

Iron and Steel survey

WELCOME!



Welcome to the IS BREF frontloading survey!

The European Bureau for Research on Industrial Transformation and Emissions (EU-BRITE) has started the review of the BAT Reference Document (BREF) on Iron and Steel Production, hereafter referred to as the 'IS BREF', with the letter for setting up the TWG sent to the IED Article 13 Forum Members on 6 March 2026 (BATIS > Forum > Iron and Steel production > Revision of the Iron and Steel BREF (2026-2030) > 02 TWG Activation). The IS BREF is being reviewed within the framework of the implementation of the revised Industrial Emissions Directive (IED)([1]) and concerns the activities specified in points 1.3, 2.1 and 2.3 of Annex I to the revised IED, namely:

- 1.3 Production of coke;
- 2.1 Metal ore (including sulphide ore) roasting or sintering;

- 2.2. Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2.5 tonnes per hour.

The IS TWG members are invited to "frontload" the information exchange for the review of the IS BREF. The 'BREF Guidance' (currently under review) provides general information on the process of exchanging information to draw up and review BREFs as well as on their structure and content. Please coordinate your response and submit only one survey per delegation.

Completing this survey will require approximately two to three hours of your time, in addition to the time needed to gather the necessary information.

In order to ensure transparency, which is one of the cornerstones of the Sevilla Process, once you have completed the survey, you are kindly requested to convert it to pdf format and upload it to BATIS (BATIS > Forum > Iron and Steel production > Revision of the Iron and Steel BREF (2026-2030) > 03 Frontloading), together with any other supporting documents. The TWG may also supplement these documents with additional files if needed.

To this end, TWG members are invited to respond to this frontloading survey by providing their views and information by 10 July 2026.

If you have any questions on this survey or on other issues related to the IS BREF, please contact the IS BREF Team at: **JRC-B5-EUBRITE-IS@ec.europa.eu**

IS TWG Activation Letter [Download]

[IS TWG Activation letter.pdf](#)

[1] Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial and livestock rearing emissions

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:02010L0075-20240804>

GENERAL INSTRUCTIONS

A. General overview of the survey

This survey is composed of 18 sections that correspond to different topics on which information and input from the TWG members are of paramount importance. It also includes a "Welcome" section, a "Contact details" section, a "Request for general information" section and this "General Instructions" section. At the end of the survey there is a "Survey Submission" section where you will be asked for feedback on the survey before submitting it.

The 18 areas for which information and opinions from the TWG are requested are listed below:

1. Scope
2. Emissions to water
3. Emissions to air
4. Raw materials and chemicals consumption
5. Energy consumption
6. Water management
7. Circular economy – Management of residues including waste generation
8. Decarbonisation and greenhouse gas emissions
9. Emerging techniques
10. Monitoring
11. Other than normal operating conditions
12. Confidential business information
13. Proposed structure of the BREF
14. Selection of sites for the data collection
15. Data collection procedure
16. Site visits
17. Permits
18. Any other relevant information

B. Content of the survey

Throughout this survey you will find several EU-BRITE initial proposals as well as some requests for information related to the proposals and bulk information on iron and steel production. These proposals stem from the requirements of Article 13(2) of the Industrial Emissions Directive that specifies the scope of the exchange of information. This exchange must, as a minimum, address emissions, consumption and nature of raw materials, water consumption, use of energy and generation of waste, the monitoring performed as well as the techniques used, their cross-media effects and their economic, technical viability and development.

With the abovementioned scope in mind, these initial proposals contained in the survey are based on the following:

- EU BRITE's preliminary research findings related to the IS production sector, with a particular focus on the existing environmental acquis;
- Information available through the European Industrial Emissions Portal (IEP) [1];
- Information provided in a frontloading study carried out by VITO / INERIS in conjunction with the European Environment Agency, including information retrieved from the screening of permits issues to iron and steel production plants [2];
- Information / proposals communicated by TWG members to EU-BRITE during the early frontloading phase (available in BATIS);

- Information published in the INCITE frontloading report for the IS BREF published in May 2026 [3];
- Information contained in the Ilva / Taranto court case judgment [4].

As a TWG member, your opinion and input are now being sought on these initial proposals. EU-BRITE will use the information gathered through this survey, to prepare a Background Paper (BP). This BP will provide members of the TWG with a detailed outline of the key matters that will be discussed and decided upon at the upcoming Kick-off Meeting (KoM).

In some of the EU-BRITE initial proposals there are references to Key Environmental Issues (KEIs), to be covered by the IS BREF. A KEI is defined as an environmental issue that is considered important for the Iron and Steel production activities. Information on the KEIs should be collected through questionnaires and/or as bulk information. The purpose of collecting this information may then differ from one KEI to another (e.g. deriving Best Available Techniques (BAT), BAT-Associated Emission Levels (AELs), BAT-Associated Environmental Performance Levels (AEPLs) and/or benchmarks). The objective is for the TWG to decide on most of the KEIs at the KoM.

[1] European Industrial Emissions Portal: <http://industry.eea.europa.eu>

[2] Pelckmans, A., Custers, K., Partaix, H., Feuger, O., Schnuriger, B. 2026. Iron and Steel BREF frontloading report - European Topic Centre on Human Health and the Environments (HTC HE report).

[3] Aries, E., Retsoulis, I. and Gonzalez Cuenca, J., INCITE frontloading report for the Best Available Techniques Reference document for iron and steel production, Publications Office of the European Union, Luxembourg, 2026 <https://data.europa.eu/doi/10.2760/0251420>, JRC146558

[4] CJEU, 2024, Judgment of the Court (Grand Chamber) of 25 June 2024, Case C-626/22. Link: <https://op.europa.eu/en/publication-detail/-/publication/152b16c8-32cb-11ef-a61b-01aa75ed71a1/language-en>

C. Filling in information

Each section of the survey can be completed independently. You can also go back to completed sections at any time to change your input. **We strongly recommend that you save your progress regularly (see picture below).**

Once saved, the survey can be shared with other users through the link provided by EU-Survey. Other users will be able to complement the survey responses. Modifications to the survey must be made individually. **However, please note that two or more users cannot contribute to the survey simultaneously.**

The blank template of the survey can easily be downloaded as a pdf (see picture below), this pdf version can subsequently be converted to a word document which can be distributed to several people for facilitating inputs collection.

For the final submission, please coordinate your responses and submit only one survey per delegation.

☒ Save a backup on your local computer (disable if you are using a public/shared computer)

Iron and Steel survey

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Once completed, you can submit the survey by going to the "Survey submission" section and clicking on the "Submit" button at the bottom of the page.

Your time and support is greatly appreciated!

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This will take you to a new page where you will be given the option to download a pdf. Please download the pdf with your response to the survey by clicking on the "Get PDF" button and upload it to BATIS (BATIS > Forum > Iron and Steel production > Revision of the Iron and Steel BREF (2026-2030) > 03 Frontloading) together with any other accompanying documents related to the survey or any other information you wish to share with the TWG.



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EUSurvey

✓ **Contribution successfully submitted**

Thank you for your contribution!

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You may need it in the future (e.g. to edit your contribution).

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You may exceed the session time while completing the survey. To avoid losing information it is important to click on the option at the top of the survey: "Save a backup on your local computer (disable if you are using a public/shared computer)". Please remember to uncheck this option if you are using a public computer.

Iron and Steel survey

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Pages

WELCOME!

GENERAL INSTRUCTIONS

CONTACT DETAILS

REQUEST FOR GENERAL INFORMATION

1. SCOPE

2. EMISSIONS TO WATER

3. EMISSIONS TO AIR

4. RAW MATERIALS AND CHEMICALS MANAGEMENT

5. ENERGY CONSUMPTION

6. WATER MANAGEMENT

7. CIRCULAR ECONOMY - MANAGEMENT OF RESIDUES INCLUDING WASTE GENERATION

8. DECARBONISATION AND GREENHOUSE GAS EMISSIONS

9. EMERGING TECHNIQUES

10. MONITORING

11. OTHER THAN NORMAL OPERATING CONDITIONS

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13. PROPOSED STRUCTURE OF THE BREF

14. SELECTION OF SITES FOR THE DATA COLLECTION

15. DATA COLLECTION PROCEDURE

16. SITE VISITS

17. PERMITS

18. ANY OTHER RELEVANT INFORMATION

SURVEY SUBMISSION

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Contact

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Throughout the survey, you will be asked to indicate whether you agree, partly agree or disagree with EU-BRITE proposals. You will be asked to justify the rationale for your opinion.

Concerning questions with predefined answers, there are two types: single choice (only one answer can be selected) and multiple choice (more than one answer can be selected). Single choices are indicated by a round box and multiple choices by a square box. See illustrative pictures below.

Single choice (example):

21. EU-BRITE proposes to collect information on the characteristics of emissions to water (e.g. pH, temperature, flow).

- ☐ Agree
- ☐ Partly agree
- ☐ Disagree

Multiple choice (example):

For which type of process(es) should this KEI be considered?

- ☐ Pelletisation
- ☐ Sintering
- ☐ Cokemaking
- ☐ Blast furnaces
- ☐ BOF steelmaking
- ☐ Secondary metallurgy
- ☐ Casting (e.g. continuous casting)
- ☐ Direct reduction of iron ore

Thank you in advance for your contribution !

CONTACT DETAILS

First name of the respondent

Riccardo

Last name of the respondent

Nigro

Email

riccardo.nigro@eeb.org

Which of the following groups does your delegation belong to?

- ☐ Member State or Norway
- ☒ NGO promoting human health or environmental protection
- ☐ Industry
- ☐ ECHA

Please select the NGO promoting human health or environmental protection you represent:

- ☒ EEB
- ☐ Other

REQUEST FOR GENERAL INFORMATION

TWG members are asked to confirm the total number of installations permitted for activity 1.3 of Annex I to the IED in each Member State.

See excerpt of Art 72 reporting datasets, MS should check the provided information

TWG members are asked to confirm the total number of installations permitted for activity 2.1 of Annex I to the IED in each Member State carrying out metal ore roasting (pelletisation plants). Please provide information in the box below.

TWG members are asked to confirm the total number of installations permitted for activity 2.1 of Annex I to the IED in each Member State carrying out iron ore sintering (sinter plants). Please provide information in the box below.

TWG members are asked to confirm the total number of installations permitted for activity 2.2 of Annex I to the IED in each Member State producing steel through the blast furnace - basic oxygen (BF-BOF) steelmaking route. Please provide information in the box below.

TWG members are asked to confirm the total number of installations permitted for activity 2.2 of Annex I to the IED in each Member State producing steel through the electric arc furnace (EAF) steelmaking route. Please provide information in the box below.

Information received during the early frontloading phase indicates that several production plants operating under activities 1.2, 2.1 and 2.2 of the revised IED may be decommissioned during the industrial transformation to achieve depollution, decarbonisation and circular economy through the uptake of alternative processes. TWG members are asked to provide the most up-to-date information available on production plants that are expected to be decommissioned during the IS BREF review period and beyond (e.g. 2026 - 2034) as this information could be important for the data collection that will be carried out in the context of the IS BREF review. Where possible, the following information is requested:

- **Activity 1.3:** Are there any cokemaking plants (e.g. coke oven batteries) for which planned decommissioning has been announced? Please specify the plants concerned and the expected decommissioning date.
- **Activity 2.1:** Are there any pellet plants or iron ore sintering plants for which planned decommissioning has been announced? Please specify the plants concerned and the expected decommissioning date.
- **Activity 2.2:** Are there any BF and/or BOF plants for which planned decommissioning has been announced? Please specify the BF and/or BOF plants concerned and the expected decommissioning date.

We suggest checking the following State aid decisions to identify the blast furnaces, sinter plants and coke ovens planned to be decommissioned by mid '30s: SA.104276 (Salzgitter), SA.104903 (ArcelorMittal Dunkerque), SA.105244 (ThyssenKrupp), SA.105337 (SHS).

Two coke oven plants of Tata Steel IJmuiden (KGF1) and KGF2 are also under a decision to revoke the operating permits due to excess emissions of substances of very high concern. See news article here: <https://odnzk.nl/nieuws/omgevingsdienst-start-procedure-tot-intrekking-vergunningen-kooksgasfabrieken/>

If there is any further information that you would like to share, please upload your file(s).

49265163-aa93-487f-aa5e-ddd88b6d790f/SA_104276_SALCOS.pdf

3ad41c46-52c7-47a8-a9ff-5f7fbb36e147/SA_104903_ArcelorMittal.pdf

937daf0b-b88a-40f7-94a3-eb0de49e7637/SA_105244_ThyssenKrupp.pdf

cd7938c8-c971-4f2a-ba31-bc7d732517fa/SA_105337_SHS.pdf

1. SCOPE

1.1. The IS BREF covers the activities specified in points 1.3, 2.1 and 2.2 of Annex I to the revised IED, namely:

- 1.3 Production of coke
- 2.1 Metal ore (including sulphide ore) roasting or sintering
- 2.2. Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2.5 tonnes per hour

Please provide any feedback you may have in the box below.

The term “pig” iron is too restrictive; we suggest to delete the word “pig” so to include also DRI plants.

1.2. Concerning activities specified in point 1.3 of Annex I to the revised IED, EU-BRITE proposes to cover the following processes / process steps:

Cokemaking

- Coal handling and preparation
 - Coal discharge, transport and storage
 - Coal preparation including crushing, grinding, pulverising and screening
- Coke oven battery operations
 - Coal charging
 - Heating / firing of coke oven chambers
 - Coking (carbonisation process)
 - Coke pushing
 - Coke quenching
 - Coke handling, grading and storage
- Coke oven gas (COG) treatment
 - COG cooling
 - Tar recovery from COG
 - COG desulphurisation
 - Ammonia recovery from COG
 - Light oil recovery from COG

- ☐ Agree
☒ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

Cokemaking should no longer be considered BAT since this process is not aligned to processes also ensuring a high level of environmental protection. We therefore regard those processes as “obsolete BAT”. A decommissioning BAT should be proposed for those activities, BAT Conclusions for the interim period up to its decommissioning / phase out may be derived (if this helps the phase out of coal use).

1.3. EU-BRITE proposes to cover in the IS BREF all relevant coke oven gas desulphurisation processes, e.g. wet oxidation, absorption/stripping, but proposes not to cover the production of sulphuric acid in coke ovens as this is included in the Large Volume Inorganic Chemicals (LVIC) BREF.

- ☐ Agree
- ☒ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Same rationale as in 1.2. The LVIC BAT-C are not yet proposed, hence there is no double regulation to date. The IS BREF should cover the production of sulphuric acid in coke ovens because it is a directly associated activity.

1.4. Concerning activities specified in point 2.1 of Annex I to the revised IED, EU-BRITE proposes to cover the following processes / process steps:

Pelletisation

- Raw materials storage, transport and handling (e.g. iron ore)
- Iron ore crushing, grinding and drying
- Green ball preparation (balling)
- Induration thermal treatment processes (roasting):
 - Straight grate process
 - Grate kiln process
- Screening and handling of iron ore pellets

Iron ore sintering

- Raw materials storage, transport and handling (e.g. iron ore, limestone)
- Raw materials blending / mixing (ore bed preparation)
- Sinter strand operation
- Sinter discharge, crushing, cooling and screening

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

We also suggest to assess alternative iron ore agglomeration routes including Vale's Iron Ore Briquettes, where relevant for BF or DRI feedstock preparation. The scope should also cover the handling and recycling of fines and residues from sintering, pelletising or briquetting, as these affect raw material efficiency, dust emissions, waste generation and GHG performance.

1.5. Concerning activities specified in point 2.2 of Annex I to the revised IED, EU-BRITE proposes to cover the following processes / process steps:

Blast furnaces (BFs)

- Burden preparation, conveying and charging of raw materials
- BF operations including the use of reducing agents
- BF hot stoves operation
- Hot metal tapping
- Treatment of liquid BF slag (e.g. slag granulation, slag pelletising)

Basic Oxygen Furnace (BOF) steelmaking

- Transport and storage of hot metal
- Hot metal pre-treatment (desulphurisation)
- BOF oxidation process
- Treatment of BOF slags

Electric arc furnace (EAF) steelmaking

- Raw materials storage, transport and handling (e.g. steel scrap)
- Scrap preheating and charging (top-charge or continuous charging)
- EAF melting and refining
- Steel and slag tapping
- Treatment of EAF slags

Secondary metallurgy

- Refining of carbon steel, special steels, etc.
- Vacuum refining (e.g. degassing, Vacuum Oxygen Decarburisation - VOD, Vacuum Arc Degassing)
- Non-vacuum-refining (e.g. Ladle furnace, Argon Oxygen Decarburisation - AOD, Composition Adjustment by Sealed Argon Bubbling-Oxygen Blowing - CAS-OB)

Casting

- Continuous casting
- Ingot casting
- Near net shape casting

- ☐ Agree
- ☒ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Same comment as for 1.2: blast furnaces should no longer be considered as BAT since this process is not aligned to processes that also ensure a high level of environmental protection (especially climate protection).

Therefore, we regard them as “obsolete BAT”. A decommissioning BAT should be proposed for those activities BAT Conclusions for the interim period up to its decommissioning / phase out may be derived (if this helps the phase out of coal use / phase out of fossil gas by 2040).

The review should ensure stricter emission limit values and robust data collection for all installations that continue operating during the transition period. Planned transformation or later decommissioning should not be used as a reason to weaken data collection for existing high-emission routes.

When it comes to EAFs, we suggest to include an additional dimension: Raw materials selection, storage, transport and handling (e.g. steel scrap). Given that technologies able to better sort steel scrap are currently available and used in scrap yards in Europe, BAT Conclusions aimed at incentivising steelmakers to select less contaminated scrap should be included.

For EAF steelmaking, the scope should also allow proper consideration of future charge mixes, including scrap, DRI and HBI, as these will become increasingly relevant in the transition to lower-emission steelmaking.

1.6. EU-BRITE proposes to cover in the IS BREF the production of sponge iron using direct reduction of iron ore with a capacity exceeding 2.5 tonnes per hour.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

We support the inclusion of DRI plants in the IS BREF. We expect that at least 2 plants will be operational by mid-2027 in the EU, giving time to the TWG to discuss and draft BAT Conclusions from 2028 onwards.

Including DRI plants in the IS BREF is essential to support permitting of these installations and fundamental to decrease the environmental and public health impact of steel production in the EU. The INCITE frontloading report identifies approximately 17 Mt/year of confirmed direct reduced iron production capacity from eight plants between 2026 and 2030, together with around 35 Mt/year of new EAF capacity, indicating a significant shift towards hydrogen steelmaking, electrification and scrap recycling

Additionally, the Hamburg DRI plant belonging to ArcelorMittal provides evidence that gas-based direct reduction is not only an emerging decarbonisation option, but also an existing, permitted and regularly monitored industrial process in the EU. Available authority documents include periodic emission measurement reports, annual continuous monitoring reports and official inspection reports. These documents show that DRI has specific emission sources, monitoring requirements and permit-related issues, which are not sufficiently addressed by the current IS BREF.

We strongly suggest to already organise the works of the TWG to allow these DRI plants to deliver data as soon as available, prioritising the update of the other sections of the BREF.

As indicated in section 1.5 the use of HBI/CBI (imported from out of EU plants) in EAFs should be part of the possible steel making options in the EU, this is notably planned for the Voestalpine Donawitz site (importing HBI from the ArcelorMittal/Voestalpine DRI plant in Texas USA).

A lower production threshold is also acceptable, in particular to gather more information from the DRI process

1.7. Concerning the production of sponge iron using direct reduction of iron ore, EU-BRITE proposes to cover the following processes / process steps (see below), and to gather information from TWG members to develop new sections in the IS BREF detailing these applied processes /process steps and the associated techniques to consider in the determination of BAT and Emerging techniques.

Direct reduction plants

- Raw materials storage, transport and handling (e.g. iron ore pellets)
- Gas-based direct reduction of iron ore, e.g. in vertical shaft furnaces, fluidised bed reactors using for example natural gas, hydrogen, syngas
- Direct reduction using external reformers for production of reducing gases including heat recovery systems
- In-situ reduction inside a shaft furnace (without the use of external reformers) including heat recovery systems
- External carbon capture systems or internal systems for CO₂ removal integrated in the plant reduction circuit
- Use of process gases with high hydrogen content, pure hydrogen use, including safety considerations for use and storage of such gases
- Product handling, storage and transport (cold and hot direct reduced iron - DRI, hot briquetted iron – HBI)
- Direct transfer of hot DRI towards EAF steelmaking

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

It is particularly important that the BREF treats DRI as an integrated industrial route rather than only as a reduction reactor.

The scope should ensure that key climate and pollution-relevant issues are captured, including the distinction between NG-DRI, H₂-DRI and H₂/NG-flexible operation, configurations with and without external reformers, methane-related impacts of NG-DRI, and the timeline for transition from natural gas to renewable hydrogen.

The scope should also remain open to alternative DRI feedstocks and raw material preparation routes, including potentially low-temperature iron ore agglomerates or cold-bonded briquettes. This is important to avoid regulatory gaps and to allow meaningful comparison of DRI technologies in terms of emissions, energy use, GHG performance, monitoring and OTNOC.

1.8. Based on the Innovation Centre for Industrial Transformation and Emissions (INCITE) findings published in the IS BREF frontloading report published by EU-BRITE in May 2026, EU-BRITE proposes to cover electric smelting furnaces (e.g. open bath furnaces) employed for smelting DRI to produce liquid iron which can subsequently be processed in BOF steelmaking. INCITE findings indicate that one major installation in the EU will be implementing this process step during the period of the IS BREF review.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

To drive decarbonisation in the sector, it is of value to collect information on electric smelters. Electric smelting furnaces used to melt DRI or HBI should be covered where they are part of the primary steelmaking transformation route. These installations may replace or partly substitute blast furnace hot metal production and therefore have important environmental implications. Data collection should include electricity consumption, electrode or plasma-related emissions where relevant, dust, NOx, CO, slag generation, metal yield, integration with BOF/EAF routes, and GHG intensity.

1.9. EU-BRITE proposes to cover in the scope of the IS BREF the activity in point 6.11 of Annex I to the IED (Independently operated treatment of waste water not covered by Directive (EU) 2024/3019) if the main pollutant load originates from the activity covered in points 1.3, 2.1 and 2.2 of Annex I to the IED as well as the production of sponge iron using direct reduction of iron ore, as addressed in recent BREFs.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Independently operated wastewater treatment should be covered where the main pollutant load originates from iron and steel activities, including direct reduction of iron ore. For DRI, relevant waterstreams may arise from gas cooling, wet dedusting or scrubbing where applied, cooling systems, water treatment, dust suppression and run-off from raw material, DRI/HBI or residue storage areas. Including such wastewater treatment is important to avoid regulatory gaps, especially where treatment is outsourced or operated separately from the main steelmaking installation. The scope should ensure that DRI-related pollutant loads, water reuse, blowdown streams, sludges and treatment residues are captured in the BREF data collection.

We expect that the production of direct reduced iron will also be covered by IED activity 2.2 after the completion of the environment OMNIBUS process. If so, there is no need to mention DRI production explicitly.

1.10. EU-BRITE proposes to cover in the scope of the IS BREF the combined treatment of waste water from different origins if the main pollutant load originates from the activity covered in points 1.3, 2.1 and 2.2 of Annex I to the IED as well as the production of sponge iron using direct reduction of iron ore, as addressed in recent BREFs.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

See point 1.9

1.11. EU-BRITE proposes not to duplicate in the IS BREF information already covered in the LCP BREF and/or in the Medium Combustion Plant Directive (MCPD) concerning the use of IS process gases as fuel in combined heat and power plants, but to instead cross-reference these documents where applicable.

- ☐ Agree
- ☐ Partly agree
- ☒ Disagree

Please provide the rationale for your opinion:

The IS and LCP BREFs are outdated. The MCP Directive only sets legal minimum requirements, it is not based on BAT considerations. Hence the data collection should collect up to date information on the combustion of IS process gases.

1.12. EU-BRITE proposes to exclude from the scope of the IS BREF the secondary production of zinc through the treatment of EAF dusts (i.e. Waelz process) and the production of ferroalloys from secondary iron and steel raw materials (e.g. plasma dust process), which are both covered under the Non-Ferrous Metals Industries BREF (NFM BREF).

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Neither zinc oxide, nor ferroalloys are iron or steel. Nevertheless, the information exchange under the IS could consider to update outdated sections of the NFM BREF, were deemed relevant.

1.13. EU-BRITE proposes to exclude from the scope of the IS BREF the mechanical treatment of metal waste for production of steel scrap (e.g. metal waste treatment in shredders) which is covered under the Waste Treatment BREF (WT BREF), but proposes to cover in the IS BREF the on-site transport, storage and handling of steel scrap including the implementation of advanced scrap-yard management techniques for example for steel scrap classification/segregation, monitoring and characterisation.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

1.14. Information received by EU-BRITE in the early frontloading phase indicates that steel production via induction furnaces is employed in some installations in the EU. However, this process has not been covered in the existing IS BREF (2013). In order to determine whether it shall be included in the scope of the IS BREF review, TWG members are asked to provide further information on steelmaking plants which are currently using this production route and to express their views on this issue.

Please provide any information you may have in the box below (e.g. plant name and location, induction furnace capacity, installation operating above/below the IED capacity threshold of 2.5 tonnes per hour).

Please provide your views regarding the possible inclusion of this steelmaking production route in the IS BREF scope:

1.15. The production of iron powder takes place in several installations in the EU. However, this production process is not covered in the existing IS BREF (2013). Information received by EU-BRITE during the early frontloading phase suggests that these production plants may not always be dedicated exclusively to the production of iron powder (but also to specialised alloys) and that their production capacity may not exceed 2.5 tonnes per hour. In order to determine whether these installations shall be considered for inclusion in the scope of the IS BREF review, TWG members are asked to provide further information on existing iron powder production plants and express their views on this issue.

Please provide any information you may have in the box below (e.g. plant name and location, iron powder production process employed, installation operating above/below the IED capacity threshold of 2.5 tonnes per hour, environmental impact).

Please provide your views regarding the possible inclusion of the production of iron powder in the IS BREF scope:

1.16. EU-BRITE proposes to exclude emissions from indirect cooling systems from the scope of the IS BREF; this may be covered under the Industrial Cooling Systems (ICS) BREF.

- ☐ Agree
- ☐ Partly agree
- ☒ Disagree

Please provide the rationale for your opinion:

As far as we know, it is not planned to update the ICS BREF, which has not even been updated since IED 1.0 was published. Consequently, the ICS BREF does no longer qualify as a valid reference. Hence the emissions from indirect cooling systems applied in IS production need to be included in the IS BREF. Should the ICS BREF be revised very soon, with similar application dates as the revised IS BREF, the relevant BAT-C sections could be transferred to the ICS BREF. However it makes sense to carry out a data collection on the topic, notably in relation to water consumption.

1.17. EU-BRITE proposes to include emissions from the storage, transfer and handling of both raw materials and by-products (e.g. cokemaking / ironmaking / steelmaking residues) in the scope of the IS BREF, and to refer to the Emissions from Storage (EFS) BREF for general issues (where applicable).

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

We agree that emissions from storage, transfer and handling should be included in the scope of the IS BREF. The Hamburg DRI documents from Arcelor Mittal show that relevant dust sources occur not only at the main process stack, but also at DRI, oxide and pellet handling points, conveyors, silos, distributors, transfer points and crane-related operations. These sources should be considered when developing DRI-specific BAT for dust capture, enclosure, dedusting and cleaning practices.

Diffuse emissions is also a recognised issue for EAFs and already mentioned in the “recommendations for future work” section of the existing IS BREF. The attached 2025 EMAS environmental report (section 7.7.3 for the Feralpi ESF Elbe site) sets out examples of effective diffuse dust emissions techniques: Enhousing / containment of dusty operations incl. on slag granulation with collection of emissions with subsequent abatement (thermal after burner, Quenching, cyclones, ACI and fabric filter) and, sprinkling of water on scrap yards with regular cleaning.

2. EMISSIONS TO WATER

2.1. EU-BRITE will collect information on the characteristics/parameters of waste water (e.g. pH, temperature, flow rate, conductivity). Please provide any relevant available information in the box below.

We agree with the proposal

2.2. Feedback on the substances/parameters proposed by EU-BRITE as key environmental issues (KEIs) for emissions to water and proposals for additional KEIs for emissions to water made by the delegation.

In this section, a KEI is understood as a substance / parameter that is considered important enough for the IS

production activities and operations that it should be covered by the IS BREF. These substances/parameters can be harmful to human health or the quality of the environment and therefore are considered as KEIs. Information about the KEIs should be collected through questionnaires and/or as bulk information. The aim of collecting such information may then differ from one KEI to another (e.g. to derive BAT, BAT-AELs). Conclusions on the KEIs will be taken by the TWG at the Kick off Meeting.

An excel file is provided to collect feedback from all delegations **(see link below to download the file)**.

The excel file provided is composed of two distinct tables.

Table 1 includes the substances/parameters **proposed by EU-BRITE as KEIs**.

Table 2 does not contain any substances / parameters but **can be used by each delegation to propose additional substances / parameters as KEIs** (if deemed necessary).

Both tables have almost identical structures, except for a few columns which slightly differ (see below).

Table 1 is structured as follows:

- Substance/parameter proposed as KEI by EU-BRITE
- Main process(es) considered relevant by EU-BRITE in reference to the proposed KEI
- Delegation feedback on KEI proposal
- Process(es) considered relevant by the delegation in reference to the proposed KEI
- Data availability for substance/parameter
- Method used for data reporting
- Typical units for data reporting
- Typical monitoring frequency for substance/parameter
- Type of discharge / averaging periods
- Emission points where the substance/parameter is monitored
- Sub-processes concerned by the KEI
- Comments / additional information

Table 2 is structured as follows:

- Substance/parameter proposed as KEI by delegation
- Rationale of the delegation to support the additional KEI proposal (e.g. additional substance/parameter included in permit)
- Main process(es) considered relevant by the delegation in reference to the proposed additional KEI
- Data availability for substance/parameter
- Method used for data reporting
- Typical units for data reporting
- Typical monitoring frequency for substance/parameter
- Type of discharge / averaging periods
- Typical emission points where the substance/parameter is monitored
- Sub-processes concerned by the KEI

- Comments / additional information

Each delegation is requested to fill in as much information as possible on the list of KEIs proposed by EU-BRITE using the template attached.

The above list is non-exhaustive. If there is any other substance/parameter that your delegation considers to be a KEI for emissions to water, please include your proposal in the second table provided.

For each substance/parameter, please provide as much information as possible.

Please note the following when filling in the tables:

- Several columns include pre-defined drop-down menu selections for facilitating responses.
- For some drop-down menu selections, only one option may be selected (e.g. delegation feedback on KEI proposal), while for other columns multi-selection is available (e.g. main process(es), typical monitoring frequency).
- For several columns, information can be entered as free text (e.g. typical units, sub-processes concerned by the KEI, comments / additional information)

[Emissions to water - List of KEIs proposed in the EU-survey.xlsm](#)

On completion of the work, please upload the final excel file using the button provided below.

For transparency purposes with the TWG, please also upload the final excel file in BATIS using the dedicated folder for the frontloading phase:

BATIS > Forum > Iron and Steel production > Revision of the Iron and Steel BREF (2026-2030) > 03 Frontloading

2.3. EU-BRITE considers the emissions to soil and groundwater as a KEI in IS installations, including the management of end-of-life plant decommissioning.

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

2.4. EU-BRITE proposes to collect information on the techniques applied to reduce soil and groundwater contamination in IS installations, including techniques applied for the management of end-of-life plant decommissioning. This may include information on the following:

- Storage and handling of input materials and production residues in stockyards / on conveyor belts (including transfer points) to avoid soil, groundwater and run-off water pollution

- Soil protection storage techniques, e.g. for materials with leachable components, contaminated scrap with mineral oil/emulsions
- Solid waste management during decommissioning
- Techniques to prevent soil /groundwater decontamination during the decommissioning phase

Please provide any feedback you may have in the box below.

We agree with this proposal.

The new Taranto's permit shows an ambition well below the actual BAT for certain pollutants.

For coking plants: more ambitious ELVs for COD. Additional pollutants are included as arsenic, cadmium, chromium (total and hexavalent) mercury, nickel, lead, copper, selenium, zinc, hydrocarbon and solvents (aromatic and nitrogenous) that We agree with this proposal. Management of end of life plant decommissioning will be particularly relevant for the BF-BOF iron ore production route.

For blast furnaces: more ambitious ELVs for iron and lead. Additional pollutants are included as arsenic, cadmium, chromium (total and hexavalent), mercury, nickel, copper, selenium, phenols, hydrocarbons, solvents (aromatic and nitrogenous).

For basic hoxigen furnaces: more ambitious ELVs for iron, zinc. Additional pollutants are included as arsenic, cadmium, chromium hexavalent, mercury, lead, copper, selenium, phenols, solvents (aromatic and nitrogenous).

If preferred, please upload a document containing information on relevant techniques applied to reduce soil and groundwater contamination in IS installations, including techniques for the management of end-of-life plant decommissioning.

3. EMISSIONS TO AIR

3.1. EU-BRITE will collect information on the characteristics/parameters of the waste gases (e.g. flow, temperature, humidity, oxygen content) for the substances / parameters proposed by EU-BRITE as key environmental issues (KEIs).

Please provide any relevant available information in the box below.

For gas-based DRI plants, waste-gas characteristics should be collected at least for the reformer stack and for relevant dedusting sources. Based on the Hamburg DRI documentation, relevant parameters include waste gas volume flow, temperature, humidity, oxygen content, operating load, fuel/process gas conditions and operating mode during the measurement. These contextual parameters are essential to interpret NO_x, CO, dust and HF emission values.

For direct reduction plants, the following air parameters should be considered as relevant KEIs or DRI-specific parameters for data collection: NO_x expressed as NO₂, CO, total dust, waste gas volume flow and, where relevant, HF and NH₃ slip if SNCR or similar NO_x abatement is applied. The Hamburg DRI documentation provides data availability for these parameters from periodic measurements and continuous monitoring. The main relevant emission point is the reformer stack for NO_x, CO, HF and flow, while total dust is relevant both at the reformer and at DRI handling/dedusting sources.

3.2. Feedback on the substances/parameters proposed by EU-BRITE as key environmental issues (KEIs) for emissions to air and proposals for additional KEIs for emissions to air made by the delegation.

In this section, a KEI is understood as a substance / parameter that is considered important enough for the IS production activities and operations that it should be covered by the IS BREF. These substances/parameters can be harmful to human health or the quality of the environment and therefore are considered as KEIs. Information about the KEIs should be collected through questionnaires and/or as bulk information. The aim of collecting such information may then differ from one KEI to another (e.g. to derive BAT, BAT-AELs). Conclusions on the KEIs will be taken by the TWG at the Kick off Meeting.

An excel file is provided to collect feedback from all delegations **(see link below to download the file)**. The excel file provided is composed of two distinct tables.

Table 1 includes the substances/parameters **proposed by EU-BRITE as KEIs**.

Table 2 does not contain any substance / parameter but **can be used by each delegation to propose additional substances / parameters as KEIs (if deemed necessary)**.

Both tables have almost identical structures, except for a few columns which slightly differ (see below).

Table 1 is structured as follows:

- Substance/parameter proposed as KEI by EU-BRITE
- Main process(es) considered relevant by EU-BRITE for proposed KEI
- Delegation feedback on KEI proposal
- Main process(es) considered relevant by the delegation for proposed KEI
- Data availability for substance/parameter
- Method used for data reporting
- Typical units for data reporting
- Typical monitoring frequency for substance/parameter
- Type of measurement / Typical averaging period
- Emission points where the substance/parameter is monitored
- Type of relevant emissions (channelled / diffuse / both)
- Cases where a correction to a specific reference oxygen level for substance/parameter is applied (where applicable)
- Comments / additional information

Table 2 is structured as follows:

- Substance/parameter proposed as KEI by the delegation
- Rationale of the delegation to support additional KEI proposal (e.g. additional substance/parameter included in permit)
- Main process(es) considered relevant by the delegation for proposed KEI
- Data availability for substance/parameter
- Method used for data reporting

- Typical units for data reporting
- Typical monitoring frequency for substance/parameter
- Type of measurement / Typical averaging period
- Emission points where the substance/parameter is monitored
- Type of relevant emissions (channelled / diffuse / both)
- Cases where a correction to a specific reference oxygen level for substance/parameter is applied (where applicable)
- Comments / additional information

Each delegation is requested to fill in as much information as possible on the list of KEIs proposed by EU-BRITE using the template attached.

The above list is non-exhaustive. If there is any other substance/parameter that your delegation considers to be a KEI for emissions to air, please include your proposal in the second table provided.

For each substance/parameter, please provide as much information as possible.

Please note the following when filling in the tables:

- Several columns include pre-defined drop-down menu selections for facilitating responses.
- For some drop-down menu selections, only one option may be selected (e.g. delegation feedback on KEI proposal), while for other columns multi-selection is available (e.g. process(es), typical monitoring frequency).
- For several columns, information can be entered as free text (e.g. typical units, rationale supporting delegation proposal, comments / additional information)

[Emissions to air - List of KEIs proposed in the EU-survey.xlsx](#)

On completion of the work, please upload the final excel file using the button provided below.

For transparency purposes with the TWG, please also upload the final excel file in BATIS using the dedicated folder for the frontloading phase:

BATIS > Forum > Iron and Steel production > Revision of the Iron and Steel BREF (2026-2030) > 03 Frontloading

3.3. Recommendations for future work in the existing IS BREF (2013) highlight that additional information on diffuse/fugitive emissions of BTX (benzene, toluene, xylenes) and PAHs (polycyclic aromatic hydrocarbons) from coke ovens should be sought in the next BREF review. Accordingly, TWG members are requested to provide up-to-date information on techniques/measures used to decrease diffuse/fugitive emissions of BTX and PAHs from cokemaking. This includes fugitive emissions from (i) coke oven battery operations (e.g. fugitive door/lid emissions, quenching towers) and ii) coke oven by-product plant operations (e.g. ammonia recovery, tar recovery, light oil recovery, coke oven gas desulphurisation).

Please provide any information you may have in the box below.

Same comment as in 2.1: Cokemaking should no longer be considered as BAT since this process is not aligned to processes that also ensure a high level of environmental protection (especially climate protection). We therefore regard those processes as “obsolete BAT”. A decommissioning BAT should be proposed for those activities, BAT-C for the interim period up to its decommissioning / phase out may be derived (if this helps the phase out of coal use).

We have measurement data results from some coke oven batteries from the dutch Tata Steel plant (IJmuiden) which show serious issues of releases of Substances of Very High Concern (incl benzene, toluene) beyond the regulatory permit limit. For that reason, the competent authority proposed to withdraw the operation permit.

Relevant articles (in Dutch): <https://odnzkg.nl/nieuws/omgevingsdienst-start-procedure-tot-intrekking-vergunningen-kooksgasfabrieken/>

<https://odnzkg.nl/wp-content/uploads/2026/05/Brief-vervolg-handhavingstraject-KGF1-en-KGF2.pdf>

<https://odnzkg.nl/nieuws/dwangsommen-voor-overschrijden-milieunormen-tata-steel-en-afronding-onderzoek-kooksgasfabriek/>

<https://odnzkg.nl/nieuws/milieunormen-overschreden-bij-kooksgasfabriek-1-omgevingsdienst-vordert-e-85-miljoen-van-tata-steel/>

<https://odnzkg.nl/nieuws/milieunormen-overschreden-bij-kooksgasfabriek-2-omgevingsdienst-vordert-e-32-miljoen-in-van-tata-steel/>

If preferred, please upload a document containing information on relevant techniques/measures to minimise fugitive VOC and PAH emissions from cokemaking.

3.3.1 For the control of diffuse emissions from coke oven battery operations (e.g. leaks from doors, ascension pipes, charging hole lids), four methods are specified in the existing IS BREF (2013) to monitor and reduce emissions, including:

- US EPA method 303
- DMT (Deutsche Montan Technologie GmbH) methodology
- BCRA (British Carbonisation Research Association) methodology
- Deutsch methodology (applied in the Netherlands)

Please specify which methodology is normally used by your delegation and indicate whether a more advanced methodology has been developed/implemented since the publication of the IS BREF (2013).

Data collection should inform the TWG which methods are more accurate and verifiable. NGO have carried out independent monitoring with cameras to detect leaks and incidents at coke oven plants, e.g. see here for Tata steel <https://www.youtube.com/@frissewindnu>

3.3.2 Information received during the early frontloading phase highlights that EN standard 17628:2022 (Fugitive and diffuse emissions of common concern to industry sectors) that describes the application of new methods (e.g. using optical gas imaging or differential absorption) to detect and/or quantify VOC emissions

from industrial processes could be relevant for coke making. Please indicate whether you consider such methods relevant and specify if they have already been implemented/tested in the IS sector.

Data collection should inform the TWG which methods are more accurate and verifiable. These techniques should allow early detection of VOC emissions and hence should be applied.

3.3.3. Recommendations for future work in the existing IS BREF (2013) highlight that concerning fugitive emissions of VOCs from coke ovens, additional information should be gathered to decide whether methane emissions shall be included or if only non-methane VOC emissions should be considered ? Please provide any feedback you may have on this matter in the box below.

The EEB is in favour to address both methane and non-methane VOC emissions from the sector.

3.3.4. Information received during the early frontloading phase highlights that in 2024 the US EPA introduced requirements for fenceline monitoring in the vicinity of cokemaking facilities in relation to the ambient air concentration of benzene. Please indicate whether similar approaches have also been implemented by your delegation for BTX and/or PAHs and provide your views regarding this approach.

As indicated in section 3.3. there have been issues of emissions of SVHC (air pollutants) from coking operations at Tata Steel (NL). Data collection should inform if there is reason for similar concerns from other coke plants in the EU.

3.4. Recommendations for future work in the existing IS BREF (2013) highlight that additional information should be gathered on the monitoring of emissions associated in particular with the transport and handling of dusty raw materials (e.g. iron ore, limestone, coal), intermediate products (e.g. coke, sinter) or residues (e.g. slag), as well as techniques implemented to minimise such emissions. Accordingly, TWG members are requested to provide information on the monitoring and the abatement techniques used for minimising fugitive dust emissions from the storage, transport and handling of materials in this sector.

Please provide any information you may have in the box below.

Taranto's new permit shows that dust emissions in Taranto's (2022 averages) coking plant reaches figures well below BATs, particularly for coal preparation, coke pushing, coke handling (use of fabric filters). The same in the sinter plant (e.g. sinter crushing, where fabric filters and multicyclone systems are in use in different emission points), blast furnace (e.g. burden preparation with the use of fabric filters), basic oxygen furnace (e.g. hot metal pretreatment, hot metal purification... with the use of fabric filters).

The Hamburg DRI documents indicate that fugitive and handling-related dust emissions are relevant for direct reduction plants. Relevant sources include transfer points, conveyors, belt scrapers, silos, bunkers, distributors, crane operations and DRI/product handling. BAT should therefore include enclosure or encapsulation of dusty transfer points, source-level extraction, dedusting of extracted air, minimisation of free fall heights, regular cleaning and systematic inspection of visible dust sources.

As mentioned above (section 1.17), diffuse emissions is also a recognised issue for EAFs and already mentioned in the "recommendations for future work" section of the existing IS BREF. Whilst monitoring of diffuse emissions may be difficult, regular immission monitoring campaigns can provide a good indication on

whether diffuse emissions prevention/reduction techniques are effective. Member States normally require compliance with maximum deposition rates e.g. German daily dust limit set by the TA Luft 0,35g/m³/day.

If preferred, please upload a document containing information on relevant techniques used to monitor and abate fugitive dust emissions from the transport and handling of materials.

3.5. Information related to the applied processes used in secondary metallurgy is included in Section 7.1.4 of the existing BREF (2013). However, little information is available on techniques applied to abate emissions to air from these processes. EU-BRITE proposes that TWG members provides additional information on the applied processes used in secondary metallurgy (including potentially new advancements in the field) and further information on measures / techniques used to reduce emissions to air (channelled/diffuse).

Please provide any information you may have in the box below on the following:

- Environmental impact of secondary metallurgy operations (previously described in Section 1.5 of this survey)
- Abatement techniques employed for controlling emissions to air / emission limit values specified in permits (where applicable, e.g. production of leaded steel)
- Potential new technologies deployed in secondary metallurgy since the last IS BREF (e.g. Twin ladle furnaces)

Please provide any information you may have in the box below.

If preferred, please upload a document containing information on secondary metallurgy applied processes and their environmental impact.

3.6. EU-BRITE proposes to consider noise emissions as a KEI.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Given that steelworks are often operating close to urban areas, noise clearly represents a KEI. Noise should be assessed on a site-specific basis, considering the plant layout, distance to nearby receptors, operating hours, cumulative noise from integrated operations, and existing permit conditions.

Noise is also an issue for DRI plants.

For which type of process(es) should this KEI be considered?

- ☒ Pelletisation
- ☒

Sintering

- ☒ Cokemaking
- ☒ Blast furnaces
- ☒ BOF steelmaking
- ☒ Secondary metallurgy
- ☒ Casting (e.g. continuous casting)
- ☒ Direct reduction of iron ore
- ☒ EAF steelmaking

3.7. EU-BRITE proposes to collect, during the BREF development process, information on measures/techniques to prevent and/or to reduce noise emissions.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

The BREF should collect information on noise prevention and reduction measures in order to ensure that decarbonisation does not shift environmental burdens to local communities. The 2025 official inspection report for the ArcelorMittal Hamburg DRI plant shows that noise can be a relevant compliance issue: the authority identified exceedance of immission limit values and non-compliance with the state of noise reduction technology for the DRI plant. This supports collecting information on noise prevention and reduction techniques for DRI installations.

Noise mitigation measures (e.g. enhousing) are also mentioned in the EMAS reports provided for EAFs.

Please provide any information you may have on relevant techniques/measures to reduce noise emissions in the IS sector using the box below.

Enhousing (scrap yard, EAF, other buildings), noise reduction walls, etc.

3.8. EU-BRITE proposes to consider odour emissions as a KEI.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

For which type of process(es) should this KEI be considered?

- ☒ Pelletisation
- ☒ Sintering
- ☒ Cokemaking
- ☒ Blast furnaces
- ☒ BOF steelmaking
- ☒ Secondary metallurgy
- ☒ Casting (e.g. continuous casting)
- ☒ Direct reduction of iron ore

Please provide the rationale for your opinion:

Odour should be considered as a KEI where it is relevant for specific processes or site configurations. Odour is an important environmental aspect because it can cause significant nuisance for nearby communities, trigger complaints, and indicate fugitive or poorly controlled emissions of substances such as VOCs, sulphur compounds, ammonia, tar-related compounds or contaminated waste water streams. Odour should in particular be considered for cokemaking, sintering and blast furnaces.

Cokemaking is the most relevant process due to potential emissions from coke oven gas leaks, coal charging, coke pushing, quenching, tar, ammonia, sulphur compounds and by-product plants. Sintering should be considered where recycled materials, oily residues, sulphur- or chlorine-containing inputs, organic additives or waste-gas treatment residues may lead to odorous emissions.

Blast furnaces should also be considered, in particular due to raw material handling, blast furnace gas systems, slag handling or granulation, sulphur-related compounds and waste water or sludge systems. For other processes, including DRI, odour should be considered where site-specific conditions indicate potential relevance, for example due to gas treatment, wet scrubbing, chemical storage, waste water treatment, residue handling, proximity to sensitive receptors or complaints.[

3.9. EU-BRITE proposes to collect, during the BREF development process, information on measures/techniques to prevent and/or to reduce odour emissions.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Please provide any information you may have on relevant techniques/measures to reduce odour emissions in the IS sector using the box below.

Relevant techniques include closed or covered systems for odorous materials, improved gas-tightness, leak detection and repair, enclosed storage tanks, vapour recovery, proper ventilation and extraction, scrubbers, activated carbon filters, biofilters, thermal oxidation where appropriate, covering of waste water treatment units, enclosed sludge handling, regular cleaning, preventive maintenance and rapid response to leaks or abnormal odour event.

4. RAW MATERIALS AND CHEMICALS MANAGEMENT

4.1. EU-BRITE considers raw materials consumption as a KEI and will collect data/contextual information on the different types of raw materials used as well as techniques applied to reduce their consumption (e.g. substitution techniques with suitable residues) during the IS BREF

development process.

Please provide any feedback you may have in the box below.

We support the proposal.

4.2. EU-BRITE proposes to collect information on advanced techniques and management practices employed for improving the characterisation of steel scrap and for maximising steel scrap recycling in IS installations during the BREF development process. TWG members are requested to provide up-to-date information on the following:

- Advanced detection techniques for scrap metal characterisation / sorting / processing (e.g. using sensors / lasers / X-rays)
- Advanced robotics for scrap metal sorting, separation, handling and transportation
- Artificial intelligence techniques for improved scrap-yard management

Please provide any feedback you may have in the box below.

We support the proposal. Such techniques are already available used in EU scrapyards (e.g. Galloo in Belgium): see Tomra (read here: <https://www.tomra.com/waste-metal-recycling/media-center/news/2026/tomra-recycling-launches-the-new-finder>) and Danieli (read here: https://www.danieli.com/en/news-media/news/danieli-partners-max-ai-advanced-robotic-scrap-sorting_37_1008.htm).

If preferred, please upload a document containing information on relevant techniques for improving the characterisation of steel scrap and for maximising steel scrap recycling.

4.3. EU-BRITE considers the consumption of hazardous chemicals as a KEI and will collect data /contextual information on chemicals consumption, as well as information on possible substitution options involving the use of less or safer chemicals during the IS BREF development process.

Please note that a list of hazardous substances considered relevant for the IS sector will be established in collaboration with the European Chemicals Agency (ECHA) in a dedicated chemicals frontloading exercise.

Please provide any feedback you may have in the box below.

We support this.

5. ENERGY CONSUMPTION

5.1. EU-BRITE considers specific energy consumption as a KEI and will collect data and contextual information on specific energy consumption during the IS BREF development process.

Please provide any feedback you may have in the box below.

Beyond the energy consumption of a specific installations, it should be considered that different production routes have different typical energy needs, with the scrap-EAF route being the less energy intensive and the BF-BOF route being the more energy-intensive. Therefore, what mentioned above regarding the better characterisation of scrap steel (allowing to produce high-quality steel products) and the need to include DRI in the BREF is also instrumental to decrease the general energy consumption of the sector. BAT-AEPL for energy consumption per tonne of output product should be derived.

Would your delegation have information on techniques/measures applied to reduce energy consumption in IS installations?

- ☒ Yes
☐ No

5.2. EU-BRITE proposes that the TWG identify the contextual information (e.g. plant configuration, system boundaries, operational regime, type of processes and fuels, methods used for monitoring and calculation, level of data aggregation, energy management systems, energy/heat recovery) needed to understand and compare the data on energy consumption collected through plant-specific questionnaires.

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

To enable comparability, specific energy consumption per tonne of product output should be derived. This approach is also taken in the provided EMAS reports. The origin of energy inputs (renewables/fossil) should also be differentiated

5.3. Recommendations for future work in the existing IS BREF (2013) highlight that additional information/data on options for increasing energy efficiency and minimising energy consumption should be sought in the next BREF review. TWG members are asked to provide up-to-date information on techniques/measures used to decrease energy consumption in IS installations, information/data on the most significant energy-consuming processes and information on the main energy sources used (e.g. type of fuels, biomass, electricity).

Please provide any information you may have in the box below.

We stress the fact that also the energy requirements of different production routes should be compared and that an option to decrease energy consumption is to shift production route (e.g. BF-BOF to DRI or scrap-EAF). Check reference here (the PDF is too big to be uploaded): <https://www.agora-industry.org/publications/low-carbon-technologies-for-the-global-steel-transformation#downloads>

If preferred, please upload a document containing relevant information on for example techniques/measures used to reduce energy consumption in IS installations, the main energy sources used or the most significant energy-consuming processes.

6. WATER MANAGEMENT

6.1. EU-BRITE considers water management (consumption and discharge) as a KEI and will collect data and contextual information on specific water consumption and waste water discharge.

Please provide any feedback you may have in the box below.

We strongly support this proposal. Water consumption is in general a KEI, in particular for the IS processes that are water intensive (mainly due to cooling purposes).

Would your delegation have information on techniques/measures applied to reduce the water consumption and waste water discharge of iron and steel installations?

- ☐ Yes
☐ No

Please provide any information you may have on relevant techniques/measures to reduce water consumption and waste water discharge in the box below.

If preferred, please upload a document containing information on relevant techniques/measures to reduce water consumption and waste water discharge .

6.2. EU-BRITE proposes that the TWG identify the contextual information (e.g. applied techniques, type of processes, methods used for monitoring, plant configuration and boundaries defined, level of data aggregation, water reuse, water recycling rate) needed to understand and compare the data on water consumption and water discharge collected through plant-specific questionnaires.

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

6.3. Recommendations for future work in the existing IS BREF (2013) highlight that information on water use in IS installations should be improved in the next BREF review (e.g. by clearly defining terms such as water demand, water intake, water consumption and waste water). TWG members are asked to provide additional information on this topic as well as to propose clear definitions. This could be used to update Section 2.4 of the existing BREF (2013) on water and waste water management.

Please provide any information you may have on this matter in the box below.

We support this. Data collection through questionnaires should provide the required information.

7. CIRCULAR ECONOMY - MANAGEMENT OF RESIDUES INCLUDING WASTE GENERATION

7.1. EU-BRITE considers the generation of residues as a KEI and will collect data and contextual information on their quantities, composition and management (e.g. recovery, reuse, recycling).

Please provide any feedback you may have in the box below.

We support this.

7.2. EU-BRITE considers the generation of wastes as a KEI and will collect data and contextual information on their quantities, composition and management (e.g. disposal).

Please provide any feedback you may have in the box below.

7.3 TWG members are asked to provide more information on the residues which would need to be considered in the IS BREF review.

Concerning residues (which can normally be reused, recycled or recovered), information included in the existing BREF (2013) specifies the following:

- Slags (from EAF, BF, BOF, secondary metallurgy, desulphurisation)
- BF flue dust and BF slurry (coarse fraction)
- Mill scale
- Filter dusts
- Waste water treatment sludges

Please provide up-to-date information on how the residues specified above are handled in IS installations, and, if necessary, propose additional residues that would need to be considered in the IS BREF review.

The use of slags as a substitute material is also useful for decarbonisation in other industries e.g. cement production.

Would your delegation have information on applied techniques for the reuse, recycling or recovery of iron and steelmaking residues aiming to increase circularity in IS processes?

- ☐ Yes
☐ No

Please provide any information you may have on relevant techniques/measures for the reuse, recycling or recovery of iron and steelmaking residues in the box below.

If preferred, please upload a document containing information on relevant techniques/measures for the reuse, recycling or recovery of iron and steelmaking residues in IS processes .

7.4 TWG members are asked to provide more information on the wastes which would need to be considered in the IS BREF review.

Concerning wastes generated (normally requiring disposal), information included in the existing BREF (2013) specifies the following:

- Fine dust/sludge from BF gas cleaning
- Runner refractory rubble from the BF
- Fine dust from BOF gas scrubbing (if a wet cleaning process is used)
- Dust with high amounts of alkali chlorides and heavy metal chlorides (e.g. last field of electrostatic precipitators, bag filters used to treat off-gas from sinter strands)
- Slurry containing gypsum (from wet desulphurisation).

Please provide up-to-date information on how the wastes specified above are handled in IS installations, and if necessary propose additional wastes that would need to be considered in the IS BREF review.

Would your delegation have information on applied techniques for minimisation of waste generation in IS processes?

- ☐ Yes
☐ No

Please provide any information you may have on relevant techniques/measures for minimisation of waste generation in IS processes in the box below.

If preferred, please upload a document containing information on relevant techniques/measures to minimise waste generation in IS processes.

8. DECARBONISATION AND GREENHOUSE GAS EMISSIONS

8.1. EU-BRITE will collect information on techniques used for the reduction of greenhouse gas emissions from all relevant processes used in iron and steel production during the BREF review process.

Please provide any feedback you may have in the box below.

We support this. In this respect, focus should be given to techniques able to significantly abate GHG emissions and not delivering only incremental decreases and prolongation of fossil-based processes.

Also in this case, comparisons among production routes should be made to recognise change of technique (e.g. BF-BOF to DRI) as the most effective technique to decrease GHG emissions.

We expect a derivation of BAT-AE(P)LS on GHG expressed per tonne of product output (similar as the EU ETS benchmarks).

8.2. EU-BRITE proposes to collect data on GHG emissions from iron and steel installations during the BREF review process.

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Data should include direct emissions, indirect emissions from electricity and hydrogen production, natural gas use, methane leakage assumptions, carbon capture rates where relevant, and comparable intensity metrics such as tCO₂e/t DRI, tCO₂e/t hot metal and tCO₂e/t crude steel.

Would your organisation have reliable representative data on greenhouse gas emissions?

- ☒ Yes
- ☐ No

Please provide information, if available, on techniques to reduce greenhouse gas emissions from IS installations.

DRI plants using 100% hydrogen can achieve up to 100% GHG emissions reduction, depending on the carbon intensity of electricity used to produce hydrogen. The remaining CO₂ emissions would depend on cathode wear /reducing agents used.

Shifting to scrap-EAF plants fed with high-quality scrap and 100% renewable electricity would decrease emissions almost completely. (See reference at point 5.3).

If preferred, please upload a document with the available information on techniques to reduce greenhouse gas emissions from IS installations.

9. EMERGING TECHNIQUES

9.1. EU-BRITE proposes to collect, during the BREF development process, information and performance data on emerging techniques (ET) applicable to the activities covered by the IS BREF and associated with the KEIs to be agreed on at the kick-off meeting.

(e.g. emissions to air/water, consumption of energy/water, resource efficiency and circularity using fewer or safer chemicals, raw materials use, decarbonisation)

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

9.2. Based on the Innovation Centre for Industrial Transformation and Emissions (INCITE) findings published in the IS BREF frontloading report published by EU-BRITE in May 2026, EU-BRITE proposes to include in the IS BREF review the innovative techniques specified in Section 4 of this report and to collect additional information (operational/environmental performance data) on those innovative techniques in a dynamic manner (i.e. throughout the BREF development process, as soon as additional data becomes available).

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

We agree. As mentioned before, to ensure a steady progress of the works we suggest to address/update the BF-BOF and scrap-EAF routes at the beginning of the process, leaving for the end the DRI route to give time to collect data from the DRI installations that will be available in Europe in 2027. DRI plant data operational outside of the EU should obviously also be considered.

9.3. After having reviewed the INCITE findings published in the IS BREF frontloading report published by EU-BRITE in May 2026, TWG members are asked to provide information on other emerging techniques (not documented in the INCITE report) that could also be considered during the IS BREF development process.

Please propose any additional emerging technique which could be covered during the IS BREF development process, and provide supporting information for your proposal.

We propose to include Vale's Iron Ore Briquettes as an additional emerging technique. This technology is relevant because it could reduce reliance on conventional high-temperature agglomeration routes such as sintering and pelletising. Vale describes the product as an iron ore briquette made through low-temperature agglomeration, which may substitute sinter, granulates or pellets in steelmaking furnaces and help reduce GHG emissions by avoiding the sintering stage.

It is also potentially relevant for the transition to DRI-based steelmaking. Vale and Midrex have announced cooperation to assess the use of iron ore briquettes in direct reduction plants. This could help diversify DRI feedstock options and reduce the environmental footprint of iron ore preparation.

9.4. TWG members are asked to review the information on emerging techniques included in Chapter 11 of the existing IS BREF (2013) and to propose a way forward for updating / reviewing the information (where applicable).

For each emerging technique included in the table below, please provide a proposed way forward and a justification.

Emerging Technique / Section in IS BREF (2013)	Proposed way forward	Justification
1. Top gas recycling blast furnace/11.1.1.1	☒ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i> Technique is not deployed due to economic reasons and its limited potential for GHG reductions.
2. Carbon-lean fuels and reducing agents/11.1.1.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☒ Technique further deployed and	<i>200 character(s) maximum</i> The use of hydrogen is key for DRI plants. Its use should be prioritized only in DRI installations and not in blast furnaces as this is not efficient, and it cannot replace coke.

	implemented - to be considered as candidate BAT	
3. Biomass/11.1.1.3	☒ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i> Biomass has limited availability and its use for steelmaking should not be promoted to prevent negative effects on biodiversity
4. CO₂ capture and storage/11.1.2	☒ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i> The use of CCS on BF has not progressed at all, given its high cost, limited decarbonisation potential and scarce storage capacity. Other more effective decarbonisation solutions are available
5. Ceramic filters for abatement of particles and NOx/11.1.3	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
	☐	

6. Burning and recycling of dry waste dust/11.1.4	Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
7. Use of carbon impregnated plastics for PCDF/Fs adsorption /11.2.1	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
8. Suppression of PCDD/F formation by addition of nitrogen compounds to the flue-gas/11.2.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
	☐ Technique obsolete and/or did not progress - Delete information	

9. Quenching/11.2.3	☐ Technique further deployed but still an ET - to be considered as candidate ET ☒ Technique further deployed and implemented - to be considered as candidate BAT	200 character(s) maximum
10. Super coke oven/11.3.1	☒ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but it is still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	200 character(s) maximum The use of coke is not BAT and should be phased out.
11. Single oven pressure control technique/11.3.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	200 character(s) maximum
12. Alternatives in coke oven	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an	

gas utilisation/11.3.3	ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
13. Reduction of CO emissions from hot stoves with an internal combustion chamber/11.4.1	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
14. Slag heat recovery/11.4.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
15. Injection of waste in blast furnaces/11.4.3	☒ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐	<i>200 character(s) maximum</i> Blast furnaces should be phased out and perverse incentives to produce waste should not be provided.

	Technique further deployed and implemented - to be considered as candidate BAT	
16. Improvement of BOF slag stability for extended use/11.5.1	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
17. Improving clean gas dust content in wet scrubber-based BOF plants by upgrading to Hydro Hybrid Filters/11.5.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
18. Whirl hood for secondary dedusting/11.5.3	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and	<i>200 character(s) maximum</i>

	implemented - to be considered as candidate BAT	
19. Recycling of BOF and EAF ladle slags as a flux agent in electric steelmaking/11.5.4	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET. ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
20. Contiac furnace/11.6.1	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET. ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
21. Intermetallic bag filter to minimise emissions of dust, PCDD/F and heavy metals/11.6.2	☐ Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
	☐	

22. Recovery of old tyres in EAF /11.6.3	Technique obsolete and/or did not progress - Delete information ☐ Technique further deployed but still an ET - to be considered as candidate ET ☐ Technique further deployed and implemented - to be considered as candidate BAT	<i>200 character(s) maximum</i>
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10. MONITORING

10.1. EU-BRITE will collect information on monitoring during the BREF development process through a data collection via plant-specific questionnaires, in particular on:

- parameters monitored;
- monitoring standards used (EN, ISO, other standards);
- purpose of monitoring (e.g. compliance monitoring, operational control);
- who carries out the monitoring (e.g. operator self-monitoring, regulatory authority);
- monitoring frequencies (continuous, once every year, once every day, etc.);
- units and averaging periods;
- issues regulated by permit conditions, e.g. emission limit values (ELVs).

Please provide any feedback you may have in the box below.

The Hamburg DRI plant provides an example of continuous emission monitoring applied to a gas-based DRI reformer.

10.2. Information received by EU-BRITE in the early frontloading phase indicates that continuous emissions monitoring methods may be implemented nowadays in installations in the EU at specific emission points (e.g. long-term dioxin sampling at iron ore sintering plants / dust monitoring at EAF steelmaking plants) even though this was not specified in the existing IS BREF (2013). TWG members are asked to provide further information on plants which may be applying such continuous emissions monitoring methods in the EU and specify permit conditions.

Please provide any information you may have in the box below.

We support the collection of monitoring information through plant-specific questionnaires. For direct reduction plants, monitoring should distinguish between continuous monitoring at the reformer or main process stack and periodic measurements at DRI handling and dedusting sources. Relevant information should include monitoring standards, frequency, averaging periods, permit ELVs and operating conditions during measurements.[]

11. OTHER THAN NORMAL OPERATING CONDITIONS

11.1 EU-BRITE proposes to work with the TWG to identify ‘other than normal operating conditions’ and to collect information on these specific conditions for the IS BREF during the BREF development process.

Please give your feedback in the box below.

OTNOC data should be used to strengthen prevention, monitoring, reporting and corrective-action requirements, not to weaken BAT-AELs. Information collected should include the frequency, duration, causes, pollutants affected, monitoring data, corrective measures and permit treatment of such events.

12. CONFIDENTIALITY ISSUES

12.1 EU-BRITE proposes not to collect data as confidential/sensitive information during the BREF development process.

(However, if any information submitted is considered confidential business information or sensitive information under competition law, this should be clearly stated when sending the information and the reason for the confidentiality/sensitivity should be given. This shall be discussed in detail at the KoM, based on which information is needed and the degree of confidentiality of the data/information requested.)

- ☐ Agree
- ☒ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Confidentiality can help obtain more complete and detailed data from operators, especially for new processes such as H2-DRI, H2/NG-flexible DRI, DRI-EAF routes and melting units; but it should not prevent the TWG from assessing environmental performance or deriving BAT, BAT-AELs, BAT-AEPLs and benchmarks. Where needed, sensitive data should be provided to the E.NGO signing a confidentiality agreement, these stakeholders are not competing to industry operators. For industry delegates (competitors), the data may get provided in anonymised or aggregated form or to a third party representative that signed a confidentiality agreement.

13. PROPOSED STRUCTURE OF THE BREF

13.1. EU-BRITE proposes to use the following structure for the IS BREF:

Scope	Chapter containing e.g.: - Processes / activities covered in the IS BREF scope. - Processes / activities excluded from the IS BREF scope. - Main 'directly associated activities' included in the IS BREF scope, even when these are not Annex I activities. - Considerations addressing the possible interface with other BREFs.
General information on the Iron and Steel Sector	Chapter containing e.g.: - IS production in Europe and worldwide. - Distribution/number of IS production plants in the EU depending on production routes. - Production, economics, employment figures in the EU steel industry. - Key environmental issues in IS production.
Applied processes and techniques in the IS sector	Chapter containing for each section a description of applied processes in the IS sector. - General section on applied processes linked to the management of e.g. energy, water, raw materials, residues and waste in IS installations. - Pelletisation - Cokemaking - Iron ore sintering - Direct reduction of iron ore (new section) - BOF steelmaking - EAF steelmaking
Current consumption and emission levels	Chapter containing all the data collected for all key environmental issues during the information exchange including figures / data tables on e.g.: - Emissions to air - Emissions to water - Noise - Odour - Energy consumption - Water consumption and wastewater discharge - Residues and waste - Raw materials and chemicals consumption - Decarbonisation - Circular economy
Techniques to consider in the determination of BAT and emerging techniques (ET)	Chapter containing detailed description of candidate techniques for BAT / ET, following a structure similar to the chapter on applied processes. - General techniques for the management of e.g. energy, water, raw materials, residues and waste in IS installations. - Pelletisation - Cokemaking - Iron ore sintering - Direct reduction of iron ore - BOF steelmaking - EAF steelmaking
Best Available Techniques conclusions (BATc) for the IS sector	Chapter containing the BAT conclusions for the IS sector (structure to be defined at a later stage).
Concluding remarks and recommendations for future work	Chapter containing a summary of the entire BREF review process, the degree of consensus reached at the final TWG meeting including details of the split views raised and the recommendations for future work.
Annexes	
Glossary	
References	

Is this proposed structure acceptable to you?

- ☐ Agree
☒ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

The main comments relate to obsolete BAT such as BF-BOF route and the coking process, for those we suggest a 'decommissioning BAT' with interim BAT-AE(P)L that would have to be met during the transition phase. The BAT-C could also be structured to differentiate new plants from existing/major upgrades standards.

We welcome the inclusion of direct reduction of iron ore and decarbonisation as KEI.

Please upload your alternative proposal for the structure of the IS BREF

14. SELECTION OF SITES FOR THE DATA COLLECTION

14.1. EU-BRITE proposes that the TWG submit proposals of well-performing (including best-performing) plants/installations carrying out the activities specified in points 1.3, 2.1 and 2.2 of Annex I to the IED to participate in the data collection during the BREF development process.

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

Clear criteria should be set to ensure we are indeed talking about best or well performers. Ideally the reference installations should comply with the strictest BAT-AEL limits. As a minimum the reference installations must demonstrate compliance within the mid-point of the BAT-AEL ranges of the existing IS BREF.

Also, installations complying with ambitious emission standards at global level (e.g. Ultra Low Emissions standard in China) should be included in the data collection.

14.2. EU-BRITE proposes that the TWG submit proposals of well-performing (including best-performing) plants carrying out the production of sponge iron using direct reduction of iron ore to participate in the data collection during the BREF development process. This could include new direct reduction plants commissioned in the EU during the IS BREF review period, and/or where possible a selection of well-performing direct reduction plants operating under standard conditions (e.g. natural gas) located outside the EU.

- ☒ Agree
☐ Partly agree
☐ Disagree

Please provide the rationale for your opinion:

As above, we support this and we suggest to collect data from plants outside the EU.

15. DATA COLLECTION PROCEDURE

15.1. EU-BRITE proposes to follow the established BREF process for the collection of site/plant-specific data via questionnaires including the following:

- preparation of the draft questionnaire by EU-BRITE followed by the commenting of the TWG;
- organisation of a questionnaire workshop to finalise the questionnaire;
- testing of the draft final questionnaire by a selected (small) number of plants/installations;
- preparation of the final questionnaire by EU-BRITE;
- distribution of the final questionnaire through Member States' representatives;
- filling in of the questionnaires by the sites/plants' operators;
- collection of the filled-in questionnaires by Member States' representatives;
- quality check of the filled-in questionnaires by MS' representatives with the help of a checklist;
- submission of the quality-checked questionnaires to EU-BRITE by MS' representatives.

- ☐ Agree
- ☒ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

A procedure on how to collect information from out of the EU plants should be added. We suggest a dedicated reach out to competent authorities and best performers at least in China and US.(see point 14.2). The EEB is willing to help to collect out of EU plants information.

15.2. EU-BRITE proposes to collect data for the reference years 2026, 2025 and 2024 or, if such data is not available, for the last 3 years for which data is available.

- ☐ Agree
- ☒ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

Since EU DRI plants will go online in 2027, we suggest to add at least 2027 and 2028 as reference years. More flexibility should be allowed for DRI plants, it should be sufficient to have operational data of a single year to understand the environmental performance of the key parameters e.g. GHG and NOx. Data should be collected for 2027, 2028 for DRI Plants. Flexibility should also be allowed if there are sound reasons e.g. recent retrofits, new build plants.

Data available

	2026	2025	2024	2023	2022	2021
What year's data is available in your organisation?	☐	☐	☐	☐	☐	☐

16. SITE VISITS

16.1. EU-BRITE proposes that the TWG suggests iron and steel installations for site visits during the BREF development process.

(Site visits may be instrumental in gathering and validating information for reviewing the BREF and these visits could be proposed by TWG members to EU-BRITE and other TWG members and appropriate information shared with the whole TWG in a timely manner).

- ☒ Agree
- ☐ Partly agree
- ☐ Disagree

Please provide the rationale for your opinion:

The Northern Sweden H2-DRI cluster should be prioritised for site visits, in particular Stegra in Boden and HYBRIT in Luleå, with LKAB's nearby regional iron ore mines and pelletising/processing sites in Malmberget /Gällivare, Kiruna or Svappavaara included where feasible. This would allow the TWG to assess the emerging value chain from high-grade iron ore and pellet/feedstock preparation to hydrogen-based direct reduction and DRI-EAF steelmaking. Such visits would be particularly useful for understanding feedstock quality, pelletising and alternatives to agglomeration, hydrogen use, DRI/HBI handling, EAF integration, energy and water use, dust, noise, odour. A separate visit to thyssenkrupp Steel Duisburg should also be considered because its DRI route with melting units/open bath furnaces is highly relevant for DRI integration with existing primary steelmaking infrastructure.

Site visits where closures of Blast Furnaces / coke ovens take place should also be useful for informing the TWG as to the sound management of decommissioning / transition.

17. PERMITS

17.1. Please upload or add a link to access representative permits for iron and steel installations held by your delegation.

Please provide a link to access the relevant permit(s).

https://eebbrussels-my.sharepoint.com/:u:/g/personal/riccardo_nigro_eeb_org/IQBOBQG5kzr_TZtj6ygoO7yTAcONaTViFMJLdRi2IHNvatM?e=IWap01

Please upload representative IS installation permits.

Please specify below if specific issues were encountered during the implementation of the previous IS BREF (2013).

Absence of SCR retrofits to the BF-BOF route
Substances of very high concern emitted from coke oven plants (e.g. Tata Steel)
Persistent derogations (e.g. Taranto)

17.2. If available, please upload or add a link to access relevant permits drawn up for First-of-a-Kind installations by your delegation.

Please provide a link to access the relevant First-of-a-Kind permit(s).

Please upload relevant permits for First-Of-Kind installations.

5fb468d0-b037-4f35-81a2-650885d8c132/Bescheid_Hy4Smelt_extern_compressed.pdf

18. ANY OTHER RELEVANT INFORMATION

18.1. Please let us know any other information you consider relevant for the BREF review process at this stage.

18.2. Please upload any other information you consider relevant for the BREF review process at this stage.

SURVEY SUBMISSION

Thank you for filling in the IS BREF frontloading survey!

Your input is crucial to understanding the IS sector and will help shape the future of a cleaner industry across Europe.

You can submit your survey by clicking on the 'Submit' button at the bottom of this page.

Please remember to download the pdf of your survey response by clicking on the "Get PDF" button that appears on the screen after submitting the survey. Once downloaded, please upload it to BATIS (BATIS > Forum > Iron and Steel Production > Revision of the Iron and Steel BREF (2026 - 2030) > 03 - Frontloading, together with any other accompanying documents related to the survey or any other information you wish to share with the TWG.

Before submitting, however, we would really appreciate your views on the way in which the IS BREF data collection has been frontloaded, so that we can continue to improve the procedures for future BREFs.

Please give us your feedback on the following statements related to the survey:

Overall satisfaction:

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How would you rate your overall experience with this survey?	
Was the information provided comprehensive and sufficient to complete the survey?	

Survey length and complexity:

How would you rate the length of the survey?	
Were the questions clear and easy to understand?	

Relevance and interest:

How relevant was the survey to the IS sector?	
Were the questions engaging and interesting?	

Technical issues

Did you experience any technical issues while taking the survey (e.g. saving or loading problems, errors)?

- ☐ Yes
☒ No

Suggestions for improvement

What did you like most about the survey?

What did you like least about the survey?

Do you have any suggestions on how we could improve future surveys related to the frontloading process?

Additional comments

Is there anything else you would like to share about your experience with this survey?

Thank you for your participation. Your time and support is greatly appreciated!

If you have any questions on this survey or on other issues related to the IS BREF, please contact the IS BREF Team at: **JRC-B5-EUBRITE-IS@ec.europa.eu**

Contact

[Contact Form](#)