WE Soda Ltd

Basis of reporting and data collection

Our reporting covers the emissions associated with Soda Ash and Sodium Bicarbonate production (Eti Soda and Kazan Soda) and port handling services (Denmar Depoculuk) for the following reporting periods unless otherwise stated:

- 1 January 2024 – 31 December 2024

This reporting guidance document supports our preparation and reporting of the following indicators in our Annual report, externally assured by ERM CVS.

For the 2024 reporting period:

- Total Scope 1 GHG emissions [tCO2e]
- Total Scope 2 GHG emissions (market based) [tCO2e]
- Total Scope 2 GHG emissions (location-based) [tCO2e]
- Total Scope 1 and Scope 2 emissions (market based) [tCO2e]
- Total Scope 1 and Scope 2 emissions (location based) [tCO2e]
- Carbon Emissions intensity [Scope 1+2 market based tCO2e/tonne production]
- Carbon Emissions intensity [Scope 1+2 location based tCO2e/tonne production]
- Total Scope 3 GHG emissions [tCO_2e], for the following categories:
    - Category 1: Purchased goods and services
    - Category 2: Capital goods
    - Category 3: Fuel and energy related activities
    - Category 4: Upstream transportation and distribution
    - Category 5: Waste generated in operations
    - Category 6: Business travel
    - Category 7: Employee commuting
    - Category 8: Upstream leased assets
    - Category 9: Downstream transportation and distribution
    - Category 10: Processing of sold products
    - Category 11: Use of sold products
    - Category 13: Downstream Leased Assets
    - Category 15: Investments

- Total water withdrawal [m3]
- Recycled and reused water [m3]
- Water intensity [m3/tonne sodium carbonate and sodium bicarbonate]
- Wastewater discharge industrial [m3]
- Wastewater discharge domestic [m3]
- Total waste [mt]
- Total waste directed to disposal [mt]
- Total waste diverted from disposal [mt]
- Total hazardous waste [mt]
- Total non-hazardous waste [mt]

We have calculated our carbon footprint where we have operational control with respect to the internationally recognised standards provided by the Greenhouse Gas Protocol, published by the World Business Council for Sustainable Development and the World Resources Institute (WBCSD/WRI Protocol).

Operations

WE Soda oversees two soda ash and sodium bicarbonate production plant, Eti Soda and Kazan Soda, and as port handling services, Denmar Depoculuk in Turkey, with headquarters in London and an office in Istanbul.

Reporting boundaries

The 2024 report furnishes data and details covering the timeframe of January 1st, 2024, to December 31st, 2024. It specifically addresses the greenhouse gas (GHG) emissions stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Uncertainties

The calculations for greenhouse gas emissions have been carried out with a high degree of confidence, referencing the Good Practice Guidance and Uncertainty Management in the National Greenhouse Gas Inventories provided by the IPCC. This confidence level has been established at 95%. The GHG Uncertainty Tool has been employed to quantify the level of uncertainty, providing a reasonable level of assurance in the results.

Methodology

Scope 1

Definition:

Direct emissions from owned or controlled sources

System Boundaries:

Direct emissions stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

Scope 1 emissions encompass emissions from stationary combustion, mobile combustion, fugitive emissions and process emissions.

- Stationary Combustion includes from fuels used on site such as natural gas, coal and other gases.
- Mobile combustion includes fuels used in on-site and out-side vehicles.
- Fugitive emissions include refrigeration gas leakage, fire extinguisher and CH_4 emissions from wastewater treatment.
- Process emissions include industrial applications.

Our key scope 1 emissions sources are natural gas, coal and fuel oil used for building and process heating, process emissions, with small contributions from fuels used in all vehicles and refrigerant releases and other stationary combustion gases. Primary scope 1 emissions are CO_2, with small contributions from CH_4, N_2O and HFCs.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Our energy and carbon figures are recorded on a monthly basis from relevant source systems and records.

The carbon emission intensity metric is calculated by dividing the absolute emission by the total production amount.

Source:

Figures are obtained through utility bills, meter readings, scale records, laboratory analysis, direct from suppliers and through our internal systems.

When converting data into carbon emissions, for lignite and natural gas emission factors and net calorific value have been calculated through monthly analyses.

For all other scope 1 sources, for other stationary gases, mobile combustion and wastewater emission factors have been taken from IPPC 2006.

Refrigerants and Fire Extinguishers GWP value have been taken from IPCC Sixth Assessment Report (AR6). Density factors have been taken from Türkiye National Inventory and DEFRA 2024.

Scope 2 (Market Based) Purchased Electricity

Definition:

Emissions generated from the consumption of purchased electricity, calculated using the market-based approach as per the GHG Protocol Scope 2 Guidance.

System Boundaries:

Emissions generated from energy generated from purchased electricity due to WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

Scope 2 emissions include GHG emissions from purchased electricity consumed by Eti Soda, Kazan Soda and Denmar Depoculuk. Renewable energy use certificates (YEK-G certificates) were taken into account while calculating market-based emissions.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Scope 2 (market-based) emissions are calculated using electricity consumption data obtained from utility bills, meter readings, and data from the EPIAS (Turkish energy exchange) platform. Türkiye-specific emission factors are applied under the market-based approach. For the portion of electricity covered by YEK-G certificates, an emission factor of zero is applied, reflecting the renewable origin of the energy. For the remaining consumption not covered by certificates, the Türkiye national grid emission factor is used. The calculation is performed in accordance with the GHG Protocol Scope 2 Guidance.

Source:

Electricity consumption data is sourced from utility bills, site-level meter readings, and the EPIAS platform. Renewable electricity procurement data, including YEK-G certificates, is obtained from electricity suppliers. Türkiye-specific emission factors are sourced from the national inventory.

Scope 2 (Location Based) Purchased Electricity

Definition:

Emissions generated from the consumption of purchased electricity, calculated using the location-based approach as per the GHG Protocol Scope 2 Guidance.

System Boundaries:

Emissions generated from energy generated from purchased electricity due to WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

Scope 2 (location-based) emissions include GHG emissions from purchased electricity consumed by Eti Soda, Kazan Soda, and Denmar Depoculuk, calculated using Türkiye's national grid emission factor.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Scope 2 (location-based) emissions are calculated using electricity consumption data obtained from utility bills, meter readings, and data from the EPIAS (Turkish energy exchange) platform. Türkiye's national grid average emission factor, sourced from the national inventory, is applied to the total electricity consumption.

Source:

Electricity consumption data is sourced from utility bills, site-level meter readings, and the EPIAS platform. Türkiye-specific grid emission factor is sourced from the national inventory.

Scope 3

Category 1 Purchased Goods and Services

Definition:

All upstream (cradle-to-gate) emissions of purchased goods and services.

System Boundaries:

All upstream (cradle-to-gate) emissions of purchased goods and services stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

Extraction, production, and transportation of goods and services purchased or acquired by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Purchased goods and services' invoices are recorded to the internal systems regularly.

Source:

Figures are obtained through invoices, direct from suppliers and through our internal systems.

Raw Materials emission factors have been taken from SimaPro 9.5.0.2 which is a sustainability and Life Cycle Assessment software and packaging materials emission factors have been taken from DEFRA 2024.

Category 2 Capital Goods

Definition: The emissions from long-term assets such as machinery and equipments.

System Boundaries:

All emissions of capital goods stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

Capital goods emissions from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Capital goods are recorded to the internal systems simultaneously.

Source:

Figures are obtained through invoices and through our internal systems.

Emission factors have been taken from USEEIOv2.0.1-411.

Category 3 Fuel and Energy Related Activities (not included in scope 1 or scope 2)

Definition:

- **For upstream emissions of purchased fuels:** All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point of, but excluding combustion)
- **For upstream emissions of purchased electricity:** All upstream (cradle-to-gate) emissions of purchased electricity (from raw material extraction up to the point of, but excluding, combustion by a power generator)
- **For T&D losses:** All upstream (cradle-to-gate) emissions of energy consumed in a T&D system, including emissions from combustion
- **For generation of purchased electricity that is sold to end users:** Emissions from the generation of purchased energy

System Boundaries:

All upstream (cradle-to-gate) emissions of purchased fuels, all upstream (cradle-to-gate) emissions of purchased electricity, all upstream (cradle-to-gate) emissions of energy consumed in a T&D system and the emissions from the generation of purchased energy stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Scope:

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, including:

- Upstream emissions of purchased fuels [extraction, production, and transportation of fuels consumed by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services)].
- Upstream emissions of purchased electricity [extraction, production, and transportation of fuels consumed in the generation of electricity, steam, heating, and cooling consumed by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services)].

- Transmission and distribution (T&D) losses (generation of electricity, steam, heating and cooling that is consumed (i.e., lost) in a T&D system)

Generation of purchased electricity that is sold to end users (generation of electricity, steam, heating, and cooling that is purchased by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites & Denmar Depoculuk (port handling services)] and sold to end users)

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Purchased fuels and electricity figures are recorded on a monthly basis from relevant source systems and records.

Source:

Figures are obtained through utility bills, meter readings, scale records, invoices, and through our internal systems.

WTT-fuels emission factors have been taken from SimaPro 9.5.0.2 which is a sustainability and Life Cycle Assessment software and DEFRA 2024. Electricity T&D emission factors have been taken Türkiye National Inventory and DEFRA 2021.

Category 4 Upstream Transportation and Distribution

Definition:

Emissions of transportation and distribution providers that occur during use of vehicles and facilities

System Boundaries:

Emissions of transportation and distribution providers that occur during use of vehicles and facilities to WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites

Scope:

- Transportation and distribution of products purchased by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites in the reporting year (2024) between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites.)
- Transportation and distribution services purchased by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites in the reporting year (2024), including inbound logistics, outbound logistics

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Transportation and distribution information is recorded in our internal system via invoices for each transport.

Source:

Figures are obtained through bill of ladings, invoices, direct from suppliers and through our internal systems.

Upstream transportation emission factors have been taken from DEFRA 2024.

Category 5 Waste Generated in Operations

Definition:

Emissions of the waste management suppliers that occur during disposal or treatment

System Boundaries:

Emissions of waste management suppliers that occur during disposal or treatment stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services)

Scope:

Disposal and treatment of waste generated in WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites' operations and Denmar Depoculuk (port handling services) in the reporting year (2024).

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

It is recorded annually with Waste Declarations reported to the Ministry of Environment, Urbanization and Climate Change.

Source:

Figures are obtained through scale records.

Waste emission factors have been taken from EPA and DEFRA 2024.

Category 6 Business Travel-Flights and Hotel Stay

Definition:

Emissions of transportation carriers that occur during use of vehicles

Emissions stemming from hotel stays

System Boundaries:

Emissions of transportation carriers, excluding taxi's, that occur during only flights and hotel stays of WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk's employees.

Scope:

Transportation of employees of WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services) for business-related activities during the reporting year 2024.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Flight and hotel tickets are bought by the tour company and records are maintained

Source:

Figures are obtained through flight and hotel invoices.

Business travel emission factors have been taken from DEFRA 2024.

Category 7 Employee Commuting

Definition:

Emissions of employees and transportation providers that occur during use of vehicles not owned or operated by the company

System Boundaries:

Emissions of employees of WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port services) and transportation providers that occur during use of vehicles not owned or operated by the company

Scope:

Transportation of employees between their homes and their worksites during the reporting year 2024 [in vehicles not owned or operated by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services)]

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

The total kilometers for each different route are recorded on a monthly basis.

The monthly total number of routes is calculated by multiplying the daily number of trips for the working shuttle by the total number of working days of that month.

Source:

Figures are obtained through Google Earth and Google Maps records.

Employee commuting emission factors have been taken from The ICCT.

Category 8 Upstream Leased Assets

Definition: Emissions arising from assets leased by the company in the relevant year to support its production and logistics-related activities.

System Boundaries:

Emissions from upstream leased assets associated with WE Soda's Soda Ash and Sodium Bicarbonate production facilities at the Eti Soda and Kazan Soda sites, and port handling services provided by Denmar Depoculuk. Only leased assets with a monthly cost exceeding 10,000 TL are considered within the scope.

Scope:

Upstream leased assets emissions from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Activity data derived from financial records is recorded in the internal system and forms the basis for calculating emissions from upstream leased assets. Emissions are calculated using relevant emission factors.

Source:

Activity data is derived from WE Soda's internal systems. Emission factors are sourced from the USA EPA Supply Chain Greenhouse Gas Emission Factors v1.3 (NAICS-6 classification).

Category 9 Downstream Transportation and Distribution

Definition:

Emissions of transportation providers, distributors, and retailers that occur during use of vehicles and facilities

System Boundaries:

Emissions of transportation providers, distributors, and retailers that occur during use of vehicles and facilities stemming from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites

Scope:

Transportation and distribution of products sold by WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites in the reporting year 2024 between our operations and the end consumer

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Transportation and distribution information is recorded in our internal system via invoices for each transport.

Source:

Figures are obtained through bill of ladings, invoices, direct from suppliers and through our internal systems.

Downstream transportation emission factors have been taken from DEFRA 2024.

Category 10 Processing of Sold Products

Definition:

"Processing of Sold Products" refers to the emissions associated with the further processing or use of a product after it has been sold to consumers or businesses.

System Boundaries:

Emissions associated with the further processing or use of a product after it has been sold to consumers from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites

Scope:

The further processing or use of a product after it has been sold to consumers from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites in the reporting year 2024.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Sales are recorded in our internal system for each transport.

Source:

Figures are obtained through direct from customers and through our internal systems.

The emission factors are derived using stoichiometric calculations, assuming that the entire carbon content of Soda Ash and Sodium Bicarbonate is fully decomposed and released as CO2 during processing, based on molecular weights.

Category 11 Use of Sold Products

Definition:

"Use of Sold Products" refers to the emissions generated when the consumer or end-user utilizes the product after it has been sold.

System Boundaries:

Emissions associated with the further use of a product after it has been sold to consumers from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites

Scope:

The further use of a product after it has been sold to consumers from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites in the reporting year 2024.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Sales are recorded in our internal system for each transport.

Source:

Figures are obtained through direct from customers and through our internal systems.

The emission factors are derived using stoichiometric calculations, assuming that the entire carbon content of Soda Ash and Sodium Bicarbonate is fully decomposed and released as CO2 during processing, based on molecular weights.

Category 13 Downstream Leased Assets

Definition:

Emissions arising from assets owned by the company but leased out to other entities during the relevant year to support downstream production and logistics-related activities.

System Boundaries:

Emissions from downstream leased assets associated with WE Soda's Soda Ash and Sodium Bicarbonate production facilities at the Eti Soda and Kazan Soda sites, and port handling services provided by Denmar Depoculuk. Only leased assets with a monthly lease income exceeding 10,000 TL are considered within the scope.

Scope:

Downstream leased assets emissions from WE Soda's Soda Ash and Sodium Bicarbonate production facilities located at the Eti Soda and Kazan Soda sites and Denmar Depoculuk (port handling services).

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

Activity data derived from financial records is recorded in the internal system and forms the basis for calculating emissions from downstream leased assets. Emissions are calculated using relevant emission factors.

Source:

Activity data is derived from WE Soda's internal systems. Emission factors are sourced from the USA EPA Supply Chain Greenhouse Gas Emission Factors v1.3 (NAICS-6 classification).

Category 15 Investments

Definition:

Emissions arising from investments by the company during the relevant year

System Boundaries:

Within this category, only emissions from bond transactions have been assessed, covering Kazan Soda and Eti Soda.

Scope:

Emissions from bond transactions made on behalf of Kazan Soda and Eti Soda.

Unit:

tCO_2e, tCO_2e/tonne of product

Method:

No bond or debenture purchases have been made in this reporting period, so there are no investments to include in this category. However, in the case of bond purchases, the emission contribution will be calculated based on the ratio of the investment amount to the company's total emissions. In the case of an affiliate, the emission contribution will be calculated proportionally based on the investor's percentage ownership share.

Source:

Bond or debenture records are recorded and provided by the Finance Department.

Carbon Emissions Intensity [Scope 1+2 market based tCO2e/tonne production]

Definition:

This metric represents the carbon emissions intensity of WE Soda's production activities, calculated as the sum of Scope 1 and Scope 2 (market-based) emissions per tonne of Soda Ash and Sodium Bicarbonate produced.

System Boundaries:

Includes emissions from all production activities at Kazan Soda, Eti Soda, and Denmar Depoculuk (port handling services).

Scope 1 covers direct emissions from stationary and mobile combustion, fugitive emissions, and process emissions. Scope 1 emissions from Kazan Soda related to natural gas consumption for the generation of electricity sold externally are excluded only from the Soda Ash production-only carbon intensity metric. These emissions remain included in the organizational-level carbon intensity calculation, as they are part of Kazan Soda's operational Scope 1 emissions.

Scope 2 (market-based) covers indirect emissions from purchased electricity, calculated using market-based emission factors (including renewable certificates where applicable).

Unit:

tCO_2e/tonne of product

Methodology:

Scope 1 and Scope 2 (market-based) emissions are calculated using activity data obtained from multiple sources, including internal records, supplier data, and operational reports. For Scope 2 (market-based), Türkiye-specific emission factors are applied. For renewable electricity covered by YEK-G certificates, an emission factor of zero is applied; for the remaining consumption, the Türkiye national grid emission factor is used. Production data (tonnes of Soda Ash and Sodium Bicarbonate) are sourced from internal systems.

The intensity is calculated by dividing the total Scope 1 and Scope 2 (market-based) emissions by total product output from the Kazan Soda, Eti Soda, and Denmar Depoculuk facilities for the reporting period.

Source:

Scope 1 and Scope 2 (location-based) emissions are calculated based on activity data sourced from multiple sources, including internal records, supplier data, and operational reports.

Scope 2 (market-based) emission factors are applied based on Türkiye-specific data and renewable energy certificates (YEK-G).

Production data are derived from site-level operational records at Kazan Soda and Eti Soda.

Carbon Emissions Intensity [Scope 1+2 locationbased tCO2e/tonne production]

Definition:

This metric represents the carbon emissions intensity of WE Soda's production activities, calculated as the sum of Scope 1 and Scope 2 (location-based) emissions per tonne of Soda Ash and Sodium Bicarbonate produced.

System Boundaries:

Includes emissions from all production activities at Kazan Soda, Eti Soda, and Denmar Depoculuk (port handling services).

Scope 1 covers direct emissions from stationary and mobile combustion, fugitive emissions, and process emissions. Scope 1 emissions from Kazan Soda related to natural gas consumption for the generation of electricity sold externally are excluded only from the Soda Ash production-only carbon intensity metric. These emissions remain included in the organizational-level carbon intensity calculation, as they are part of Kazan Soda's operational Scope 1 emissions.

Scope 2 (location-based) emissions include GHG emissions from purchased electricity, calculated using Türkiye's national grid emission factor.

Unit:

tCO_2e/tonne of product

Methodology:

Scope 1 and Scope 2 (location-based) emissions are calculated using activity data obtained from multiple sources, including internal records, supplier data, and operational reports. For Scope 2 (location-based), Türkiye's national grid emission factor is applied to the total electricity consumption. Production data (tonnes of Soda Ash and Sodium Bicarbonate) are sourced from internal systems.

The intensity is calculated by dividing the total Scope 1 and Scope 2 (location-based) emissions by total product output from the Kazan Soda, Eti Soda, and Denmar Depoculuk facilities for the reporting period.

Source:

Scope 1 and Scope 2 (location-based) emissions are calculated based on activity data sourced from multiple sources, including internal records, supplier data, and operational reports.

Scope 2 (location-based) emissions are calculated using electricity consumption data obtained from utility bills, meter readings, and data from the EPIAS (Turkish energy exchange) platform. Türkiye's national grid average emission factor is sourced from the national inventory. Production data are derived from site-level operational records at Kazan Soda and Eti Soda.

Total Water Withdrawal

Definition:

Total water withdrawal for production, auxiliary, and port handling activities associated with Soda Ash and Sodium Bicarbonate production

System Boundaries:

All operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda. All production sub-facilities and processes and integrated wastewater treatment plants are included in the system boundaries. Within the framework of the operational control approach, water use, recycled&reused water and water discharge arising from the activities are included.

Scope:

Total water withdrawal in m^3.

Unit:

m^3, m^3/tonne of product

Methodology:

Water withdrawal is monitored and recorded daily via flowmeters. Water withdrawn from all sources, including surface water, groundwater, and municipal supply, is consolidated and reported as total water withdrawal.

Source:

Data is obtained from site-level flowmeters and cross-checked with supplier invoices where applicable. Data is consolidated in an internal Excel working file.

Recycled and Reused Water

Definition:

Total volume of water that is reused or recycled for production, auxiliary, and port handling activities associated with Soda Ash and Sodium Bicarbonate production

System Boundaries:

All operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda. All production sub-facilities and processes and integrated wastewater treatment plants are included in the system boundaries. Within the framework of the operational control approach, water use, recycled&reused water and water discharge arising from the activities are included.

Scope:

Recycled and reused water in m^3.

Unit:

m^3, m^3/tonne of product

Methodology:

Condensate water used directly without treatment is recorded as reused water. Recycle water, which is treated and reused within the processes, is monitored separately. Data is compiled daily from site-level flowmeters and operational logs.

Source:

Data is collected from flowmeters and operational logs and consolidated in an internal Excel working file.

Water Intensity [m^3/tonne of product]

Definition:

Water intensity represents the amount of water withdrawal per tonne of Soda Ash and Sodium Bicarbonate produced

System Boundaries:

All operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda. All production sub-facilities and processes and integrated wastewater treatment plants are included in the system boundaries. Within the framework of the operational control approach, water use, recycled&reused water and water discharge arising from the activities are included.

Scope:

Water withdrawal per tonne of product in m^3/tonne.

Unit:

m^3/tonne of product

Methodology:

Water intensity is calculated by dividing the total water withdrawal by the total production of Soda Ash and Sodium Bicarbonate for the reporting period.

Source:

Water withdrawal data is sourced from flowmeters. Production data is sourced from site-level operational records. Data is consolidated in an internal Excel working file.

Wastewater Discharge (Industrial)

Definition:

Total volume of industrial wastewater discharged

System Boundaries:

All operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda. All production sub-facilities

and processes and integrated wastewater treatment plants are included in the system boundaries. Within the framework of the operational control approach, water use, recycled&reused water and water discharge arising from the activities are included.

Scope:

Industrial wastewater discharge in m^3.

Unit:

m^3, m^3/tonne of product

Methodology:

Industrial wastewater is measured through flowmeters and recorded daily.

Source:

Data is sourced from discharge flowmeters and consolidated in an internal Excel working file.

Wastewater Discharge (Domestic)

Definition:

Total volume of domestic wastewater discharged

System Boundaries:

All operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda. All production sub-facilities and processes and integrated wastewater treatment plants are included in the system boundaries. Within the framework of the operational control approach, water use, recycled&reused water and water discharge arising from the activities are included.

Scope:

Domestic wastewater discharge in m^3.

Unit:

m^3, m^3/tonne of product

Methodology:

Domestic wastewater is measured through flowmeters and recorded daily.

Source:

Data is sourced from discharge flowmeters and consolidated in an internal Excel working file.

Total Waste

Definition:

The total amount of waste generated by the organization during the reporting period, including both hazardous and non-hazardous waste.

System Boundaries:

All waste operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda.

Scope:

All waste generated from soda ash and sodium bicarbonate production processes, and port operations.

Unit:

tCO_2e, tCO_2e/tonne of product

Methodology:

Waste data is compiled from all records of waste generated during the year, including waste codes, hazardous characteristics, treatment methods, and waste treatment facilities. Waste is classified based on hazardous/non-hazardous, treatment location (on-site/off-site), disposal/recycling, and treatment method.

Source:

Waste Management Regulation, Annual Waste Declaration. Waste generated and sent to waste treatment facilities is recorded initially through waybills, and the official waste declaration is made at the end of the year based on this data.

Total Waste Directed to Disposal

Definition:

Waste that was sent to the disposal methods, such as incineration.

System Boundaries:

All disposed waste operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda.

Scope:

Waste directed to disposal from all production operations (Eti Soda and Kazan Soda) and port handling services (Denmar Depoculuk).

Unit:

tCO_2e, tCO_2e/tonne of product

Methodology:

Waste data is compiled from all records of waste generated during the year, including waste codes, hazardous characteristics, treatment methods, and waste treatment facilities. Waste is classified based on hazardous/non-hazardous, treatment location (on-site/off-site), disposal/recycling, and treatment method.

Source:

Waste Management Regulation, Annual Waste Declaration. Waste generated and sent to waste treatment facilities is recorded initially through waybills, and the official waste declaration is made at the end of the year based on this data.

Total Waste Diverted from Disposal

Definition:

Waste that was diverted from disposal through reuse, recycling, or other recovery operations.

System Boundaries:

All recycled waste operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda.

Scope:

Waste that was diverted from disposal, including recycling and recovery processes within production and port operations.

Unit:

tCO_2e, tCO_2e/tonne of product

Methodology:

Waste data is compiled from all records of waste generated during the year, including waste codes, hazardous characteristics, treatment methods, and waste treatment facilities. Waste is classified based on hazardous/non-hazardous, treatment location (on-site/off-site), disposal/recycling, and treatment method.

Source:

Waste Management Regulation, Annual Waste Declaration. Waste generated and sent to waste treatment facilities is recorded initially through waybills, and the official waste declaration is made at the end of the year based on this data.

Total Hazardous Waste

Definition:

Waste that is classified as hazardous due to its properties and potential harm to human health or the environment, according to the regulations.

System Boundaries:

All hazardous waste operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda.

Scope:

Hazardous waste generated in the production facilities and port operations, subject to regulatory classification.

Unit:

tCO_2e, tCO_2e/tonne of product

Methodology:

Waste data is compiled from all records of waste generated during the year, including waste codes, hazardous characteristics, treatment methods, and waste treatment facilities. Waste is classified based

on hazardous/non-hazardous, treatment location (on-site/off-site), disposal/recycling, and treatment method.

Source:

Waste Management Regulation, Annual Waste Declaration. Waste generated and sent to waste treatment facilities is recorded initially through waybills, and the official waste declaration is made at the end of the year based on this data.

Total Non-Hazardous Waste

Definition:

Waste that does not meet the criteria for hazardous classification and has no significant risk to human health or the environment.

System Boundaries:

All non-hazardous waste operations of Soda Ash and Sodium Bicarbonate production facilities located in Eti Soda and Kazan Soda plants and as port handling services Denmar Depoculuk of WE Soda.

Scope:

Non-hazardous waste from soda ash and sodium bicarbonate production operations, and port handling services.

Unit:

tCO_2e, tCO_2e/tonne of product

Methodology:

Waste data is compiled from all records of waste generated during the year, including waste codes, hazardous characteristics, treatment methods, and waste treatment facilities. Waste is classified based on hazardous/non-hazardous, treatment location (on-site/off-site), disposal/recycling, and treatment method.

Source:

Waste Management Regulation, Annual Waste Declaration. Waste generated and sent to waste treatment facilities is recorded initially through waybills, and the official waste declaration is made at the end of the year based on this data.