THE REVISION OF THE INDUSTRIAL EMISSIONS DIRECTIVE: IMPLICATIONS FOR THE *SEVILLA PROCESS* AND FOR PROMOTING INNOVATION IN LARGE INDUSTRIAL INSTALLATIONS THROUGH INCITE

Introduction

The Industrial Emissions Directive (IED; Directive 2010/75/EU) is the main legislative framework addressing industrial emissions from large industrial installations in the EU. It covers over 30,000 industrial plants and 20,000 livestock farms, requiring them to operate with a permit granted based on the implementation of Best Available Techniques (BAT), which are specified in the BAT conclusions that are published in the Official Journal of the European Union. The activities/types of installations regulated by the IED include power plants, refineries, waste treatment, the production of metals, cement, glass and chemicals as well as livestock farming.

The modernisation of EU rules on industrial emissions is being undertaken to align with the European Green Deal objectives. Large industrial plants and livestock farms are responsible for 20% of Europe's emissions to air, 20% of emissions to water and 40% of GHG emissions, and the revised framework aims to accompany the green and circular transformation of industry. The updated rules will notably promote a faster uptake of innovative techniques while increasing data transparency, and improving public participation in the permitting process. This paper provides an overview of the main legislative changes that are part of the revised IED (recently adopted in April 2024) and presents the INnovation Centre for Industrial Transformation and Emissions (INCITE), designed to bring a forward-looking mechanism to the *Sevilla Process*, the participatory stakeholder engagement process used to draft and review the Best Available Techniques (BAT) reference documents (BREFs).

Achievements of the existing IED

The IED has been effective in reducing pollution from industrial activities, resulting in a 40% to 85% decrease in pollutant emissions to air over the last 15 years. For instance, industrial emissions of sulphur oxides (SO_x) and particulate matter (PM_{10}) decreased by 50% in the EU from 2010 to 2017(1) (see Fig.1). The environmental and health costs of European industry decreased by 33% from 2012 to 2021, primarily due to the adoption of BAT in the EU energy sector(2). Despite these improvements, damage to health and the environment from large industrial installations in Europe remains high, accounting for about 2% of the EU's GDP, or approximately EUR 268 billion to EUR 428 billion per year(2).

The new IED legislative framework

The revised IED introduces a number of new requirements designed to address five areas identified as needing modernisation during the evaluation of the Directive (see Fig. 2).

- **Promoting innovation and transformation:** INCITE will be established to identify and evaluate innovative processes and techniques that industrial operators will implement to align with the EU's sustainable, clean, circular, and climate-neutral policy objectives. Operators will also need to create installation-specific transformation plans as part of their environmental management system, with energy-intensive installations required to produce such plans by 30 June 2030.
- **More effective legislation:** Member State permitting authorities will be required to use tighter pollutant emission limit values when revising permits or setting new permit conditions. The emission limit values will now be based on an assessment by the operator of the entire BAT-Associated Emission Level (BAT-AEL) range, looking at the feasibility of meeting the strictest end of the BAT-AEL range when applying BAT. Moreover, Member States will implement systems and procedures for electronic permitting of installations by the end of 2035.
- **Consumption, circular economy and chemicals use:** The BAT conclusions may include binding environmental performance levels related to BAT for consumption levels (e.g. water and energy resources, waste generation). Additionally, industrial installations will be required to establish a chemicals

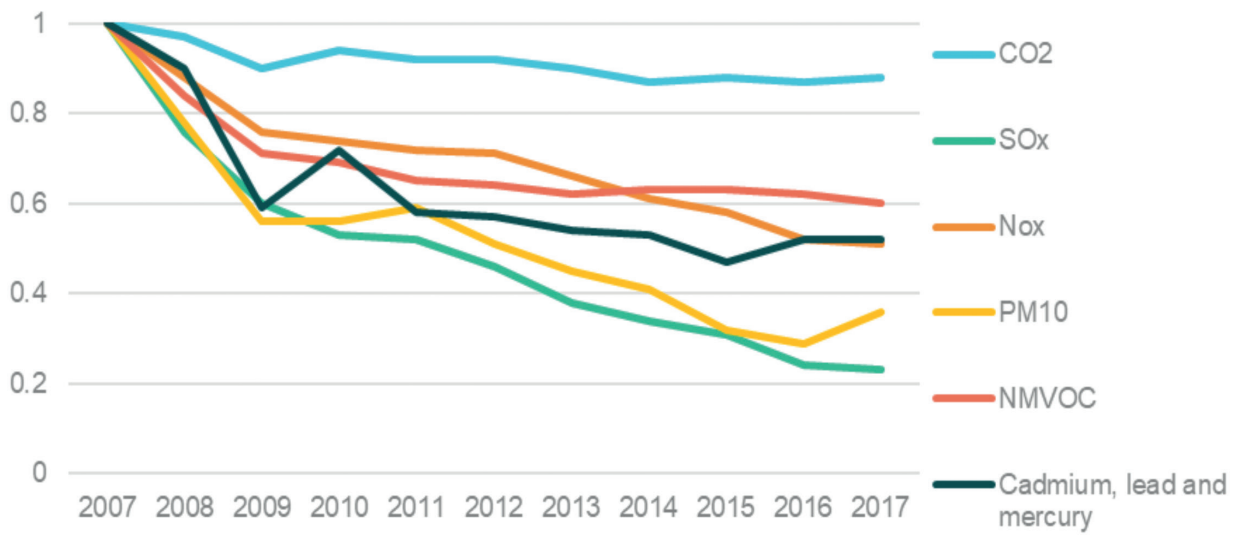

Fig. 1: Decreasing trend of emissions to air of key environmental pollutants from industry(3)

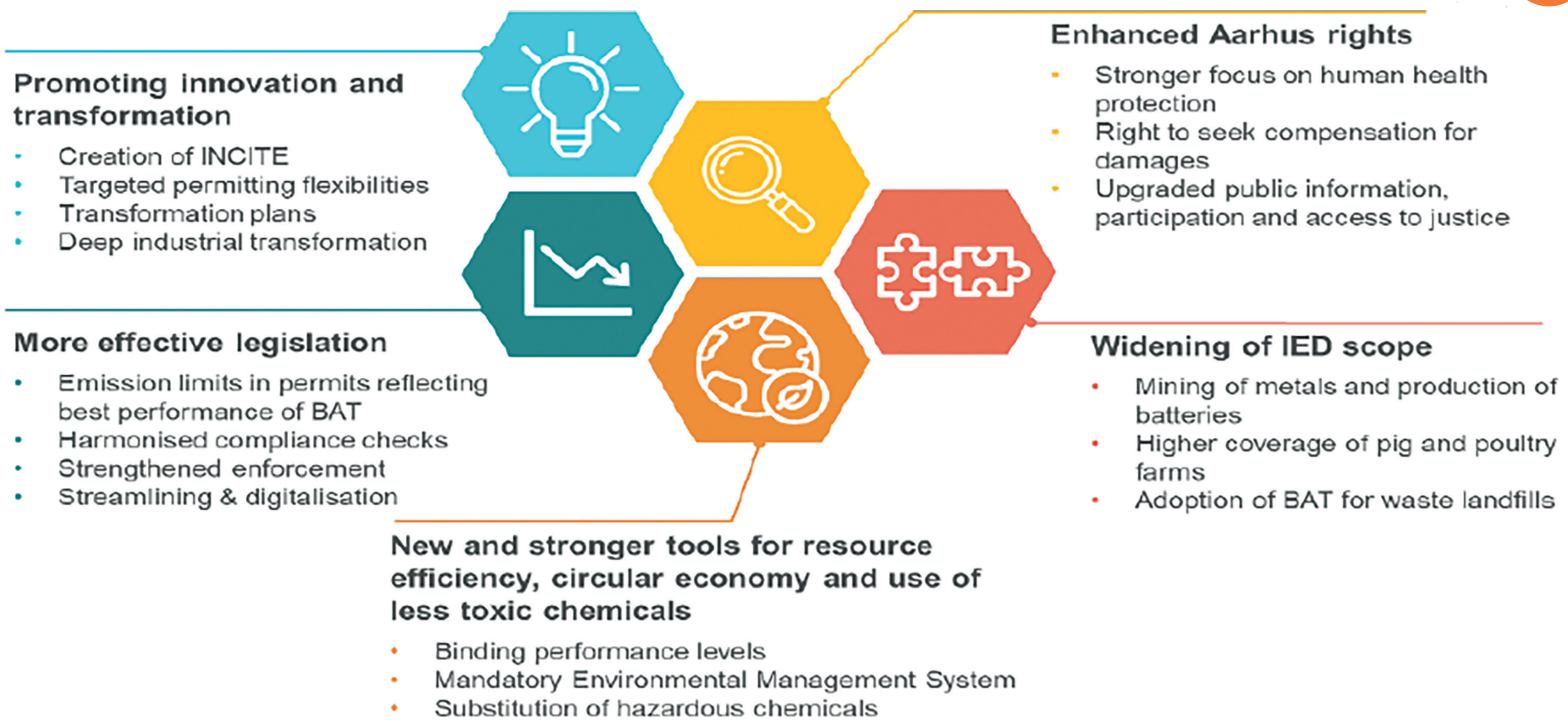

Fig. 2: Key measures included in the new IED

management system including a chemicals inventory for hazardous substances present in or emitted from the installation, along with an analysis of potential options to substitute them with safer alternatives or to reduce their use or emission.

- **Enhanced Aarhus rights:** The new Industrial Emissions Portal Regulation replacing the E-PRTR Regulation sets rules on collection and reporting of environmental data from industrial installations and enhances access to environmental information by setting up the Industrial Emissions Portal. It is a tool for the public and the authorities to identify and monitor sources of industrial pollution and thus contributing to its prevention and reduction.
- **Widening of IED scope:** The IED coverage will be extended to new sectors such as the manufacture of lithium battery cells in giga-factories and extractive industry installations (for ores). The adoption of BAT conclusions under the IED for the operation of waste landfills will become possible, which shall contribute to the reduction of methane emissions in this sector.

Implications of the revision of the IED for the *Sevilla Process*

Commission Implementing Decision 2012/119/EU is a key document which provides detailed guidance for the information exchange under the *Sevilla Process*, laying down the rules for data collection, prescribing the process of drawing up and reviewing BREFs, and defining quality assurance measures. Under the new IED, this document will need to be revised in order to reflect the changes introduced by the new Directive within 22 months of its entry into force.

The BREF development work steered by the European Commission under the *Sevilla Process* will need to accelerate. Under the new rules, the exchange of information for the preparation, review and update of a BREF shall not exceed a period of 4 years. The opinion of the Article 13 Forum on the proposed content of a BREF shall also be submitted within 6 months of the final meeting of the expert group responsible for the drawing up or the revision of any given BREF.

INCITE

One of the objectives of INCITE is to become a leading centre for identification and evaluation of innovative techniques with high potential for decarbonisation, depollution, and increasing resource efficiency and circularity in large industrial installations and farms covered under the IED. It will be officially launched on 21 June 2024 in Seville. The Joint Research Centre (JRC) Seville will set up and operate INCITE in close cooperation with the Directorate-General for Environment (DG ENV), but also with support from other Commission DGs (e.g. RTD, CLIMA, GROW). The concept of INCITE is summarised in Fig. 3.

- **Objectives and scope:** INCITE aims to be a central reference point for identifying and evaluating the environmental performance of innovative techniques in Europe and beyond. It aims to inform future policy developments and investments, remove informational barriers for investors, and support front-runners through flexible permitting rules. The goal is to accelerate the development and uptake of innovations to make industry more competitive and greener. INCITE will cover all industrial sectors under the IED but will focus work during its first years of operation on energy-intensive industries.
- **Key activities:** INCITE will systematically scan the horizon, gathering information on innovative techniques worldwide. If they are deemed ready for use at an industrial scale, are cost-effective and provide significant environmental benefits, these techniques could be incorporated in the *Sevilla Process* for the development of environmental norms. For this purpose, INCITE will establish a global and publicly available online platform where a wide range of stakeholders (EU-funded project leaders, industry, technology providers, research and technology organisations) will be able to submit and access information. This platform will also enable demonstration plants and first-of-a-kind industrial installations to be mapped. INCITE will ensure that the information is complete and accurate, and will assess the degree of maturity and environmental performance of innovative techniques. Sectoral scoreboards showing the degree of advancement of industry sectors towards the EU objectives of e.g. decarbonisation or circular economy will be

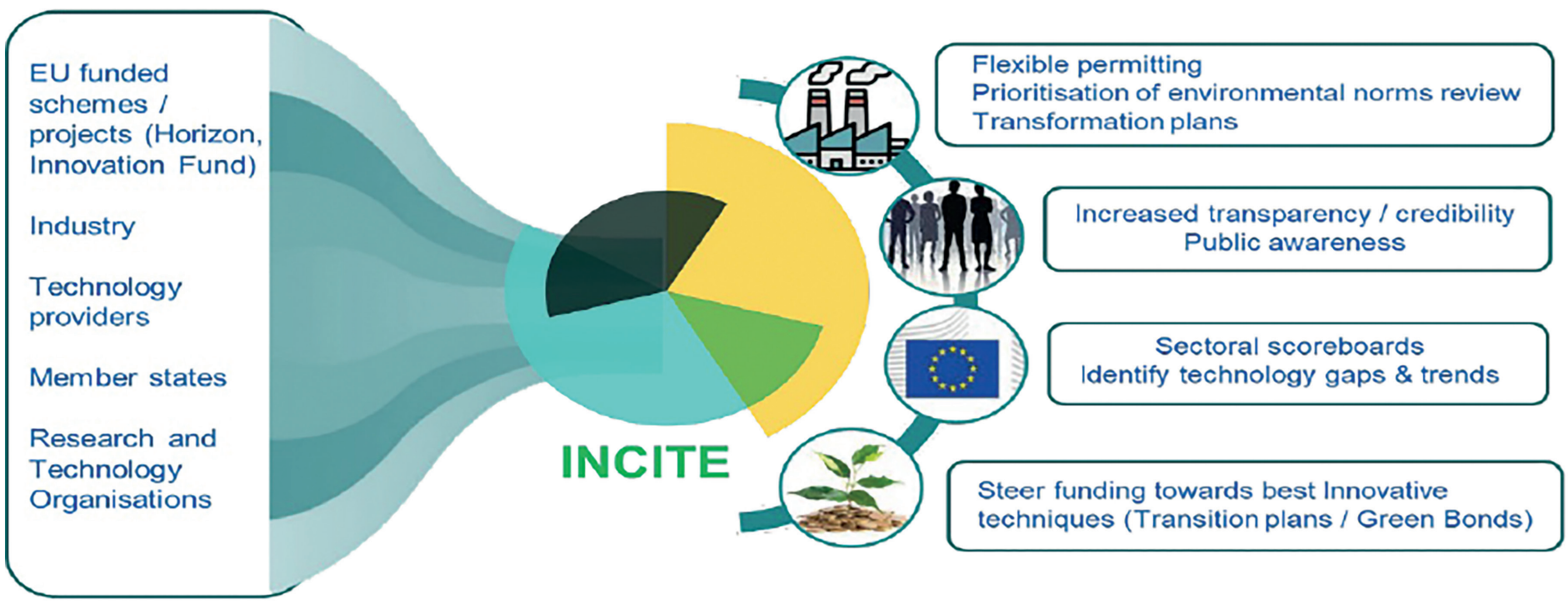

Fig. 3: INCITE concept

developed to help prioritise the revision of BREFs and define the work programme of the *Sevilla Process*.

- **Outputs:** INCITE will establish a forum for stakeholders to exchange information and discuss innovative techniques in sectoral workshops and site visits to front-runner industrial installations. INCITE will publish recommendations in JRC Technical Reports and curate the information to support Member States when permitting installations using innovative techniques and to help direct funding towards promising technologies.
- **Added value:** INCITE will help to remove informational barriers for public and private investors in industrial transformation, but will also support front-runners through flexible permitting rules. It will provide comprehensive assessments on the environmental performance and economic viability of the technologies. Its technical recommendations on innovative techniques are expected to assist sustainable finance actors in verifying taxonomy criteria alignment or conducting credibility checks for transition plans prepared by industrial installations under the Corporate Sustainability Reporting Directive.

References

(1) Commission Staff Working Document – Evaluation of the Industrial Emissions Directive (IED) – SWD(2020) 181 Final - 23/09/2020.

(2) The costs to health and the environment from industrial air pollution in Europe – 2024 update. European Environment Agency publication - 25/01/2024.

(3) European Environment Agency data viewer (2017).

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