This policy paper builds upon input by the EEB into the IED[1] evaluation process and is therefore focussed on industrial production within the largest industrial (production) facilities. ***Brussels, 2 March 2020***

EU INDUSTRIAL STRATEGY FOR ACHIEVING THE 'ZERO POLLUTION' AMBITION SET WITH THE EU GREEN DEAL (LARGE INDUSTRIAL ACTIVITIES)

[1] Industrial Emissions Directive (IED) 2010/75/EU, IED review roadmap submission and http://eipie.eu/the-sevilla-process/the-industrial-emissions-directive

Key elements to achieve high level of environmental and climate protection for industrial activities (point sources)

1. Our forward looking & inclusive vision: "a circular, decarbonised & zero pollution vision for EU industry"

The upcoming EU Industrial Strategy, announced by the European Commission as part of the European Green Deal (EGD) to be adopted in March 2020, will have to be consistent both with the EGD main objective of creating a climate neutral, circular and clean economy, and the new wider Zero Pollution ambition and toxic-free environment goal. For this to happen, the EU Industrial Strategy must mainstream the EGD targets across all main policy areas impacting industry: climate, energy, environmental impacts including chemicals, economic support mechanisms, research and development.

In order to be successful in its implementation, the EU Industrial Strategy also needs to set clear and measurable targets with an ambitious yet realistic time plan, be inclusive and coherent as to the goals and ensure enforcement to level the playing field for industry. If the EU wants to be a frontrunner and innovation leader, the EU Industrial Strategy needs to be ambitious in substance.

1.1. Background and current bottlenecks

- **Climate protection** is mostly addressed through EU ETS, while other regulatory - non-market based - approaches should act in a complementary manner. Within the Industrial Emissions Directive (IED), the EU flagship instrument setting environmental standards for large scale industrial activities, GHGs are excluded and the implementation of energy efficiency standards is left optional (see section 3.1);
- **Circular Economy** is a key objective to achieve, but so far lacks details as to how to implement this concept within industrial activities. Some conflicts of policies may also occur e.g. 'waste' reduction objectives to indirectly promote the reuse of toxic materials which can cause health impacts to be prevented through EU chemicals legislation.
- **Wider environmental protection aspects** such as resource (energy, water, chemicals, materials) consumption for industrial activities are not addressed within the context of the planet's carrying capacity and potential use conflicts (cascade of use principles, particularly in relation to biomass). The sustainability, nature and qualitative requirements on inputs to be used for industrial activities are often left to the discretion of operators; some Member States want to retain full flexibility as to the choice of fuels or type of resources used although it is clear that these choices have far reaching impacts. The EU environmental standards making progress, such as the EU's Best Available Techniques Reference Documents, often refrain from addressing some issues addressed (in part) by other policy instruments, on the basis that other EU regulation would "cover" a specific aspect (e.g. substitution of chemicals of concern or addressing decarbonisation) failing to set incentives beyond regulatory requirements and to embrace a truly integrated approach (see section 3).
- **Lack of enforcement and progress tracking (smart indicators)** A successful EU Industrial Strategy requires a clear and specific vision and objective, clarity as to the means but also needs to be effective as to its enforcement so to produce impact. It needs a corrective mechanism that can swiftly correct the policy instruments when emission and pollution reduction targets and needs are not met. This requires proper indicators for progress assessment, enabling

benchmarking of all stakeholders involved to create a fair effort sharing for the EU industry and partners.

1.2. EEB asks: overall summary

(External) policy coherence means complementarity between instruments that can efficiently work together to achieve a higher-level goal. The new wide and inclusive goal set within the EU Green Deal is to aim for 'zero pollution' from all sources with a timescale set to 2050 with a sub-goal on climate neutral economy to be reached by 2040 and non-toxic environment by 2030.

'Zero Pollution' shall mean:

- That the relevant objectives set under the Environmental Quality standards / Environmental Protection acquis are achieved and that the industrial activity in question is fully compatible to those objectives of reaching a zero-pollution economy
- That the "no harm" principle is implemented e.g. the industrial activity is fully implementing the toxic-free environment goal through both preventive and corrective measures
- That a full internalisation of external costs (of certain types of industrial activities) is ensured in accordance to the polluter-pays principle, especially when considering incentives to certain industry actors or "innovation" projects.

1.3. EEB asks: media-oriented sub-objectives

Climate/ Energy transition:

- Towards an industry that uses energy from sustainably sourced renewable sources, is energy-efficient and would achieve carbon neutrality at the latest by 2040
- The GHG reduction target of at least 65% shall be achieved by 2030
- An EU-wide coal/lignite phase-out is to be achieved by latest 2030
- The share of RES source shall be at least 45% by 2040
- Decarbonisation is systematically integrated in the BAT elaboration process (see section 2)

Air quality:

- Zero adverse impact to health and the environment from anthropogenic emissions and deposition and exposure below critical loads and levels

Resource use / Circular Economy:

- Drive the transition to a circular economy becoming the new normal for a resource-saving EU economy operating within planet boundaries

Chemicals of Concern:

- Substitution of chemicals of concern throughout the production lifecycle (toxic free environment)

Water Protection:

- Good ecological and chemical status of water is ensured [restored]; focus should be on agriculture and urban activities, water management and wastewater treatment policies need to work hand in hand.

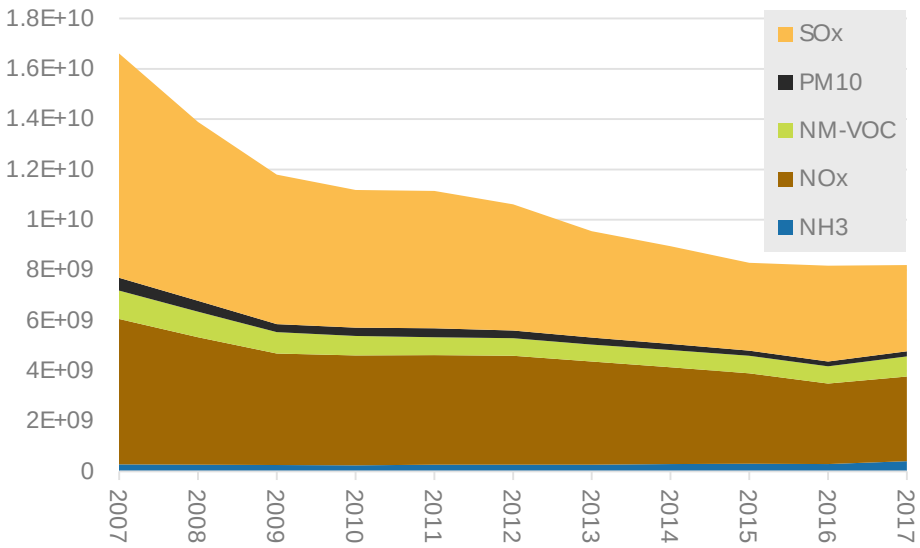
2. IED: current bottlenecks on cross-cutting aspects

2.1. Background

All relevant aspects of environmental protection e.g. air, water, resource and energy consumption, use of chemicals of concern for large scale industrial activities are mainly regulated through the re-casted Integrated Pollution Prevention and Control (IPPC) Framework, the Industrial Emissions Directive (IED). The so called Best Available Techniques (BAT) Reference Documents (BREFs) detail on what constitutes the economically and technically viable options for achieving a general high level of environmental protection as a whole from the regulated industrial activities[2]. Industry need to comply with those "state-of-the-art" production standards within a 4-year implementation timeline following publication in the Official Journal of the EU. Those standards are agreed within a multi-stakeholder process including Member States, industry and NGOs promoting environmental protection, even if industry is predominately represented in those technical working groups. Member States are responsible to set the operating conditions once those EU standards are adopted[3].

2.2. Grinding to a halt

There are around 50,000 large industrial installations in Europe covered by the IED. Air pollution from the largest of those installations generated an annual health costs of up to €189 billion in 2012.[4] This figure neglects wider environmental damage costs that are not yet quantified, such as water pollution, damage to vegetation or resource use impacts. It is also disappointing to notice that emissions have not sufficiently decreased over recent years: health costs in 2017 can be estimated to around €140 billion in 2017, a far cry from the IED's goal to *prevent, reduce and as far as possible eliminate pollution*.



Emissions of the top five pollutants reported in E-PRTR since 2007 (in kg). The data reported in E-PRTR represent only to a fraction of the total emissions by these industries (cf. table 2.1 in the EEA report).

[2] The current list of the 34 reference documents: https://eippcb.jrc.ec.europa.eu/reference/

[3] More information about the basics of the IED https://eeb.org/publications/61/industrial-production/4394/new-features-under-the-industrial-emissions-directive.pdf.

[4] http://eipie.eu/environmental-issues/air-quality

2.3. Special treatment of GHG (market-based approach) versus other pollutants

Activities covered by the IED consume a high amount of resources, currently mostly non-renewable ones (energy, water, materials). They are not only the main source emitters of traditional pollutants to air and water, they also are the largest point source Greenhous gas (GHG) emitters in the EU (e.g. Large Combustion Plants, refineries, iron and steel, glass, cement production and chemicals industry).

The IED is supposed to take an integrated approach on pollution prevention (over control) from industrial activities, yet GHG aspects are not directly addressed within the IED BAT concept due to the EU-ETS Directive which excluded that pollutant from the IED predecessor, the IPPC-Directive.

The EU-ETS is an exclusive market-based approach that prevents permit writers from setting GHG emission limits or leaves it optional to set binding energy efficiency performance based standards as a complementary measure to the market-based approach (the operator can buy GHG pollution allowances). Blatant inconsistencies appear between the IED and EU-ETS, when one considers four essential elements of the IED:

- **The IED sets environmental performance standards based on the concept of 'state of the art' (BATs).** Any reference installation operating in the world can serve as setting "the standard" for the whole sector. In order to reflect technical progress, the BREFs need to be revised in a maximum 8 years review cycle. Under the EU-ETS the carbon price level (EUA) is not depending on technical performance levels of the various operators but on the market. When setting the EU ETS benchmarks (for free allowances), pollution prevention based on technical feasibility are not considered, and those levels are based on the 5-10% best observed performers (i.e. levels achieved from profitable plants).
- **Emission Limit Values / measures to be set in operating permits.** Even if the implementation of BAT Conclusions can result into fuel/techniques switching, the main impact is limited due to significant flexibility remaining for permitting authorities in implementation of the BAT. Permit conditions such as permit limits need to be complied with at all times. Under the EU-ETS there is, in theory, unlimited pollution levels as long as the operator purchased the corresponding pollution allowance (EUA), but no specific measures are to be taken to prevent GHG emissions
- **The BAT concept is based on the pollution prevention over control principle**. Under the IED, the principle is that pollution prevention shall be favoured over control, and pollution limits shall be complied with, but impact depends on the ambition level within the BAT determination process (e.g. substitution obligations, process switching etc to take precedent over end of pipe control), as well as on the stringency of permit limits and enforcement. The EU-ETS does not take account of pollution prevention requirements since operators are left entirely free on how to mitigate GHG.
- **'Polluter pays' principle not fully implemented in the IED.** Even if the IED refers to it, the 'polluter pays' principle is implemented only very partially when a certain BAT determination is made. The operator should bear the costs for applying certain pollution control measures (e.g. air pollution controls equipment or waste-water treatment techniques) which require investments and spending for proper operation. However, there is a clash with the definition of 'available' techniques, meaning these should be 'economically viable' for a sector. The 'polluter pays' principle, however, implies that the operator covers in full the damage caused, including the left-over damage caused despite full implementation of the BAT - which is not foreseen under the IED. One fundamental limitation is that levies/taxes on pollutants other than GHG are considered a responsibility of Member States, and that the question of economic viability does not take account of the wider benefits of pollution prevention, often due to absence of proper methods for the internalisation of external damage costs. The EU ETS does however implement

the 'polluter pays' principle, even if just limited to GHG emissions, and despite current EUA prices being significantly below (factor 5) the realistic damage cost to be at least at 100€/tonne GHG.

2.4. EEB asks

The current framework should be transformed to lead the transition to a truly sustainable[5] industry framework at EU level, via a reformed IED. The IED is unique in its ambition of an 'integrated approach' meaning to address all environmental media impacts, and set the best possible standards to prevent negative impacts from a given industrial activity. **It should be transformed to become the new zero-pollution industrial production regulation.** Emphasis should be on preventing pollution, in full integration with circular economy and decarbonization policies. The EU Industrial Strategy should therefore include the following main elements:

- A change in the approach of how industrial activities are regulated, by setting BAT for lowest ratio 'environmental impact of industrial activity' versus 'public good/service provided', in order to promote the industrial activity with the least negative environmental impact for the provision of a given product/service. The Commission should prioritise the following items: energy production, water quality and supply, protein production, resource management, substitution of chemicals of concern.
- Other environmentally impacting activities should be covered as well (e.g. aquaculture, data centres, other forms of animal rearing) without loosing focus on the desired public good / service to be provided.
- The 'prevention first' principle should be rigorously implemented and prioritised over end-of pipe pollution reduction.
- The notion of BAT should be clarified to mean technical achievable performance levels that provide the best overall environmental protection outcomes.
- The EU 'safety net' requirements– i.e. the binding minimum requirements - are extended and revisited for preventing impacts from the most polluting industrial sectors (e.g. energy intensive industries and in particular coal/lignite combustion).
- In order to take a fully integrated approach, direct GHG emissions should also be addressed in this framework as a complementary approach to market-based instruments.
- The EU should become the frontrunner in environmental performance standards that are fully coherent with the SDGs and a zero-pollution ambition.

The current situation requires action that is both bold and swift. Considering the lengthy investment cycles for industry regulated by the IED (10-20 years), the strengthened policy framework needs to be in place before first revision cycles of relevant industrial production standards (e.g. EU BREFs). The EU must promote frontrunner industry practices andto give a direction for the transition path to take. This also implies that the 'technology neutrality' dogma is to be abandoned: if breakthrough techniques are

[5] A useful definition of sustainability is that epitomised by the Brundtland Report: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

identified in being most effective to deliver on the above objectives, they should be clearly favoured, and outdated techniques should be subject to 'negative BAT'[6].

More information: http://eipie.eu/;
http://eipie.eu/storage/files/EEB%20submission%20IED%20evaluation.rar

3. Revised IED / Industrial Strategy: media-specific recommendations

The objectives highlighted below should be part of the developed Roadmaps on Zero Pollution Ambition / Zero Pollution Action Plans and fully implemented in ongoing BREF reviews / upcoming BREFs or dedicated BREFs (decarbonisation and resource efficiency).

3.1. Climate / Energy

The necessary drivers are developed to deliver on the carbon neutral economy by 2040

- Achieve at least 45% of renewables by 2040 at the latest, and energy efficiency of at least 40%.
- Delete IED Art. 9 / amend the EU ETS system to enable a combined approach of command and control, as well as revised market-based instruments aiming to achieve a carbon price of at least 100€/ton CO2 by 2030.
- Introduce minimal binding energy efficiency standards based on best-in-class solutions within a given industrial activity (e.g. electricity, heat generation).
- Introduce GHG performance standards to achieve a complete 2030 coal phase-out in Europe.
- Introduce an Emission Performance Factor (EPF), which would increase the carbon price set under the EU-ETS. The EPF would be a BAT performance-based multiplication factor to be applied to the purchasing of EUA allowances; alternatively, member states that have environmental pollution tax systems in place leading to the same effect (internalisation of externalised costs, including due to GHG emissions) may get dispensed.
- Scrap the IED Art 31 desulphurisation rate benefitting low grade lignite fuels with immediate effect, and tighten the minimal binding air pollution limits set in Annex V of the IED.

The following measures could be further developed through a dedicated circular economy and decarbonization / GHG mitigation BAT reference document, and within the specific sector industrial production BAT benchmarks (BREF) currently under review, as well as through specific legislative approaches:

- Dedicated decarbonisation and GHG mitigation provisions for the iron and steel industry (e.g. preference for renewables based Electric Arc Furnace route for secondary metals, green hydrogen based primary iron and steel making)
- Electrification obligations for furnaces and crackers (e.g. chemical industry)
- Decarbonisation and GHG mitigation objectives for the cement industry (e.g. enhanced cement binders and substitution of cementitious materials)
- CO_2 free ammonia production
- General fuel switching obligations with cascading use principles in the case of biomass
- Enhanced catalysts or polymers, green/sustainable chemicals concept concretised

Promoting green electricity and achieving a carbon neutral grid will be paramount. Dedicated support for green hydrogen and sustainable biomethane will be needed. However, it must prioritise essential

[6] E.g. as in the Chlor-Alkali BREF the mercury cell / diaphragm containing asbestos techniques were declared as obsolete (negative BAT)

uses and not serve as a pretext to invest in natural gas grid infrastructures, which will lock-in emissions and compromise the Paris agreement. The use of Carbon Capture and Storage/Usage should be determined in light of the high costs and technological risks.

It is worth noting that the scale of the energy demand of the steel, cement and chemical industries will substantially decrease once the EU takes its commitment to a circular economy seriously. Overall, virgin materials demand will be reduced by phasing-out non-recyclable materials, and applying measures that promote longevity and re-use. Moreover, materials from recycling generally require much less energy than virgin materials.

More background: '*EEB Position paper on decarbonisation aspects in the IED*', 'Destination: Climate Neutrality'[7], EEB recommendations on EU Climate law[8], *joint NGO letter on Industrial Strategy*[9]

3.2. Air quality

Objective: zero adverse impact to health and the environment from anthropogenic emissions, and deposition and exposure below critical loads and levels

- Air pollutants should be first prevented through the substitution principle based on preferential overall solutions (e.g. for domestic heating: first energy conservation measures are employed (insulation), then decarbonised; zero-emission techniques such as heat pumps should be employed instead of setting stricter emission standards on combustion-based outdated technologies) and where not feasible, reduced to lowest technical abatement levels, in particular for any Carcinogenic Mutagenic or Reprotox substance (CMR)
- Air pollution levels from industry, even in their vicinity, are well below the target immission/exposure values set by the WHO or other more precautionary standards
- GHG are included in the BREF documents
- Diffuse emissions are covered, emissions at various operation regimes tackled.

3.3. Resource use / Circular Economy

Objective: encourage the transition towards Circular Economy becoming the new normal for a resource-saving EU economy operating within planet boundaries

- Improved closed loop production systems
- Rigorous implementation of the waste hierarchy
- Improved/ambitious BATAE(P)ls for resource consumption, set per production outputs
- Improved material use efficiency rates, minimal 20% percentage increase for 2025 and at least 30% for 2030 and based on transparent sector benchmarking performance
- A minimal share of sustainably sourced renewable feedstock for production consistent with the EU climate goals and cascade of use principles for biomass[10]

[7] https://eeb.org/library/destination-climate-neutrality/

[8] https://eeb.org/library/response-to-consultation-on-the-eu-climate-law/

[9] https://carbonmarketwatch.org/wp-content/uploads/2020/02/green-NGOs-interservice-letter-vicepresident-.pdf

[10] http://eeb.org/publications/65/biofuels/90397/position-paper-on-burnable-carbon.pdf

- Promotion of industrial symbiosis applications[11]

3.4. Chemicals of Concern and soil protection

Objective: phase out and substitution of chemicals of concern throughout the production lifecycle (toxic-free environment)

- Substitution of SVHC and other substances of concern ahead of REACH deadlines
- Restriction and use minimisation of substances of concern
- Zero release of hazardous chemicals, including accidental release
- Full implementation of the remediation and restoration principle
- Soil remediation costs are recovered in full by the industry
- Prevention of accidental release (target is [0] accidents involving release of harmful substances).

More background: EEB Position paper on Toxic-Free Environment[12]

3.5. Water Protection

Objective: good ecological and chemical status of water is ensured [restored]

- Restoration of good chemical and ecological status of surface water
- Zero discharge of Persistent, Bio-accumulative, or Toxic (PBT) / vPvB (PHS substances)
- At the industry site gate compliance with Maximum Allowable Concentration levels (for Priority Substances), set within the EU Water Framework Directive
- Improved/ambitious BATAE(P)ls for water consumption, set per production outputs
- Improved water recycling rates, minimal percentage increase compared to sector benchmarking performance
- Whole effluent assessment implemented in permitting, to consider cocktail effects.

4. Coherence with other directly related policy instruments

Industrial activities must not be viewed through the IED lens only. Policy coherence and complementarity is needed. Connected policy instruments should be made fit for purpose and some new policy instruments are needed. The following considerations are highlighted:

- **Strengthening synergies between related frameworks on environmental protection:** Related products regulations (e.g. toys, cosmetics, food contact materials, ecodesign/ecolabel) and environmental compartments regulations (e.g. water and air); source policy instruments (e.g. IED and sector BREFs -HAZBREF initiative, Seveso III Directive, Plant Protection Products and Biocides, fuel quality standards, products legislation); and chemical regulations (e.g. POPs, mercury, CLP and REACH) need to interact better. The following key principles should be systematically addressed: deliver a high level of protection of environment and human health with priority on prevention (substitution) over control, achieving a clean circular economy based

[11] See notably Riccardo/Vito "IED Contribution to the Circular Economy" https://circabc.europa.eu/sd/a/23fd890d-83f9-4372-8f26-669ff50e106a/IED%2520contribution%2520to%2520Circular%2520Economy%2520report.pdf

[12] https://eeb.org/library/towards-a-non-toxic-environment-ngo-chemical-policy-asks-of-the-european-commission /

on non-toxic material cycles and ambitious state of the art standards, transparency and balance of interests participation in decision making, effective enforcement.

- **'Efficiency first' principle**: according to the EIA[13], energy efficiency suffered an historic slowdown in 2018, with a 1,2% improvement. According to the IEA's Executive Director Fatih Birol, *"we can improve energy efficiency by 3% per year simply through the use of existing technologies and cost-effective investments. There is no excuse for inaction: ambitious policies need to be put in place to spur investment and put the necessary technologies to work on a global scale."* Such investments must be at the heart of the EU Industrial Strategy to decrease energy intensity and help depolluting the economy.
- **Clean buildings**: the improvement of EU buildings is central to guarantee a smooth and just transition towards a Zero Pollution Europe. Not only do deeply renovated buildings consume much less energy, they also improve the daily life of their inhabitants and provide a formidable boost in terms of employment. A Long-Term Renovation Strategy plays a key role.
- **GPP**: Green Public Procurement should become the norm for Public Bodies all around the EU. In this respect, the guidelines drafted and constantly updated by the JRC should become mandatory at EU level, and it is surprising how EU bodies are not leading by example. On the one hand, GPP is an instrument to boost innovation towards more sustainable and circular products, on the other hand it allows public bodies to save resources, including financial ones.

5. Economic aspects

5.1. Trade and export aspects

When it comes to trade and commercial treaties with extra-EU parties, the EU should not relax its standards; on the contrary, it should promote them worldwide in order to prevent environmental dumping. This means that further economic instruments such as pollution charges, use of chemicals of concern tax, carbon tax and tax reduction/rebates for products meeting highest EU environmental standards, need to be put in place. Prices should reflect the carbon footprint and other environmental footprints that products carry with them. Proper taxation schemes are mechanisms to level the playing field globally, and should promote sustainable products to become the overall cheapest on the market.

5.2. Finance and other economic incentives

Financial flows are often described as the blood of our economy: this blood must carry oxygen, not septicaemia.

Making financial flows as sustainable as possible is key to ensure a transition towards a Zero Pollution Ambition for Europe. Whereas the finance sector is increasingly becoming aware of the urgency of the present climate and environmental crisis, its concrete actions are too slow and still provide benefits to unsustainable climate-harming and polluting investments flows. This shortcoming equally applies to the accounting of wider environmental footprints linked to resource use or other pollution generated by certain industrial activities. For this reason, public interest must be affirmed, and stringent regulations should be introduced to dramatically speed up the transition process towards sustainable production and consumption.

[13] EIA, Energy efficiency 2019

5.3. EEB asks

First of all, when it comes to deciding how to spend public money, a transparent list of selection criteria must be established in advance in order to guarantee that only those investments that are coherent with a Zero Pollution Ambition and with social justice will receive funding. A link to the Green Taxonomy, Sustainable Finance regulation is therefore to be made and all relevant incentive or state aid schemes should be aligned in its compatibility check to this wider goal.

EEB proposals:

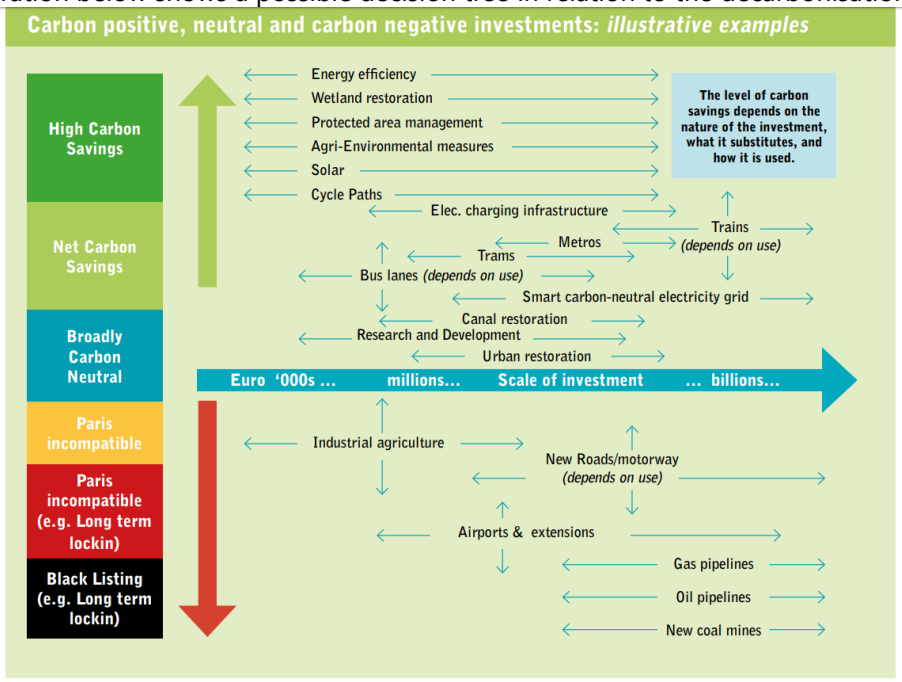
- Pollution prevention and clean production shall always be prioritised over 'polluter pays' or 'compensates' approaches. An accelerated EU-wide substitution strategy for a toxic-free environment will promote green chemistry, substitution, responsible 'innovation' and 'clean' production. In order to prevent greenwashing, it is important that financial support is channelled towards solutions that go beyond relevant Union standards. This requires clarity as to qualitative and quantitative expectations and impacts in regard to claimed 'innovative' and 'clean' solutions.
- Polluters must always pay for the consequences of their action or inaction. However, external costs (e.g. health or environmental issues caused by pollutants) are not always accounted for, and there is no harmonised method in the EU for internalisation of damage costs (e.g. plastic pollution, PFAS, resource use). With the example of air pollution, compared to the US, the value of statistical life of EU citizens is valued three times less, in contradiction to the OECD recommendations. Moreover, polluters should remain liable for restoring habitats impacted by their activities (e.g. mining or dealing with legacy chemicals, setting aside a minimal turnover share for recovering future costs to society due to pollution). Carbon pricing at EU and national level (carbon taxes, strengthened EU-ETS) should reflect the real costs e.g. set at least at the level of 100€/ton CO2 before 2030.
- No government subsidy should be paid to phase out unsustainable activities or compensate for short-sighted past investment. A clear, transparent and ambitious list of selection criteria and priorities to allocate public money so that 'best value for money' is ensured should be set up, through improved policy coherence with the zero pollution goal (e.g. energy efficiency, clean transport and charging infrastructures, renewable energy, a zero-carbon electricity grid, environmentally sustainable agriculture and forestry, restoration of land and sea ecosystems, management of protected areas and public awareness raising, non-toxic production)[14].
- Energy efficiency in industrial processes must be targeted as well with taxation schemes aimed at easing the scalability of the most effective solutions.
- A decision-tree mechanism must be established so that potential alternatives are checked against the relevant environmental objectives in an integrated way.
- Direct and indirect subsidies to fossil fuel-based activities must end, and a negative list of sectors that will not be subsidised must be established (e.g. by excluding fossil fuels from taxonomy). The EU should align any support schemes to meet those objectives and not to take a silos approach. For instance, the Just Transition Mechanism / Innovation Fund should explicitly exclude any support to the use of all fossil fuels, including gas, and ensure a transition towards a Zero Pollution Ambition (e.g. not to fund biomass use conversions in outdated infrastructure)

[14] See EEB "A Budget to address the Climate Emergency" https://eeb.org/publications/105/sustainability-governance/100770/a-budget-to-address-the-climate-emergency.pdf

or fund coal/lignite phase outs occurring after 2030. Social consequences must be taken into account, but should not be used as an excuse for inaction.

- Member States should play their part in multiplying the fresh money provided by the Commission to finance the European Green Deal Zero Pollution ambition.

The illustration below shows a possible decision tree in relation to the decarbonisation objective:



More information:

https://eeb.org/work-areas/climate-energy/an-eu-budget-to-address-the-climate-crisis /

6. Monitoring, benchmarking and transparency

6.1. Background and current shortcomings

A reliable and transparent data flow among institutions, businesses, NGOs and other civil society actors is the basis the Zero Pollution Europe will be built upon. The Aarhus Convention and EU framework already sets rights for improved information and public participation on industrial activities.

The E-PRTR Regulation provides stakeholders with basic information on annual emission loads and waste transfer from the EU's largest industrial facilities. Similarly, the IED sets down provision aimed for improved access to information and public participation in decision making. However, there is a considerable reporting and monitoring deficit on those installations, as showed by the EEB's 'Burning: the evidence' report[15]. Installations not fully implementing the possible BAT performance levels are not easily identifiable; monitoring data is outdated and not easily accessible overall. There is a significant implementation deficit at member state level.

Real-time publication of environmental performance information, at least for installations with major air pollution and water protection impact, would allow citizens to compare reported emissions with measured ones ("citizen science"). Some positive examples exist, but they remain the exception in the

[15] https://eeb.org/most-eu-countries-failing-to-ensure-effective-access-to-industrial-pollution-information/

EU. A centralised data reporting with user-friendly access through mobile app has been developed by the IPE in China: the 'Blue Sky' map provides real time visualisations at facility level on wastewater and air emissions[16].

For IED activities relevant reporting, the situation is very different from one EU country to another, meaning that EU citizens are treated differently in their rights for effective public participation in decision making. The current reporting suffers from relevant flaws that reduce its utility and which prevent it from being a useful tool to increase public participation, guarantee transparency, benchmarking and compliance promotion activities. An improved EU centralised database on emissions of pollutants and environmental quality could be a key monitoring and benchmarking tool ready for a Zero Pollution Europe.

To enable a benchmarking of industrial activities, certain missing information is necessary, such as production outputs and emissions from products ('diffuse' emissions). Currently, only the Norwegian industry is pro-actively publishing production output and diffuse emissions from product in a centralised database in Europe. When it comes to the EU 27, it is left voluntary to EU industry to report that information with a few exceptions (e.g. electricity output data under the ENTSO-E platform). Very often, production output data are withheld by operators on alleged grounds of Confidential Business Information (CBI), whereas legal justifications for such claims are generally not provided either.

6.2. EEB asks

The EU should:

- Establish an EU single access database (improved IED registry). National and regional authorities should be linked to this database.
- Increase database usability by providing useful search filters.
- Allow better benchmarking of real-time environmental performance and better use of information for other purposes (e.g. BREF reviews) or compliance assessment against environmental quality standards. This includes a minimal list of permit conditions related information to be added, permit review status and production outputs information.
- Guarantee real time access to important data like flow rates, continuous emissions monitoring results.
- Oblige member states to provide data under a no-fee basis.
- Harmonise data structures by providing templates to member states (e.g. IED Electronic Permit Template). Improve visibility and comparability of permit conditions, derogations, inspection reports and compliance reports.
- Improve the IED registry and revisit the PRTR to include diffuse emissions from products ,in particular from SVHC, and enable progress tracking towards SDG achievement, with proper consultation of end-users, also by integrating information on environmental and health quality (see section 6.5).
- Monitor transposition and implementation regarding transparency in a Forum.

More details: https://eeb.org/publications/61/industrial-production/47539/burning-the-evidence.pdf

[16] http://wwwen.ipe.org.cn/

6.3. Best practice examples across the globe

Best practices are available, such as in Norway (PRTR model) and in Ireland. The Italian system is also rated as good. The most notable good examples on aspects highlighted above are however from outside of Europe:

- The 'Blue Sky' map, developed by IPE in China. Real time data at facility level are available on wastewater, air emissions, integrated with air and water quality information[17].
- The US Air Markets Program Data system[18]. Through this system, hourly averaged raw monitoring data can be downloaded at unit and monitoring location level, with various search filters and queries options, such as abatement techniques types and boiler or fuel types. Online publication occurs just one day after submission to the US EPA.
- A very detailed information on technical plant configurations, fuel use, observed performance and detailed filters for various abatement techniques for power plants is available since 1990 and reported to the US EPA. The reporting thresholds are much lower than in the EU (all electric power generation starting at 1MWel)[19].
- In the US, thanks to forward looking IT reporting requirements, it is possible to compare any permit conditions set across various industry sectors with powerful search criteria in a few clicks. Mexico and Canada are also included in the permit database[20].

An equivalent system would save a lot of time to identify those installations having implemented certain techniques (BAT), compare performance and track compliance at an EU level.

6.4. Enforcement of EU legislation

Other more general issues to be addressed to ensure an effective monitoring and enforcement of the IED[21] are:

- Increasing effectiveness, capacity, know-how and coordination of public authorities in charge of inspections
- Promotion of early and effective participation of civil society
- Dissuasive penalties and adequate sanctions. Under EU competition law, fines up to e.g. 10% of the undertakings global turnover may be imposed whilst some large combustion plants without any permit would get away with a few thousand euros in fines in Romania. An EU level inspection authority e.g. IMPEL should be able to order immediate suspensions of a given activity where the national authorities fail to take timely action.

More information on concerns and possible solutions on enforcement relating to the IED are available here, under section IV:
http://eipie.eu/storage/files/2019%2012%2016%20IED%20permitting%20culture_NGOs%20workshop%20.pdf

[17] http://wwwen.ipe.org.cn/

[18] https://ampd.epa.gov/ampd/

[19] https://www.eia.gov/electricity/data/eia860/

[20] https://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en

[21] See also EEB 'Power for the People' https://eeb.org/library/power-for-the-people/

6.5. Towards meeting the SDGs

Further, parties need to lay down adequate reporting requirements that would enable the public to track progress towards the achievement of the Sustainable Development Goals (SDGs). This means the EU, member states and their economic actors. The Industrial Strategy should ensure a meaningful step is made to this end for the EU, party to that initiative. The following design features and information should therefore be incorporated in the revised EU reporting system(s).

a) design features

- Enable evaluation of global trends
- Enable evaluation of impacts of environmental policies and programmes
- Improve knowledge into human and ecosystem heath issues
- Characterise transboundary impacts of releases, waste flows and resource consumption
- Identify pollution prevention opportunities, such asrelease or consumption per unit of production, or efficiency of pollution prevention techniques
- Enable review of environmental performance and efficiency

b) possible indicators to apply to information

- Ratio of releases of chemicals and production outputs (including chemicals of concern from products i.e. "diffuse emissions")
- Ratio of recyclability of resources and waste prevention per production outputs
- Hazard ranking and fate (hazard properties of substances used in industrial activities)
- Environmental quality index (air, water, soil)
- Environmental footprint index (per capita)
- Social impacts (reduced health risks)
- Effectiveness rating of measures taken to prevent pollution and reduce impact

Better transparency and benchmarking tools would facilitate improved implementation of EU regulation on industrial activities and assist environmental authorities with enforcement, as discrepancies and unreported breaches and violations not picked up by monitoring and reporting mechanisms could better be reported by citizens. It would also improve compliance with Aarhus obligations (access to information, public participation, and access to justice).

The EU has failed so far to deliver user friendly IT tools on environmental performance of industrial installations, and is far behind in providing a useful and end user friendly access to already generated data andinformation by the industry. If the EU is serious about using effective digital tools to benefit citizens and drive improvements in industry, action is urgently needed.

Contact

Christian Schaible *Policy Manager - Industrial Production*

European Environmental Bureau
Tel: +32 2 289 10 90, Mob +33 659379880, Email: christian.schaible@eeb.org