HUBER+SUHNER Group
Global greenhouse gas emission inventory 2018

HUBER+SUHNER
Excellence in Connectivity Solutions

Background

sinum AG, pioneers and experts in corporate ecobalancing and environmental communication with more than 20 years of experience, has been advising and supporting the HUBER+SUHNER Group in the realization of its environmental and greenhouse gas (GHG) accounting and reporting since 2007. The Global GHG emission inventory in its current form has been in place since business year 2012 and forms the basis for the verification of the HUBER+SUHNER's Group GHG emissions and for climate-related communication. It is avialable on hubersuhner.com since 2018.

Methods, tools and procedures

The inventory is based on the results of the annual ECOPRO Efficiency Profile[1] and complies with the WRI/WBCSD Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition). The HUBER+SUHNER Group has been responsible for providing the data, which form the basis for calculating GHG emissions. To ensure data quality, sinum checked the data received and generated questionnaires to clarify uncertainties. Recommendations were also made for continuous improvement of data collection and management. As recommended by CDP and the GHG Protocol since 2015, the global warming potential (GWP) factors have been taken from the IPCC Fifth Assessment Report (AR5). The inventory results were calculated by using expert system REGIS and ecoinvent database version 3.5.

Covered boundaries and known exclusions

The scope of the GHG inventory considered the activities of the HUBER+SUHNER Group in Switzerland (2 sites) and since 2013 also the most important international sites (currently eight international sites[2]). For the Swiss sites and China (boundary extension setup in 2015 with inclusion of own copper wire and plastics) an exhaustive GHG inventory was compiled. Whereas the other international sites received intermediate goods from the sites in Switzerland, the inventory of the international facilities included auxiliary materials, packaging, energy, disposal, water, transports of products and business travel. Scope 3 included GHG emissions from fuel-and-energy-related activities not included in Scope 1 and 2, purchased goods and materials, business travel, downstream transports, water, waste generated in operations and commuting (Switzerland only). Data collection has been continuously expanded and improved, e.g. in 2018 data for new types of metals and plastics in China, cooling agent in Poland, Malaysia and Tunisia and goods transport Brazil were made available and included for the first time. Overall, data availability and quality can be considered as good.

GHG emissions of the HUBER+SUHNER Group for 2018

Total GHG emissions:
81'562 t CO2eq (increase of 14 % in reference to 2017 v35)

Scope 1:
3'663 t CO2eq (decrease of 55 % in reference to 2017 v35)

Scope 2:
14'113 t CO2eq (decrease of 2 % in reference to 2017 v35)

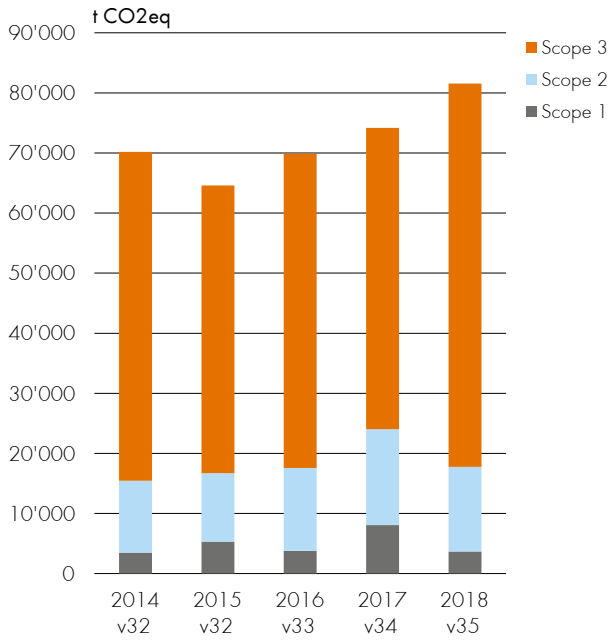
Scope 3:
63'786 t CO2eq (increase of 29 % in reference to 2017 v35)

The trend of rising in total GHG emissions, which began in 2016, continued in 2018 (as last year same growth rate as net sales). This is attributable to the increase in Scope 3, which was mainly due to the production-related increase in the goods purchased (especially plastics in Switzerland) and increased air freight from Switzerland, Brazil and Poland. The purchase of electricity from hydropower and the reduction of purchased heat at the Pfäffikon site are mainly responsible for the slight decrease in Scope 2. The very sharp decrease in Scope 1 is almost exclusively attributable to the reduction in SF6 emissions in Switzerland.

The following figures show relevant breakdowns of the HUBER+SUHNER Group GHG emissions for 2018[3] and previous years.

1 Extended corporate ecobalancing including internal peer review, standardised since the mid-nineties.
2 China, Poland, Brazil, Germany, Malaysia, Tunisia, UK and India.
3 For the 2018 inventory the actualized database v35 was used. Changes to former version v34 in Scope 1 (no change) and Scope 3 (-2 %) are not relevant, while the recalculated Scope 2 emissions are 10% lower. Therefore, the recalculated period 2017 (2017 v35) is shown only in figure 2 (right). To facilitate the annual comparison, periods 2015 to 2017 are shown according to previous year's calculations (i.e. 2017 v34, respectively 2017 v35).

Overview scopes



Overview sites

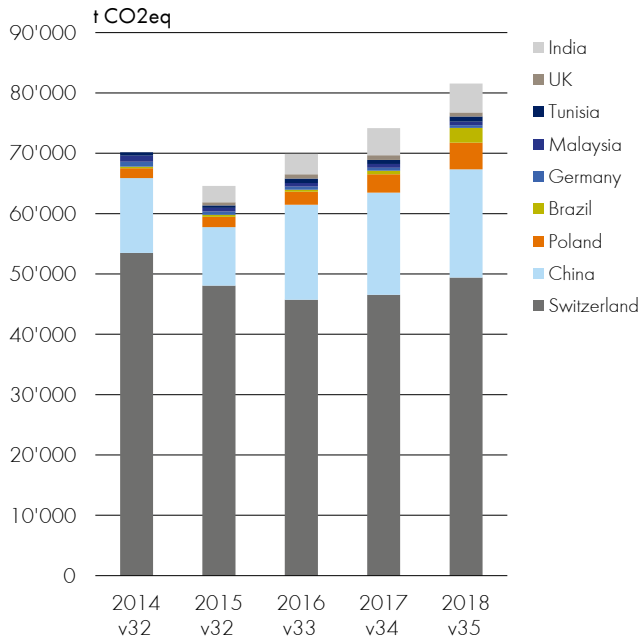
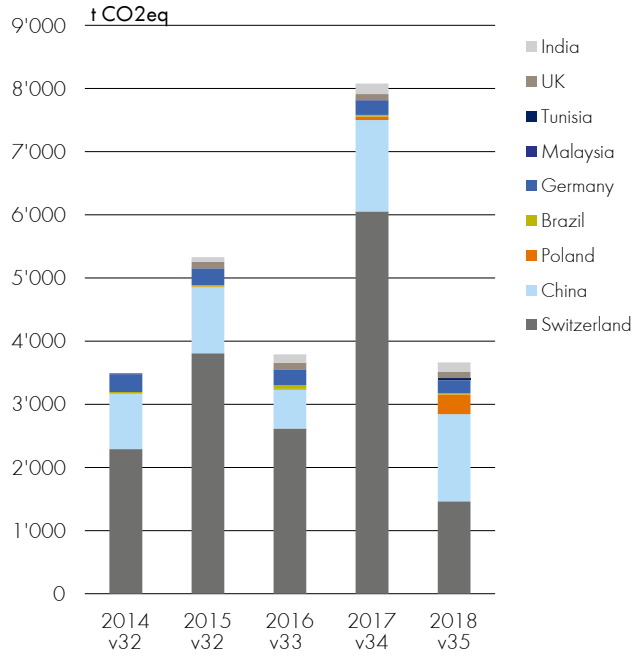


Fig.1: Total GHG emissions 2014-2018: Breakdown by Scopes (top) and breakdown by countries (bottom)

Scope 3 emissions (see figure 3 and 4) and the Swiss sites dominate the breakdowns by scopes and countries. The economic upswing at HUBER+SUHNER Group that has started in 2016 is accompanied by an increase in total emissions.

Scope 1



Scope 2

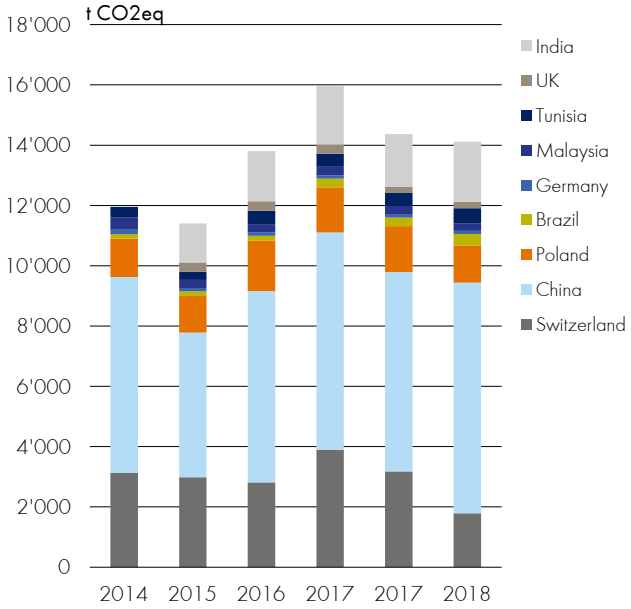


Fig.2: Breakdown of GHG emissions by country 2014-2018: Scope 1 (top) and Scope 2 (bottom)

The main GHG emitters in Scope 1 were heating with 28 % in Switzerland and SF6 emissions with 22 % in China. SF6 emissions in Switzerland have fallen sharply and now account for 10 % (see last row in table on page 4). The clearly visible increase in Poland is due to a change in boundary for heating (new own heat production). Thanks to the purchase of renewable electricity at the Pfäffikon site, in Scope 2, a relevant reduction was achieved compared to 2017 v34. Due to the decline in the CO2 intensity of electricity in the updated database, however, emissions almost stagnated compared to 2017 v35.

Scope 3

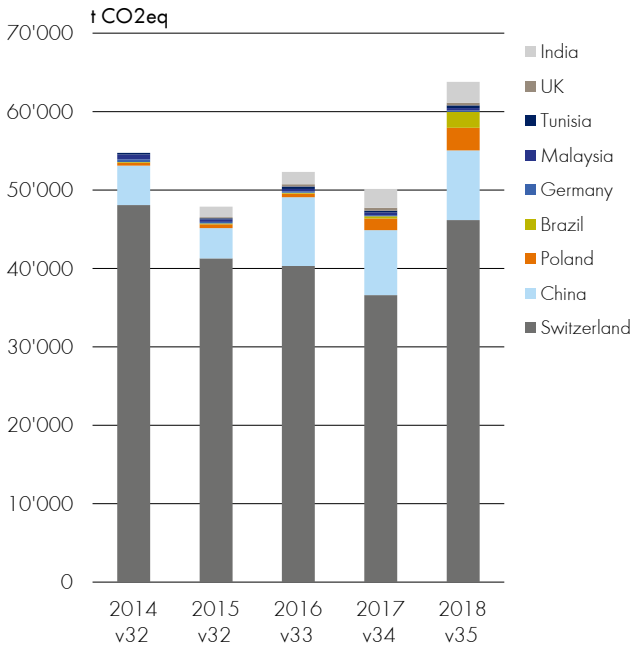


Fig.3: Breakdown of Scope 3 GHG emissions on countries 2014-2018

Scope 3 was dominated by the intermediate goods produced in and shipped off the Swiss sites. The increase in emissions in Switzerland was directly linked to production growth with correspondingly higher goods purchases (especially plastics) and increased air freight. Other relevant drivers are the increase in air freight from Poland and Brazil.

Scope 3

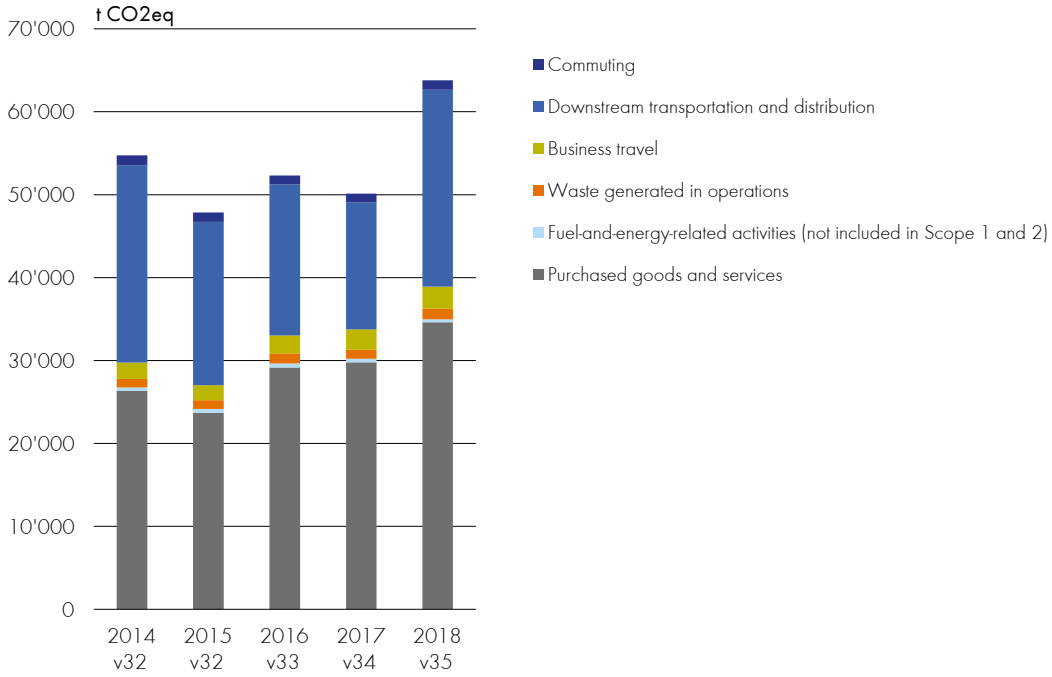


Fig.4: Breakdown of Scope 3 GHG emissions on sources 2014-2018

55 % of emissions from downstream transportation and distribution were caused by air freight from Switzerland (international sites contributed an additional 20 %). The share of the Group's truck transports amounted to 20 %. Of the purchased goods and services, 40 % were copper and 33 % plastics at the Swiss sites. The share of copper in China was 17 %.

Performance Scope 1+2

Declaration of performance in accordance with CDP Reporting (Questions CC7.9, CC7.9ab). Emissions performance calculations were market-based. Compared to the previous reporting year the Scope 1+2 emissions[4] of the HUBER+SUHNER Group decreased 26 % corresponding to 6'259 t CO2eq.

Reason	Change in emissions (t CO2e)	Direction of change	Emissions value (%)	Comments
Change in renewable energy consumption	1'324	Decreased	6	At the Pfäffikon site in Switzerland 1.6 GWh electricity from hydro power was purchased.
Other emissions reduction activities	1'121	Decreased	5	Various energy efficiency initiatives have been undertaken and are ongoing at all H+S sites, like replacement fluorescent lamps with LED lights, optimization of control/steering mechanism, closed-loop cooling system, heat recovery.
Divestment	0	No change	0	No divestment.
Acquisitions	0	No change	0	No acquisitions.
Mergers	0	No change	0	No mergers.
Change in output	2'144	Increased	9	Increase of net sales by 14 %. Only emissions of electricity were considered.
Change in methodology	1'427	Decreased	6	Change from ecoinvent database version v34 to version v35 for the background processes.
Change in boundary	140	Increased	0.6	Reduction of energy reference area in PL and UK. Inclusion of cooling agent in MY, PL and TN.
Change in physical operating conditions	218	Decreased	0.9	Due to the weather conditions in Europe, less heating energy was required at the European sites.
Unidentified	0	No change	0	No unidentified changes.
Other	4'452	Decreased	19	The management of SF6 emissions in Switzerland through monitoring and adaption of measures is continuous. Measures for early detection of leaks have been implemented and led to a very strong decrease. In addition, the district heat (supplied by the municipal utilities, with an annually changing share of energy sources) at the Pfäffikon site in Switzerland was supplied with a lower CO2 emission factor.

4 Difference to value 2017 ecoinvent database version v34

Performance science based targets

HUBER+SUHNER Group is one of 210+ leading companies aligning their strategy with the Paris Agreement through science based targets (SBT). HUBER+SUHNER aims to reduce greenhouse gas emissions by 30 percent between 2015 and 2025 in relation to the added value[5] generated. Two intensity targets were defined in 2017, for Scope 1+2 emissions and for Scope 3 emissions.

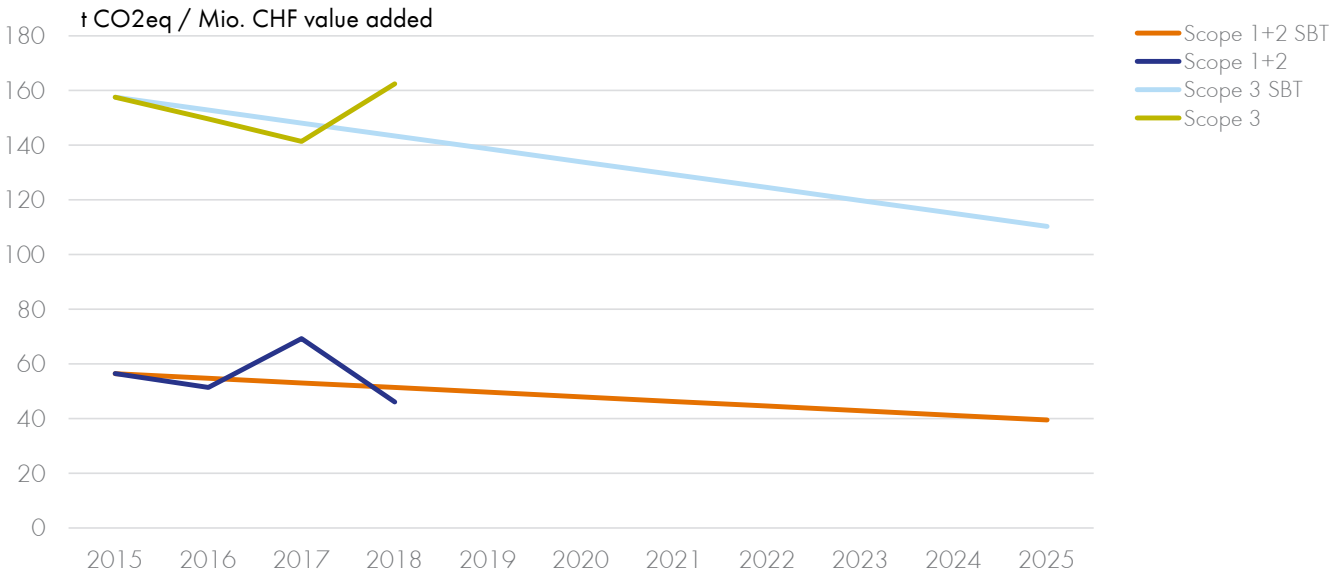


Fig.5: Monitored greenhouse gas emissions versus science-based targets reduction path

In Scope 1+2, the intermediate target 2016 and now 2018 have been achieved, while the intermediate target for 2017 was missed. The strong decrease in SF6 emissions is the main reason for falling below the base year emissions per value added by 18 % in the year under review. The renewable electricity procurement at the Pfäffikon site also contributed to this.

In Scope 3, the company missed its intermediate reduction target for the first time, by 10 %, compared to the base year emissions per value added. This increase was mainly due to the production growth with correspondingly higher goods purchases (especially plastics) and increased air freight (after the decline in 2017). Scope 3 emissions rose by almost 30 %, while value added rose by only 11 %.

5 Between 2015 and 2025, an increase in value added (activity indicator) of 15 % is estimated for H+S group (all sites). Value added is calculated from profit before income tax, depreciation and amortization plus personnel costs minus other financial result.

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INDEPENDENT ASSURANCE STATEMENT

To Huber+Suhner Group

Objective of the engagement
Huber+Suhner Group has engaged true&fair.expert llc, CH-3013 Bern (t&f), to provide a moderate independent assurance of its global greenhouse gas inventory 2018.

Scope
The assurance covers data and information provided in the global greenhouse gas inventory 2018 of Huber+Suhner Group, which was prepared by sinum AG, CH-9000 St. Gallen, on May 28, 2019. The greenhouse gas inventory includes the scopes 1, 2 and 3.

Criteria for report preparation
Huber+Suhner Group's global greenhouse gas inventory 2018 is based on

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, revised edition, by WRI/WBCSD

Assurance standards
t&f used the AA1000 Assurance Standard (2008), type 2, to guide its approach to this assurance.

Activities
Following is a summary of t&f's actions to check the accuracy, plausibility and relevance of the greenhouse gas disclosures covered by the assurance:

- ☒ Assessment of the approaches used for reporting (including materiality) and the basic concept of data analysis and aggregation;
- ☒ Interviews with management personnel responsible for the analysis and report;
- ☒ Interviews with those responsible for the collection and analysis of information;
- ☒ Validation (at the group and country level) of the systematic approaches to the collection, assembly and evaluation of information, as well as to reporting;
- ☒ Assessment (at the group and country level) of the calculation, consolidation and quality control of the information used;
- ☐ Validation of the collection, processing and forwarding of data at selected locations – a sample of sites selected according to e.g. customer expectations, feasibility;
- ☐ Validation of the collection, processing and forwarding of data at selected locations – a representative sample of sites selected.

Conclusion
t&f's conclusion has been formed on the basis of, and is subject to the inherent limitations outlined above.

Adherence to AA1000 AccountAbility Principles

- Full adherence to all three principles: Inclusivity, Materiality, and Responsiveness.

Reliability of data and assertions
Based on our work described above, nothing has come to our attention to indicate that the data and assertions in Huber+Suhner Group's global greenhouse gas inventory 2018 are not

- fairly presented,
- free of material misstatements, and
- reported in accordance with reporting criteria.

Bern, July 2, 2019

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