 2025 from 2015 levels. Driven by the decrease in energy consumption and in parallel the decrease in the use of fossil fuels, we saw a continued decrease in CO₂ emissions over the past years.

The absolute emissions from our own operations (scope 1) and from purchased energy (e.g. electricity, scope 2) further decreased by approximately 8% from 2019 to 2020. Per employee, we already reached our 2025 goal in 2017 and 2018. Consequently, the goal for 2019 had been set at a further 3% reduction in emissions per employee that was reached in 2019 with a reduction of approximately 13% compared to 2018.

In 2020, we further improved our emissions per employee by 10% compared to 2019 (see **Figure 1**).

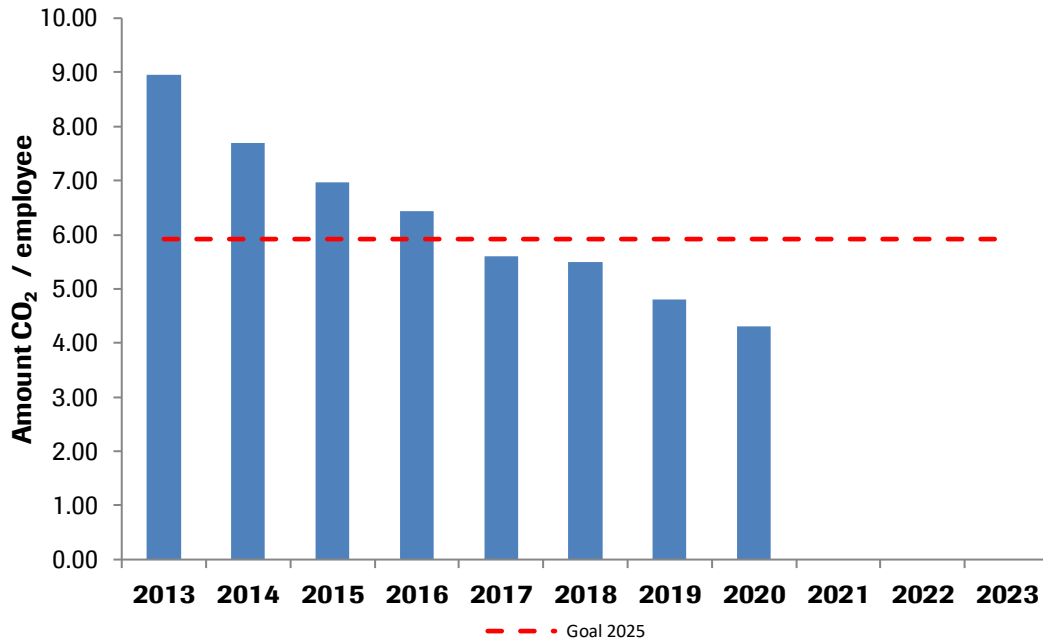
This, however, was also positively impacted by the Covid-19 pandemic.

Roche recognises that climate change is one of the largest global risks and we are addressing this issue as matter of urgency. Since the early 2000s, Roche has been working towards a low-carbon future.

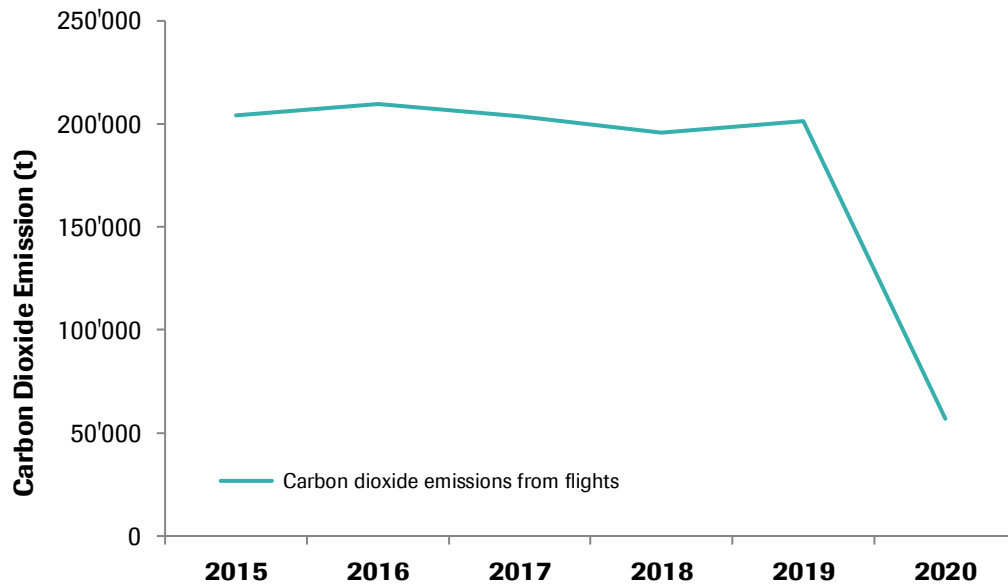
Roche's long-term goal is to reduce emissions from owned or controlled sources or from the generation of purchased energy (scope 1 & 2) to zero by the mid of this century.

Carbon dioxide from air travel decreased significantly due to the Covid-19 pandemic by approximately 72% in 2020 compared to 2019 (see **Figure 2**). As a consequence, our business has not been sensibly affected though. Hence, there is evidence now that even after a return to a so-called "normality" in our business behaviour after the pandemic, an appreciable reduction of our air travel compared to 2019 and the years before should be feasible.

CO₂ intensity (amount of CO₂ t, (Scope 1 & 2)/employee) - Figure 1



Carbon dioxide emissions from business flights - Figure 2



Halogenated hydrocarbons

Halogenated hydrocarbons which contain chlorine, for example chlorofluorocarbons (CFC) and hydrochlorofluorocarbons (HCFC) also damage the ozone layer. A Group directive on the progressive phasing out of CFCs and HCFCs was therefore set up which committed to their elimination from cooling and fire extinguishing systems by 2010. However, several projects to replace HCFCs in refrigeration units have been delayed by the lack of accepted alternatives in some countries. Additional delays have been caused by the acquisition of new operations which work towards separate timelines to give them the same time frame as sites involved in the original process.

Halogenated hydrocarbons which contain fluorine, for example hydrofluorocarbons (HFC) and perfluorinated carbons (PFC), which are often used as replacements for HCFCs and CFCs, do not affect the ozone layer but have a considerable global warming potential and are also persistent in the atmosphere. We do not consider them to be a suitable long-term alternative and we aim to phase out these compounds. Plans are in place and investment projects are being implemented to meet this goal. As there are cooling plants / machinery where no alternatives for HFC or PFC refrigerants are available, a complete phase out is not possible. A residual amount of approx. 10% of such compounds is being tolerated for the moment.

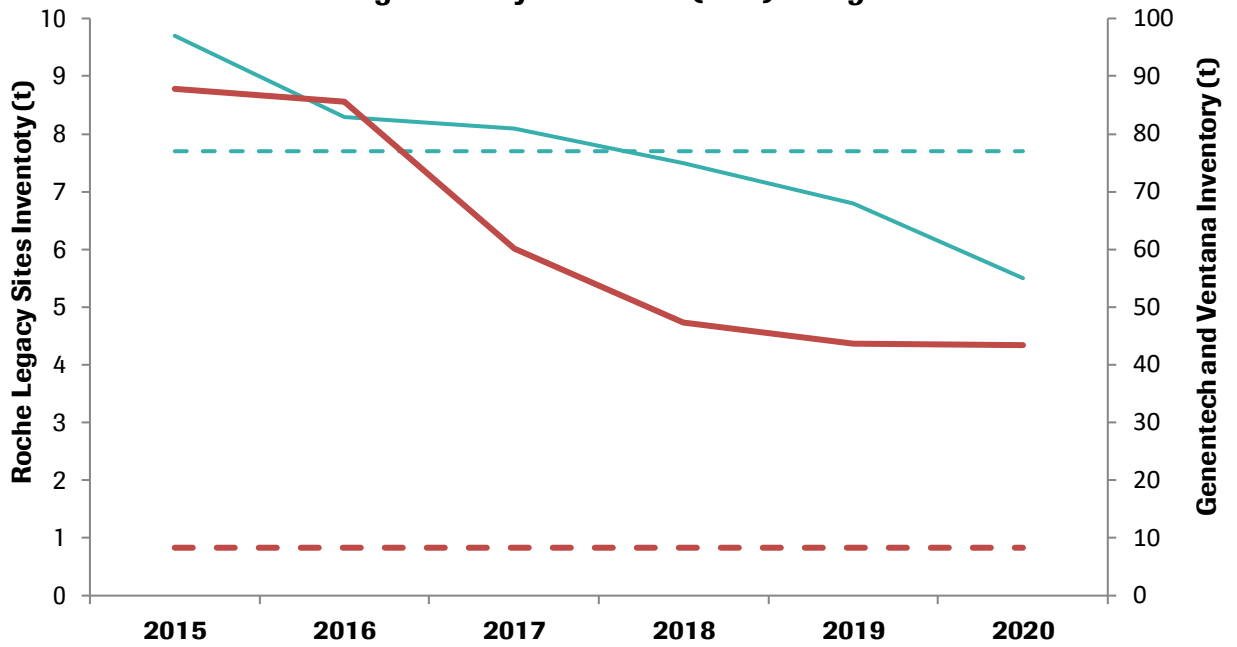
Nevertheless, we have set now an ambitious **“zero inventory”** goal by the end of **2030** to demonstrate our intention to totally phase-out all these substances within a 10-year time frame.

The inventory of halogenated hydrocarbons for the Roche Group decreased from 114.3t in 2017 over 91.3t in 2018 to 90.8t in 2019, but increased in 2020 again to 94.1t (including rented and leased buildings; global inventory including Chugai, Genentech and Ventana). This increase is mostly due to Chugai's increasing inventory in 2020. Related emissions totalled 1.5t (-32% compared to 2019). Future reductions in the inventory are expected to be accompanied by reduced amounts of emissions.

By the end of 2015, legacy Roche had reduced total quantities of these substances by 89.8%. We aimed then to build on this success by adding further goals. One goal was to reduce the total quantities by a further 20% by the end of 2020 for all legacy Roche sites, from 9.5t to 7.7t. We were able to reach this goal in 2018. The current inventory in Roche legacy sites is 5.5t (see **Figure 3**). Hence, Roche Diagnostics Legacy and Pharma Legacy sites achieved a combined K6 inventory reduction of 44% against the 2015 baseline, which is more than double the reduction target for 2020.

For sites acquired after 2002 (in particular Genentech and Ventana), we set a similar goal with another timeline. Since 2010, Genentech and Ventana have been aiming to reduce their inventory by 90%, to 8.3t in 2022. As of December 2019, the weight of inventory was 43.6t and this slightly decreased to 43.4t in 2020 (see **Figure 3**). The plan is to remove the excess inventory of approx. 35t within the next 2 years (until the end of 2022).

Halogenated Hydrocarbons (tons)^{1,2} - Figure 3



1. used as refrigerants / fire suppressants

2. without Chugai

— Roche Inventory (Legacy Sites)

- - - Legacy Sites Goal 2020

— Genentech and Ventana Inventory

- - - Genentech and Ventana Goal 2022