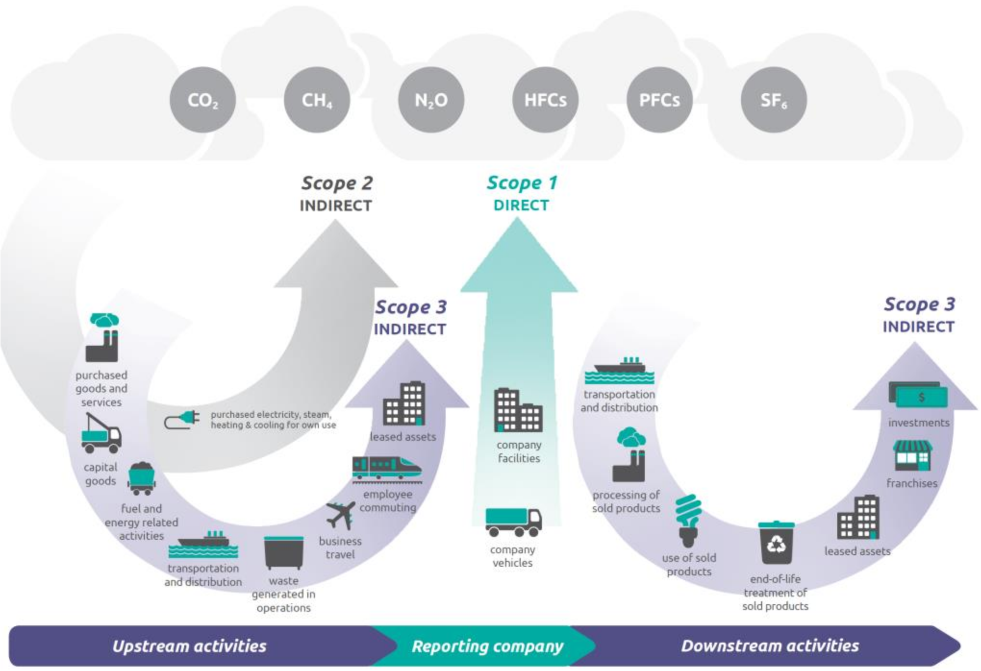
SSG Emissions Reporting Principles

Lucerne, 07th August 2023

Swiss Steel Group

The GHG[1] Protocol provides the globally most commonly used system to classify emissions

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain



1. Greenhouse Gas Protocol

Source: SSG Corporate Strategy; Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Standard, p. 5: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

The system distinguishes between Scopes 1, 2 and 3

Emissions type	Scope	Definition	Examples
Direct emissions	**Scope 1**	Emissions from operations that are owned or controlled by the reporting company	Emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment
Indirect emissions	**Scope 2**	Emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company	Use of purchased electricity, steam, heating, or cooling
	Scope 3	All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions	Production of purchased products, transportation of purchased products, or use of sold products

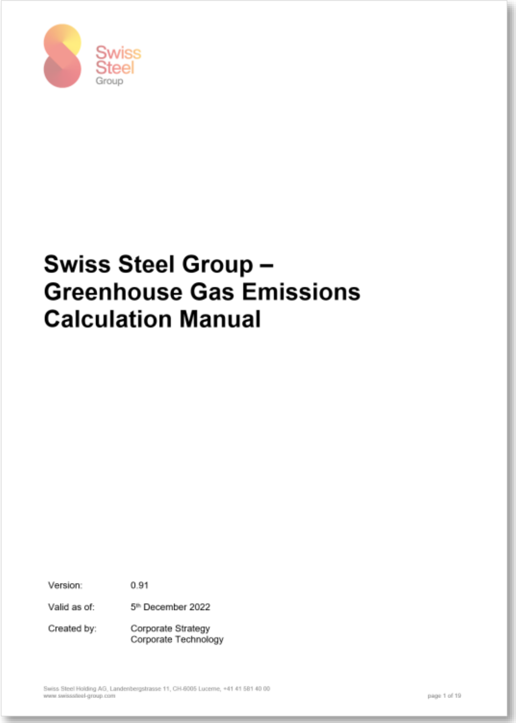
Source: SSG Corporate Strategy; Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Standard, p. 28: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

Scope 3 itself is differentiated into 15 sub-categories

	#	Category	Description
Upstream	3.1	**Purchased goods and services**	Extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2 – 8
	3.2	**Capital goods**	Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year
	3.3	**Fuel- and energy related activities (not incl. in scope 1 or scope 2)**	Extraction, production, and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year, not already accounted for in scope 1 or scope 2, e.g. upstream emissions of purchased fuels and electricity, transmission and distribution losses
	3.4	**Upstream transportation and distribution**	Transportation and distribution services purchased by the reporting company in the reporting year, incl. inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company)
	3.5	**Waste generated in operations**	Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities not owned or controlled by the reporting company)
	3.6	**Business travel**	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company)
	3.7	**Employee commuting**	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company)
	3.8	**Upstream leased assets**	Operation of assets leased by the reporting company (lessee) in the reporting year and not included in scope 1 and scope 2 – reported by lessee
Downstream	3.9	**Downstream transportation and distribution**	Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company)
	3.10	**Processing of sold products**	Processing of intermediate products sold in the reporting year by downstream companies (e.g., manufacturers)
	3.11	**Use of sold products**	End use of goods and services sold by the reporting company in the reporting year
	3.12	**End-of-life treatment of sold products**	Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life
	3.13	**Downstream leased assets**	Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor
	3.14	**Franchises**	Operation of franchises in the reporting year, not included in scope 1 and scope 2 – reported by franchisor
	3.15	**Investments**	Operation of investments (incl. equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2

Source: SSG Corporate Strategy; Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Standard, p. 32-37: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

Swiss Steel Group collects and reports its GHG[1] emissions according to a calculation manual, which applies for all SSG sites


Swiss Steel Group

Swiss Steel Group – Greenhouse Gas Emissions Calculation Manual

Version:	0.91
Valid as of:	5th December 2022
Created by:	Corporate Strategy Corporate Technology

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- Emissions are categorized in line with the GHG[1] Protocol Corporate Standard
- Emissions are tracked following a cradle-to-gate approach
- CO_2 is the only relevant Kyoto gas for direct emissions given the nature of SSG's operations. Other GHG[1] from indirect emissions are considered immaterial
- The reporting boundary includes
  - Scope 1, 2, 3.1, 3.3, 3.4, 3.5 and 3.6 emissions
  - All sites, where operational activities are conducted
  - Activities, which are either direct operational steel making activities or ancillary activities related to steel making
  - Some smaller sites are excluded, which contribute less than 2% of Group emissions

1. Greenhouse Gas

Source: SSG Corporate Strategy

Swiss Steel Group reports emissions for Scopes 1, 2, 3.1, 3.3, 3.4, 3.5 and 3.6 with clearly defined Reporting Principles

Scope	Description	SSG Reporting Principles
Scope 1	Direct emissions from combustion or processes	For sites falling under an Emissions Trading System (ETS), the respective ETS guidelines apply. Sites that do not fall under an ETS apply local emission factors for emissions from combustion and a mass balance approach for process emissions.
Scope 2	Indirect emissions from purchased power, steam, heating or cooling	The GHG[1] Protocol Scope 2 Guidance applies. Only power is relevant for SSG. Emissions are calculated according to the location-based method calculated with local grid factors. If a site procures power from specific sources or green energy certificates, emissions are also calculated according to the market-based method with source-specific emission factors. If waste energy is utilized by a third party, the site can reduce its reported Scope 2 emissions. The emissions that would have been caused by the combustion of natural gas to create the equivalent amount of energy can be deducted in line with local laws and regulations.
Scope 3	Indirect emissions not included in Scope 2	The GHG[1] Protocol Value Chain (Scope 3) Standard applies. If not otherwise stated, the average-data method applies.
Scope 3.1	Indirect emissions from purchased goods and services	SSG distinguishes more than 3’000 different input materials, which are aggregated into material categories. Secondary emission factors from public sources such as worldsteel, industry associations or other publicly available data banks, are then applied to these categories to calculate Scope 3.1 emissions. If available, primary emissions data from specific suppliers is used.
Scope 3.3	Indirect emissions from fuel- and energy related activities (not incl. in scopes 1 or 2)	All fuels considered in Scope 1 are tracked and either location-specific emission factors or secondary emission factors from public sources are applied to calculate Scope 3.3 emissions. From 2022 onwards, transmission and distribution losses are included also.
Scope 3.4	Indirect emissions from upstream transportation and distribution	The distance-based method of the GHG[1] Protocol Scope 3 Calculation Guidance is applied. SSG distinguishes five transport modes: Road, rail, inland vessels / barges, sea and costal water, and air. Emission factors for ton-kilometers from local or national ministries (e.g. German Federal Environmental Agency, Ademe, US EPA) are applied. When local or national emission factors are not available or outdated, then emissions are calculated with the EcoTransIT Emission Calculator.
Scope 3.5	Indirect emissions from waste generated in operations	SSG tracks emissions from waste EAF slag according to the worldsteel methodology. Slag used in road construction or sold to slag processing facilities is credited to overall Scope 3.5 emissions.
Scope 3.6	Indirect emissions from business travel	The GHG[1] Protocol spend-based method applies. SSG tracks emissions from air travel and rented motor vehicles and applies spend-based emission factors published by ClimateIQ.

1. Greenhouse Gas

Source: SSG Corporate Strategy

FAQ: Why are reported emissions not comparable across companies?

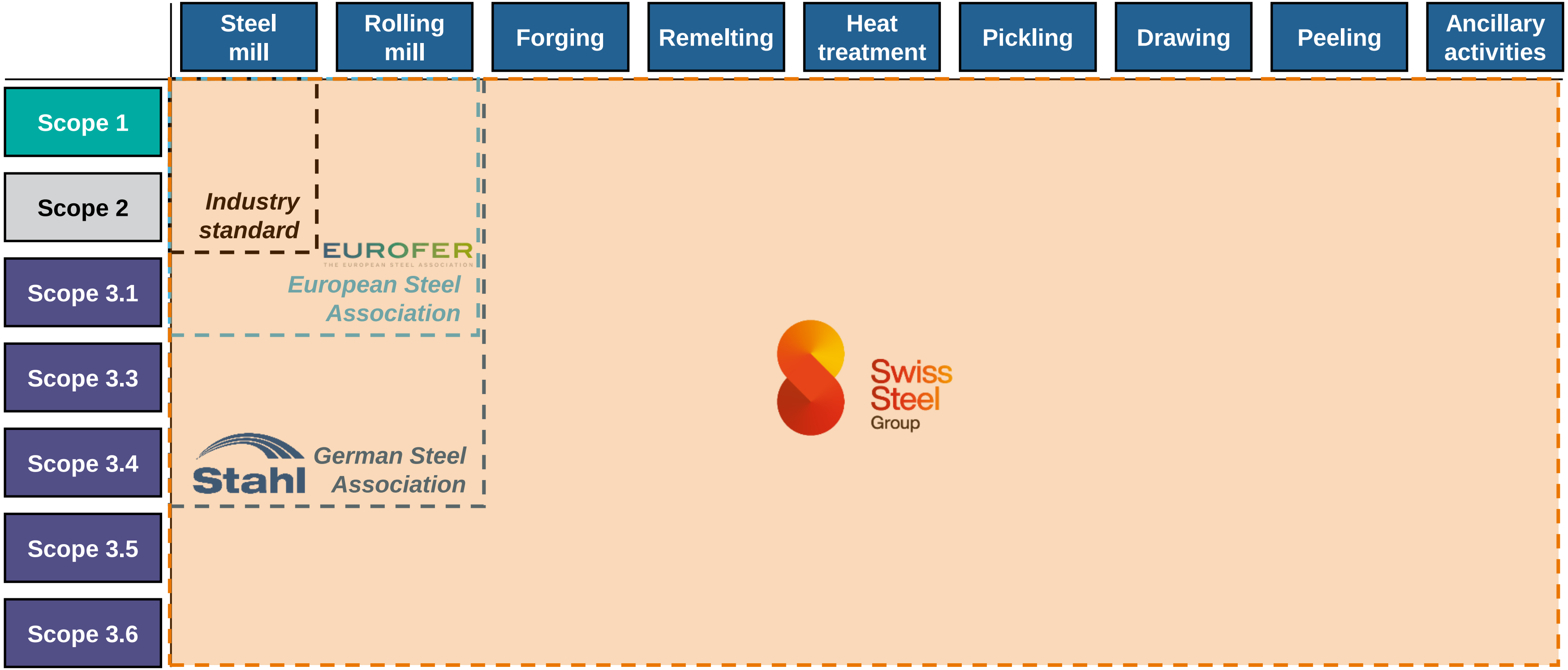
Answer

- Different companies apply different perimeters in their tracked and reported emissions
- For example, some companies report only Scope 1 and 2 emissions for their steel mill. Others on the other hand may include also emissions from their value chain (Scope 3) and/or include more activities (system boundary)
- Also, different companies may use different emission factors to calculate their emissions
- To make emissions comparable, one has to know the perimeter (system boundary + emission scopes) as well as the applied emission factors (or used emission factor data base)
- Swiss Steel Group's emission perimeter goes beyond the industries' standard (compare next page)

Swiss Steel Group

1. Greenhouse Gas
Source: SSG Corporate Strategy

The SSG emissions perimeter goes beyond the industries’ emissions tracking standards. It comprises all operational steel making activities and covers Scopes 1, 2, 3.1, 3.3, 3.4, 3.5 and 3.6



1. Greenhouse Gas
Source: SSG Corporate Strategy

Version history

Version	Description
23.02.2023	First release
07.08.2023	T&D losses added in Scope 3.3