

TRIESTE, July 18th, 2023

GHG STATEMENT 2022

Scope of this document

This statement reports the Greenhouse Gas (GHG) emissions relevant to the Fincantieri Group in the calendar year ended December 31st, 2022. It follows the operational consolidation approach as described in the Greenhouse Gas (GHG) Protocol with respect to direct Scope 1 GHG emissions, indirect Scope 2 GHG emissions and other indirect Scope 3 GHG emissions.

- Criteria used to define the scope:

Operational control approach

- Companies, sites and activities included in the reporting boundary:

The reporting boundary of the data presented in the report relates to the companies in the consolidation area used for the “2022 Consolidated Non-Financial Statement”

- Perimeter limitations:

Information is disclosed at Group level for all the emission categories with the exemption of Scope 3 categories:

- Employee Commuting – data collected for Fincantieri S.p.A.
- Upstream Transportation and Distribution – raw materials data collected for Fincantieri S.p.A. and Fincantieri Marine Group

- Temporal perimeter of data:

January 1st, 2022 –December 31st, 2022

References

- Types of GHG gases included in the calculation:

GHG considered are CO₂, CH₄, N₂O, GHG, aggregated in CO₂e

- Standard methodologies:

For the sites based in Italy, energy consumption data are provided by the Energy Manager and correspond to those transmitted annually to FIRE (Italian Federation for Energy Efficiency) to be compliant with national law, imposing a balanced energy use for industrial companies with primary energy consumption over 10,000 tep/year. The data referring to VARD, Fincantieri Marine Group and Fincantieri Marine Systems North America subsidiaries are provided by relevant offices/sites of each company.

Main estimation method for the quantification of GHG emissions is based on the formula:

$$\text{GHG Emissions} = A * \text{EF} * \text{GWP}$$

Where:

- GHG emissions is the quantity of GHG (expressed in CO₂, CH₄, N₂O) measured in metric tonnes of CO₂ equivalent;
- A is Activity data, which measures burned fuel [kg], [m³], [l] or [tons], energy [MJ] o [kWh];
- EF (Emission Factor) is the quantity of GHG emissions per every unit of activity data;
- GWP is Global Warming Potential (IPCC, 4AR): 1 for CO₂; 25 for CH₄ and 298 for N₂O.

Emissions calculation has been carried out based on the following references related to the CO₂e emission factors, standards and methodologies.

- References:

- Global Reporting Initiative's (GRI) Sustainability Reporting Standards of 2021, with the exception of the specific Standards: GRI 303 and GRI 403 published in 2018, GRI 306 published in 2020;
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition);
- GHG Protocol Scope 2 Guidance: an amendment to the GHG Protocol Corporate Standard – international;
- IPCC Guidelines for National Greenhouse Gas Inventories, 2006;
- UK Government GHG Conversion Factors for Company Reporting, 2022 (DEFRA 2022);
- Ispra National Inventory Report 2021 (ISPRA 2021);
- "European Residual Mix 2021" (AIB 2022);
- Ecoinvent version 3.8;
- Terna "International comparisons", 2019 (TERNA 2019);
- EU Consumption Based Accounting Tool – March 2022;
- IMO Energy Efficiency Design Index (EEDI) MARPOL Annex VI;
- Factory Acceptance Tests (FAT);
- Internal technical documents and designs;
- External data from suppliers.

- Methodologies and standards used to calculate GHG emissions:

The emissions have been estimated following the guidelines of the Greenhouse Gas (GHG) Protocol.

Data collection and estimation methodology

- Presence of any estimates, relative calculation methodology and % in relation to total GHG emissions reported:

There aren't estimates or relative calculation methodology.

- Systems, procedures and place for the collection, management and consolidation of data relating to reported GHG emissions:

The data collection is coordinated and managed by the Sustainability unit, in collaboration with the multifunctional Working Group. The Sustainability reporting process has been set up in accordance with an internal procedure that defines the roles, responsibilities, and operating methods that Fincantieri S.p.A.'s and subsidiaries' staff must follow to guarantee the proper management of all the data required. The reporting process was supported by a new software that allowed a greater automation both in collecting and processing information, as well as data visualization based on different geographical areas. The collected data has undergone processing and validating by the respective function managers.

GHG Emission Quantities

In summary:

- The Group's Scope 1 direct emissions calculation has been performed by multiplying the direct GHG source quantity by its emission factor.
- Scope 2 indirect emissions instead are generated offsite, due to the electricity generation. Calculation has been performed by multiplying the purchased electric energy quantity by its emission factor according to two different metrics described by the GHG Protocol using either Market-Based or Location-Based factor:
 - Market-Based reflects emissions from energy that companies have purposefully chosen;
 - Location-Based reflects the average emissions intensity of grids on which energy consumption occurs.
- Scope 3 emissions are related to the downstream and upstream value chain throughout the life cycle of the product sold.

Scope 1

The following tables display 2022 Scope 1 emissions consolidated, disaggregated by country/region, business division, facilities:

Scope 1 emissions (metric tons CO ₂ e) Consolidated data
118,461

Country/Region	Scope 1 emissions (metric tons CO ₂ e)
Italy	79,326
Norway	4,880
Romania	5,722
Brazil	0
Vietnam	6,748
United States of America	21,785

Business division	Scope 1 emissions (metric ton CO ₂ e)
Shipbuilding	92,507
Offshore	11,597
Equipment Systems & Services	14,357

Facility	Scope 1 emissions (metric tons CO ₂ e)
Office Italy	14,218
Office United States of America	108
Office Norway	31
Shipyards Italy	65,107
Shipyards Norway	4,849
Shipyards Romania	5,722
Shipyards Brazil	0
Shipyards Vietnam	6,748
Shipyards United States of America	21,678

Scope 2

The following tables display 2022 Scope 2 emissions (location based, market based) consolidated, disaggregated by country/region, business division and facility:

Scope 2 emissions (metric tons CO ₂ e) Consolidated data – location-based	Scope 2 emissions (metric tons CO ₂ e) Consolidated data – market-based
112,204	32,653

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Italy	73,693	26,163
Norway	354	0
Romania	13,177	0
Brazil	0	0
Vietnam	6,400	6,400
United States of America	18,580	90

Business division	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Shipbuilding	94,536	15,943
Offshore	6,742	6,400
Equipment Systems & Services	10,926	10,310

Facility	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Office Italy	9,975	10,221
Office United States of America	939	90
Office Norway	12	0
Shipyards Italy	63,718	15,942
Shipyards Norway	342	0
Shipyards Romania	13,177	0
Shipyards Brazil	0	0
Shipyards Viet Nam	6,400	6,400
Shipyards United States of America	17,641	0

Scope 3

The following tables display 2022 Scope 3 emissions consolidated and divided by GHG Scope 3 Categories and the related applied methodology:

Scope 3 emissions (metric tons CO ₂ e) Consolidated data
22,928,859

GHG Scope 3 category	Scope 3 emissions (metric tons CO ₂ e)	Emissions calculation methodology
Purchased goods and services	997,708	The calculation is based on the purchase of goods for the production of the Group's ships with the exception of the VARD group. For each ship under construction, the carbon footprint resulting from the materials used was calculated and the annual emissions were then broken down according to the percentage of cost associated with each order. The calculation follows an average-data method and the specific emission factors used are a combination extracted from DEFRA 2021 and Ecoinvent 3.8.
Capital goods	56,186	The calculation is based on Fincantieri's investment expenditures, following average spend-based method, in accordance with the guidelines of the GHG Protocol. The sources of emission factors are set in the "EU consumption-based accounting tool – March 2022" which are multiplied by the capital expenditure in each NACE category.
Fuel and energy related activities (not included in Scope 1 or 2)	30,866	The calculation is based on fuel and electricity energy consumed by Fincantieri following an average data method, in accordance with the guidelines of the GHG Protocol. Emissions are calculated by multiplying fuel and electricity quantities by relevant upstream emission factors. The specific emission factors used are extracted from DEFRA 2022.
Upstream transportation and distribution	25,280	The calculation considers the quantity of the procured raw materials by Fincantieri S.p.A. and Fincantieri Marine Group as well as the internal handling of Fincantieri S.p.A. and VARD ship sections. The calculation of the procured raw materials is based on a distance-based method, in accordance with the guidelines of the GHG Protocol. The specific emission factors used are extracted from DEFRA 2022. The raw materials considered in this calculation are iron, paint, carbon dioxide, nitrogen, oxygen, and argon. The calculation of the internal handling of the ship sections is based on a fuel-based method, in accordance with the guidelines of the GHG Protocol.

GHG Scope 3 category	Scope 3 emissions (metric tons CO ₂ e)	Emissions calculation methodology
Waste generated in operations	6,707	The calculation is based on waste generated through Fincantieri Group operations. The emissions are calculated through the average-data method, in accordance with the GHG Protocol. The specific emission factors used are extracted from DEFRA 2022.
Employee Commuting	7,526	The calculation, performed through the distance-based method, is derived from the mobility survey conducted in 2022, which involved all Fincantieri S.p.A. employees (including blue collars). An average ton of CO ₂ e per employee, calculated using specific emission factors extracted from DEFRA 2022, has been multiplied by the total number of employees of Fincantieri S.p.A in 2022.
Business travel	5,548	The emissions are derived from the business travel, and include emissions generated by flights, trains and cars used by staff members on a mission. The emissions refer to the whole Fincantieri Group and have been estimated through the distance-based method, following the guidelines of the GHG Protocol. The specific emission factors used are extracted from DEFRA 2022.
Use of sold product	21,798,611	<p>The emissions derived from the ships sold by the Group follow a direct use-phase emissions method, in accordance with the GHG Protocol.</p> <p>Data from ships delivered in 2022 by the Group (19 in total) have been collected and analysed to simulate a realistic forecast for the different portfolios: Cruise, Navy and Special Vessels (including the barges from Fincantieri Marine Group). These initial estimations account for both navigation and port emissions and are based on a hybrid approach. The estimations are conservative as they do not reflect the gradual introduction of decarbonisation measures in navigation, such as biofuels and green hydrogen.</p> <p>Cruise Vessels:</p> <ul style="list-style-type: none"> - Navigation emissions have been estimated based on a realistic yearly voyage profile, provided by a client, which has been simulated for the ships estimated 25-year lifetime. Fuel consumption and energy requirements have been derived from technical documents. - Port emissions have been estimated based on a gradual uptake of the connection of ports to the electrical grid. Thus, a profile of 50% of time connected to the local

GHG Scope 3 category	Scope 3 emissions (metric tons CO ₂ e)	Emissions calculation methodology
		<p>electrical grid (with a supply of renewable energy) and 50% of time with energy generated by generators onboard have been considered. Fuel consumption and energy requirements have been derived from technical documents.</p> <p>Navy Vessels:</p> <ul style="list-style-type: none"> - Navigation emissions have been estimated using the specific fuel consumption and energy requirements data coming from technical documents and engines' Factory Acceptance Test (FAT). - Port emissions have been estimated based on a major presence of navy ports with the connection to the electrical grid. Therefore, a profile of 90% of time connected to the local electrical grid (with a supply of renewable energy) and 10% of time with energy generated by generators onboard have been considered. <p>Special Vessels</p> <ul style="list-style-type: none"> - Navigation emissions have been estimated using the specific fuel consumption and energy requirements data coming from technical documents. Port emissions have been estimated using the specific fuel consumption and energy requirements data coming from technical documents such as FATs and engine data and are based on profile of 100% of time with energy generated by generators onboard.
Other (upstream) - water	429	The calculation is based on water consumption by Fincantieri Group. These data include the emissions related to the withdrawal of municipal water, groundwater, and seawater. The emissions have been estimated following the guidelines of the GHG Protocol. The specific emission factors used are extracted from DEFRA "Greenhouse gas reporting: conversion factors 2022".

- The unit of measure used for each Scope reported are:

<p>Scope 1: ton CO₂e</p> <p>Scope 2 market-based: ton CO₂e</p> <p>Scope 2 location-based: ton CO₂e</p> <p>Scope 3: ton CO₂e</p>

Scope 2 emissions are expressed in tonnes of CO₂; however, the percentage of methane and nitrous oxide has a negligible effect on total greenhouse gas emissions (CO₂ equivalent) as inferred from the relevant technical literature.

EMISSION FACTORS

In summary here below the emissions factors used and the relative references, divided by Scope:

Scope 1

Description	Country/Region	Emission factor	U.M.	Sources
Natural gas	USA, Norway, Romania, Vietnam, Brazil	0.00202	ton CO ₂ e/Sm ³	DEFRA 2022
Natural gas	Italy	0.00198	ton CO ₂ e/Sm ³	ISPRA 2021
Gas oil/Diesel	USA, Norway, Romania, Vietnam, Brazil	3.230	ton CO ₂ e/ton	DEFRA 2022
Gas oil/Diesel	Italy	3.169	ton CO ₂ e/ton	ISPRA 2021
Fuel oil	USA, Norway, Romania, Vietnam, Brazil	3.165	ton CO ₂ e/ton	DEFRA 2022
Fuel oil	Italy	3.143	ton CO ₂ e/ton	ISPRA 2021
Acetylene	USA, Norway, Romania, Vietnam, Brazil	5.757	ton CO ₂ e/ton	Ecoinvent 3.8
Acetylene	Italy	3.051	ton CO ₂ e/ton	Ecoinvent 3.8
LPG	USA, Norway, Romania, Vietnam, Brazil	2.939	ton CO ₂ e/ton	DEFRA 2022
LPG	Italy	3.026	ton CO ₂ e/ton	ISPRA 2021
LNG	Whole Group	2.559	ton CO ₂ e/ton	DEFRA 2022
Petrol	USA, Norway, Romania, Vietnam, Brazil	0.00234	ton CO ₂ e/litre	DEFRA 2022
Petrol	Italy	0.00315	ton CO ₂ e/litre	ISPRA 2021
Diesel (transport)	USA, Norway, Romania, Vietnam, Brazil	3.033	ton CO ₂ e/ton	DEFRA 2022
Diesel (transport)	Italy	3.169	ton CO ₂ e/ton	ISPRA 2021
Refrigerant gas HFC-32	Whole Group	0.675	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas HFC-134a	Whole Group	1.430	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas HFC-143a	Whole Group	4.470	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas R407c	Whole Group	1.774	ton CO ₂ e/kg	DEFRA 2022

Description	Country/Region	Emission factor	U.M.	Sources
Refrigerant gas R410a	Whole Group	2.088	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas R507	Whole Group	3.985	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas R404a	Whole Group	3.922	ton CO ₂ e/kg	DEFRA 2022
Refrigerant gas R22	Whole Group	1.810	ton CO ₂ e/kg	DEFRA 2022

Scope 2 - Location-based

Description	Country/Region	Emission factor [ton CO ₂ e /MWh]	Sources
Electricity purchased from non-renewable sources	USA	0.374	Terna 2019
Electricity purchased from renewable sources	USA	0.374	Terna 2019
Electricity purchased from non-renewable sources	Italy	0.315	Terna 2019
Electricity purchased from renewable sources	Italy	0.315	Terna 2019
Electricity purchased from non-renewable sources	Romania	0.280	Terna 2019
Electricity purchased from renewable sources	Romania	0.280	Terna 2019
Electricity purchased from non-renewable sources	Norway	0.012	Terna 2019
Electricity purchased from renewable sources	Norway	0.012	Terna 2019
Electricity purchased from non-renewable sources	Brazil	0.139	Terna 2019
Electricity purchased from renewable sources	Brazil	0.139	Terna 2019
Electricity purchased from non-renewable sources	Vietnam	0.576	Terna 2019
Electricity purchased from renewable sources	Vietnam	0.576	Terna 2019

Scope 2 - Market-based (for purchases of electricity from renewable sources, a zero-emission factor (0) is attributed)

Description	Country/Region	Emission factor [ton CO ₂ e /MWh]	Sources
Electricity purchased from non-renewable sources	USA	0.374	Terna 2019
Electricity purchased from non-renewable sources	Italy	0.457	AIB 2022

Description	Country/Region	Emission factor [ton CO ₂ e /MWh]	Sources
Electricity purchased from non-renewable sources	Brazil	0.139	Terna 2019
Electricity purchased from non-renewable sources	Norway	0.012	Terna 2019
Electricity purchased from non-renewable sources	Romania	0.282	AIB 2022
Electricity purchased from non-renewable sources	Vietnam	0.576	Terna 2019

Scope 3 - For the whole Group

Description	Emission factor	U.M.	Sources
Purchased goods and services			
Weight of iron	4.018	ton CO ₂ e/ton	DEFRA 2022
Weight of paint	0.01162	ton CO ₂ e/l	Ecoinvent 3.8
Weight of carbon dioxide (CO ₂)	0.86669	ton CO ₂ e/ton	Ecoinvent 3.8
Weight of nitrogen	0.00052	ton CO ₂ e/m ³	Ecoinvent 3.8
Weight of oxygen	0.00156	ton CO ₂ e/m ³	Ecoinvent 3.8
Weight of argon	0.00426	ton CO ₂ e/m ³	Ecoinvent 3.8
Capital Goods			
Real Estate	0.000084	kg CO ₂ e/€	EU Consumption Based Accounting Tool - March 2022
Machinery and equipment n.e.c.	0.000265	kg CO ₂ e/€	EU Consumption Based Accounting Tool – March 2022
Constructions and construction works	0.000310	kg CO ₂ e/€	EU Consumption Based Accounting Tool -March 2022
Fuel and energy related activities (not included in Scope 1 or 2)			
Natural gas	0.343	kg CO ₂ e/Sm ³	DEFRA 2022
Diesel	740.697	kg CO ₂ e/ton	DEFRA 2022
Fuel oil	657.972	kg CO ₂ e/ton	DEFRA 2022
Acetylene	304.510	kg CO ₂ e/ton	DEFRA 2022
LNG	885.687	kg CO ₂ e/ton	DEFRA 2022
LPG	347.009	kg CO ₂ e/ton	DEFRA 2022
Electricity from non-renewable sources (Italy)	0.093	kg CO ₂ e/MWh	DEFRA 2022
Electricity from non-renewable sources (USA)	0.112	kg CO ₂ e/MWh	DEFRA 2022

Electricity from non-renewable sources (Vietnam)	0.116	kg CO ₂ e/MWh	DEFRA 2022
Waste generated in operations			
Hazardous waste - disposal	0.001	ton CO ₂ e/ton	DEFRA 2022
Hazardous waste - recycle	0	ton CO ₂ e/ton	DEFRA 2022
Non-hazardous waste - disposal	0.467	ton CO ₂ e/ton	DEFRA 2022
Non-hazardous waste - recycle	0	ton CO ₂ e/ton	DEFRA 2022
Upstream transportation and distribution			
Transport of materials by train	0.000028	ton CO ₂ e/ton*km	DEFRA 2022
Transport of materials by truck	0.000106	ton CO ₂ e/ton*km	DEFRA 2022
Transport of materials by airplane	0.000539	ton CO ₂ e/ton*km	DEFRA 2022
Transport of materials by ship	0.000013	ton CO ₂ e/ton*km	DEFRA 2022
Business travel			
Kilometres of flights by employees on business trips - of which short-haul (under 3 hours - domestic)	0.000081	ton CO ₂ e/ton*km	DEFRA 2022
Kilometres of flights by employees on business trips - of which medium-haul (over 3 hours and under 6 hours - international)	0.000102	ton CO ₂ e/km	DEFRA 2022
Kilometres of flights by employees on business trips - of which long-haul (over 6 hours - intercontinental)	0.000097	ton CO ₂ e/km	DEFRA 2022
Kilometres of travel by train by employees on business trips - of which kilometres by high-speed train	0.000004	ton CO ₂ e/km	DEFRA 2022
Kilometres of travel by train by employees on business trips - of which kilometres by conventional train	0.000035	ton CO ₂ e/km	DEFRA 2022
Kilometres of travel by own car by employees on business trips	0.000171	ton CO ₂ e/km	DEFRA 2022
Kilometres of travel by rental car by employees on business trips	0.000171	ton CO ₂ e/km	DEFRA 2022
Employee Commuting			
Motorbike	0.11355	kg CO ₂ e/km	DEFRA 2022

Average local bus	0.0965	kg CO ₂ e/km	DEFRA 2022
International Train	0.00446	kg CO ₂ e/km	DEFRA 2022
Light rail and tram	0.02861	kg CO ₂ e/km	DEFRA 2022
Coach	0.02733	kg CO ₂ e/km	DEFRA 2022
Cars (Diesel, Petrol, Hybrid, CNG, LPG, Plug-in Hybrid, Electric)	0.051 – 0.171	kg CO ₂ e/km	DEFRA 2022
Use of Sold Products			
Navigation emissions	Specific emission factors		FAT – Technical Documents
Port Emissions	Specific emission factors		FAT – Technical Documents
Other - Water			
Water withdrawal	0.149	ton CO ₂ e/MI	DEFRA 2022

CONCLUSION

GHG emissions related to 2022 Fincantieri Group own operation and activities are:

Scope category	Value [ton CO ₂ e]
Direct Scope 1 GHG emissions	118,461
Indirect Scope 2 GHG emissions - Location-Based	112,204
Indirect Scope 2 GHG emissions – Market-Based	32,653
Other indirect Scope 3 GHG emissions	22,928,859