



European Union Network for the Implementation
and Enforcement of Environmental Law

IMPEL Mini Conference on Compliance Assurance 2022

Focus on Compliance Promotion

28-29 September, Ghent, BELGIUM

A cooperation with the Flemish Government



Flanders
State of the Art

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the European Union (EU) Member States, and of other European authorities, namely from acceding and candidate countries of the EU and European Economic Area (EEA). The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 8th Environment Action Programme that guide European environmental policy until 2030, the EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil" on Flagship 5 and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu



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Executive Summary The Mini Conference gives an overview of the full potential of compliance promotion as a full-fledged strategy that stands and works together with the strategies of compliance monitoring and follow-up & enforcement. A Flemish study ¹ on behalf of the Department of Environment and Spatial Development, executed by Professor Kurt Deketelaere (Faculty of Law, University of Leuven and University of Helsinki), made an inventory of ‘the instruments’ of compliance promotion, with the help of some IMPEL colleagues (2020). Existing examples of broadly defined compliance promotion were classified in 4 categories: information and training, technical assistance, transparent communication and compliance incentives. Examples of good practices of the 4 categories were presented and discussed during the Mini Conference. It is concluded that extensive data collection, a well-developed database and well-thought-out systems for data use are key for developing the appropriate actions of Compliance Promotion. The most important conclusion of the Mini Conference is to handle a holistic and integrated approach to Compliance Assurance. This means that a broad spectrum of compliance strategies, interventions, tools and actions should be considered in order to address very different compliance issues and target groups and to face new environmental problems and climate emergencies, in an appropriate way.	
Disclaimer	

¹ [Studie: Compliance Promotion | Departement Omgeving - \(vlaanderen.be\)](#)



This report is the result of a project within the IMPEL network. The content does not necessarily represent the view of the national administrations or the Commission.

Quotation

It shall be permissible to make quotations from an IMPEL Document which has already been available to the public on the IMPEL website, provided that their making is compatible with fair practice, and their extent does not exceed that justified by the purpose. Where use is made of works in accordance with Berne Convention, mention should be made of related IMPEL Document Name with giving publication link of the document on IMPEL Website. IMPEL has all rights under the Berne Convention.



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1. Introduction

Member States must have appropriate mechanisms in place to ensure compliance with EU derived obligations (EU directives and regulations concerning environment). Non-compliance may occur for different reasons, including confusion, poor understanding or lack of acceptance of rules, lack of investment, opportunism and criminality. Its impacts on the environment, human health and the economy will depend on the nature, scale and persistence of breaches. In practice, mechanisms for securing compliance involve Member States using **three broad classes of intervention (collectively referred to as ‘environmental compliance assurance’)** as stated in **COM(2018)10 of the Commission²**:

1. Compliance promotion helps duty-holders to comply through means such as guidance, ‘frequently asked questions’ and help-desks.
2. Compliance monitoring identifies and characterises duty-holder conduct and detects and assesses any non-compliance (specific cases of non-compliance or more broad compliance problems in an industrial sector or an area...), using environmental inspections and other checks.
3. Follow-up & enforcement draw on administrative, criminal and civil law to stop, deter, sanction and obtain redress for non-compliant conduct and encourage compliance.

IMPEL members, mostly inspection and enforcement organizations, often have their main focus on compliance monitoring and follow-up & enforcement as the main strategies for assuring compliance and they have a legal framework for implementation of both strategies. Compliance promotion is more in the grey zone, sometimes not being legally incorporated, sometimes the task of other organizations, sometimes neglected as a strategy for securing compliance, sometimes seen as too soft... It is also a bit in the grey zone because it is usually reduced to tools as guidance and information... although compliance promotion could be understood more broadly as the set of actions to increase awareness, knowledge and understanding of legal obligations among the target group concerned, thus bringing about a lasting change in behaviour, in order to achieve voluntary and correct compliance with the regulations. Moreover, compliance promotion could be in some cases a more adequate strategy for tackling more broad compliance problems than mere inspections and enforcement.

² COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU actions to improve environmental compliance and governance



A Flemish study³ on behalf of the Department of Environment and Spatial Development, executed by Professor Kurt Deketelaere (Faculty of Law, University of Leuven and University of Helsinki), made an inventory of ‘the instruments’ of compliance promotion, with the help of some IMPEL colleagues (2020). Existing examples of broadly defined compliance promotion have been classified in 4 categories: information and training, technical assistance, transparent communication and compliance incentives. **The mini conference aims to give an overview of the full potential of compliance promotion as a full-fledged strategy that stands and works together with the strategies of compliance monitoring and follow-up & enforcement.**

³ [Studie: Compliance Promotion | Departement Omgeving - \(vlaanderen.be\)](#)



2. Agenda

Wednesday 28/09/2022 – 9:00 - 17:30

9:00 – 9:15 Welcome

Welcome by Ana Garcia, Chair of IMPEL – online

9:15 – 10:00 Introduction

Introduction to the topic of the mini conference: Professor Kurt Deketelaere – Faculty of Law, University of Leuven and University of Helsinki – online

Agenda of the mini conference + practical arrangements: Martine Blondeel – Department of Environment & Spatial Development of the Flemish Government, Belgium – on site

Presentation 1: Marinus Jordaan - Netherlands/Association of Regional Environment Inspection Agencies, The Netherlands – on site

Investigation of drivers for compliance behaviour as a basis for choosing interventions. Why it is logical that lots of companies not automatically comply with the law. And how you could use this logic to achieve better compliance results. Some results after almost five years of trial and error experimenting with behavioural insights in the Netherlands.

10:00 – 10:30 Session 1: Information and training

'Information and training' focuses on proactively sharing information about policy and regulations in general or about a particular theme in a way that is targeted, meaningful and informative.

Presentation 2: Hugh Coughlan - Eastern-Midlands Regional Waste Management Planning Office, Ireland – on site

Ireland has seen an evolution in its waste enforcement strategy over the last 7 years. The establishment of shared service models at National & Regional level in enforcement, planning and regulation has led to a more holistic and integrated approach to compliance. These shared services working with and on behalf of local municipalities have also enabled greater speciality and expertise within resources and ensured a more systematic, consistent and indeed measurable level of engagement with all stakeholders. The overall assessment at this juncture on what still is an early stage on the journey is that Ireland now has a more engaged, informed and ultimately more compliant sector.

10:30 – 11:00 Coffee break



11:00 – 12:15 Session 2: Technical assistance

'Technical assistance' focuses on explaining to target groups what the intention of specific legal rules is by clarifying the requirements that are set for specific target groups, products or activities and by making a number of templates, toolkits, checklists and self-evaluation tools available for this purpose. Technical assistance distinguishes itself from information and training by its interactive, often real-time character and the focus on one activity, product or target group.

Presentation 3: Simon Bingham - Scottish Environmental Protection Agency (SEPA), United Kingdom – on site

NetRegs is a partnership between the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA). NetRegs is a free to use website which aims to improve the compliance of small and medium-sized enterprises (SMEs) in Scotland and Northern Ireland by helping them understand environmental regulations. The website and tools provide guidance, written in simple, easy to understand language, on how to comply with environmental law as well as advice on best environmental practice. (www.netregs.org.uk)

Presentation 4: Sebastien Janssens – Flemish Land Agency (VLM), Belgium – on site

In 2007, the Flemish Land Agency (VLM) set up a “farm consultancy and sensitizing service” (BAS) to guide, advise and sensitize farmers about manure legislation under the Nitrates Directive and its practical consequences and application on the farm. In addition to providing individual advice to farmers, the advisors also took care of other tasks, such as providing information sessions and providing information sheets. This public service was phased out in 2017 and has since been discontinued. Meanwhile it had been replaced by a partnership of private and public organisations in a non-profit association, the “coordination centre for education and guidance on sustainable fertilization” (CVBB). Recently, based on an evaluation, another approach was decided, with the new set up of the “counselling service towards a better soil and water quality” (B3W), with a clear bottom-up approach and more elaborated obligations of result. This presentation about technical assistance on achieving the goals of the Nitrates Directive, is also a presentation about evaluation and evolution.

12:15 – 13:30 Lunch time – resto VAC Gent – 3rd floor

13:30 – 15:15 Session 3: Transparent communication

'Transparent communication' means the disclosure of enforcement data and information by the government and of self-monitoring data by the business community. This very concrete and visible approach aims to inform and confront companies and citizens about their own compliance behaviour or that of others, so that they can learn the necessary lessons and adapt their own behaviour. By communicating transparently about compliance behaviour, enforcement authorities can deliberately build public support for compliance. The use of enforcement and compliance data can thus be the basis for citizen engagement. Through scoring systems, legal subjects can be ranked according to their compliance behavior and this score can be made public (praise & fame



or name & shame). Transparent communication can also be used to individually draw up a score on compliance behavior so that an insight is obtained in the place of the score in the ranking of the target group, without these results being made public.

Presentation 5: Michael Barrette - Enforcement Targeting and Data Division, US EPA – on site

ECHO, Enforcement and Compliance History Online, is a web tool developed and maintained by EPA's Office of Enforcement and Compliance Assurance for public use. The ECHO website provides environmental regulatory compliance and enforcement information for over one million regulated facilities nationwide. It also offers information about compliance and enforcement activities at the state level. ECHO was developed originally with the intent to ensure the public was aware of environmental violations, and US EPA hoped that by putting information online, that regulated entities would be incentivized to fix violations quickly and stay in compliance. Like other environmental databases in the US (e.g. TRI, Toxic Release Inventory), ECHO (like TRI before) has become an important means of pressure (in the hands of citizens, organisations, governments) on companies to comply with legislation. Like TRI, ECHO proves that "transparency leads to better compliance". Hard evidence is not available, but there is a lot of "anecdotal confirmation" that convinces the US EPA that ECHO does have a "compliance effect". This presentation will explain the content of what ECHO provides, the initial difficulties to making the information public, and the evolution of the project to bring more and more information to the public.

Presentation 6: Kealan Reynolds – Environmental Protection Agency, Ireland – online

The National Priority Sites system allows the EPA to identify which industrial and waste licensed sites should be prioritised for enforcement based on their environmental performance. The list is used to target the EPA's enforcement effort at the poorest performing sites in order to drive improvements in environmental compliance. Each site is given a score based on its licence compliance in the previous six months. The system has been in place in Ireland since mid-2017 and has become a key part of the EPA's enforcement toolbox. The National Priority Sites list is published at the end of each quarter and continues to drive compliance amongst the licensed community in Ireland.

Presentation 7: Bart Pannemans – Department of Environment & Spatial Development of the Flemish Government, Belgium – on site

Drilling activities, such as geothermal boreholes, groundwater wells or dewatering of construction sites, require an environmental permit and must comply with technical regulations. In addition, they can only be carried out by licensed drilling companies, who have a number of reporting obligations: drilling activities need to be announced in advance, so that inspections during the drilling can be organized, and afterwards activities need to be reported in the digital platform of Databank Ondergrond Vlaanderen (DOV), allowing the reuse of such data. However, compliance with the reporting obligation by the drilling companies is often insufficient (number of data, quality of data, etc.). Individual reports on reporting behavior are compiled by analysis of the reported



data, and sent to each company. These ‘school reports’ should encourage the drilling companies to improve their compliance behavior.

15:15 – 15:45 Coffee break

Session 4: Compliance incentives

‘Compliance incentives’ are based on the use of advantages or disadvantages to elicit compliance. A first type of incentive is the adjustment of the inspection frequency based on past compliance or on the voluntary application of certified environmental management systems. The better the compliance behavior, the fewer inspections are necessary. Companies that subject their activities to an environmental management system, carry it out correctly and report on it (to the government and to the public) can be subjected to a lower frequency of inspection. In addition, economic, fiscal and financial incentives are also possible. Examples include: making support conditional on compliance behaviour, different forms of creative financial arrangements and the application of supervisory levies for specific inspections, in particular for the additional inspections needed to curb illegal behaviour. A third type of incentive is to enter into partnerships such as private assurance. In practical terms, this means that private parties themselves systematically check compliance, correct violations and take measures to prevent the recurrence of violations. In that case, the government can start monitoring at meta-level (meta-supervision). Partnerships between governments can also stimulate compliance, such as when following up on cross-compliance measures with other government agencies. Another type of stimulus is nudging. This is a behavioral psychological motivation technique in which people are subtly stimulated to behave in a desired way.

Presentation 8: David Pugh – Environment Agency (England), United Kingdom - online

The Environment Agency (England) Compliance Classification Scheme.

The compliance classification scheme is used by our Officers to score non-compliances with conditions in an operators permit. Criteria are used to determine the severity of the non-compliance and potential risk to human health and the environment, ranging from major to no impact. The output from this assessment is used in a number of ways: recording and sharing with the operator our assessment of any non-compliance with permit conditions; ranking and scoring these non-compliances; informing our risk-based approach to deployment of people and resources; setting a charge multiplier for annual subsistence charges based on performance, in line with the polluter pays principle with poor performers paying more than those who are compliant; annual reporting on business performance

Presentation 9: Samira Ghaznawi, Robbe Deleu and Aranka Vandesande – Flemish Waste Agency, Belgium – on site

The Flemish Waste Agency works closely with the private sector to monitor compliance with environmental regulations. After all, many companies are involved in 'waste', which is disproportionate to the number of inspectors. A known compliance problem concerns the sorting behaviour of companies and the collection of



industrial residual waste, whereby too much waste is admitted that does not belong there. The inspectors carry out checks on companies in this respect. Recently, new regulations came into force whereby, in addition to public supervision, residual waste collectors are also deployed to check their customers for sorting errors, keep records of non-conformities and, in the case of certain collections, possibly also carry out post-sorting. These collectors are in turn administratively checked by OVAM. This new arrangement of public-private cooperation allows supervisors to achieve greater coverage (more inspections, because also by the collectors) and more targeted enforcement (use of the data in the registers for risk analysis and targeting). For the inspection of the extended producer responsibility under the WEEE directive and the battery directive, the public-private cooperation goes one step further: 'flow followers', paid by the private sector, are employed in the inspection service. There, they take on a role of assisting companies and at the same time, they form an intermediary for public supervision.

17:00 – 17:30 Conclusion of the day

Concluding discussion with the participants: conclusions on the use of the strategy of compliance promotion - some topics for further discussion – other examples of compliance promotion – further work done in Flanders

Conclusion of the day + practical arrangements: Martine Blondeel – Department of Environment & Spatial Development of the Flemish Government, Belgium – on site

Thursday 29/09/2022 – 9:00 - 12:00

9:00 – 10: 15 Focus on Compliance Strategies US EPA

Presentation 10: Michael Barrette - Enforcement Targeting and Data Division, US EPA – on site

Enforcement and Compliance History Online (ECHO) – Demonstration and Deeper Dive into key features, reports, and new directions

Presentation 11: Amy Porter - Office of Enforcement and Compliance Assurance, US EPA - online

US EPA Enforcement and Compliance Assurance Tools.

This presentation includes an overview of US EPA enforcement and compliance assurance tool categories including assistance, incentives, monitoring, transparency and communication, and informal and formal enforcement. Covers tool categories as well as specific tools and discussion about policies and guidance, case specific determinations, and the strategic use and sequencing of tools with examples. Touches on basic principles of deterrence, escalation and theories of compliance behaviour.

10:15 – 10:45 Coffee break



10:45 – 11:50 In depth discussion on compliance assurance strategies and further work

10:45 – 11:50 In depth discussion on:

- topics defined in the conclusions of the mini conference first day
- topics resulting from the presentations of US EPA
- the connection with other work on compliance strategies:
 - link with the new proposal by the EU Commission for the Environmental Crime Directive
 - link with the Regulatory Framework Subproject of Climate Change Emergency Programme of the Cross Cutting expert team of IMPEL

Presentation 12: Simon Bingham - Scottish Environmental Protection Agency (SEPA), United Kingdom – on site

The movement from a carbon-based economy to a green economy is not a simple process. It will require careful navigation by many regulators to enable activities that can transition to do so whilst managing those activities that cannot to a successful closure without leaving lasting legacy issues. This will require regulators to use new tools and techniques and work in an extremely sensitive and potentially locally charged atmosphere. Regulatory strategy needs to be developed to include strategic alignment. The regulatory strategies needed to carry out this work are different from those employed during traditional regulation. We also all know that the climate is changing rapidly and bringing with it different weather patterns. Our regulatory framework has, however, not changed. This is a big piece of work potentially.

11:50 – 11:55 Conclusion of the mini conference and further work to do in this field for IMPEL

Martine Blondeel – Department of Environment & Spatial Development of the Flemish Government, Belgium – on site

11:55 – 12:00 Closure of the Mini Conference

Closure by Kristina Rabe, vice Chair of IMPEL – online



3. Organisation and Participation

The IMPEL Mini Conference on Compliance Assurance was **organized in close cooperation between IMPEL and the Flemish Government:**

- The topics and agenda of the conference were based on a Flemish study made on behalf of the Department of Environment and Spatial Development (2020) (see p.6). This study on Compliance Promotion was drafted with the assistance of IMPEL colleagues.
- The speakers for the Mini Conference were chosen and invited by the Project Manager (working for the Flemish Government), with the help of colleagues from IMPEL.
- Three of the speakers work for the Flemish Government. There were two speakers from the US EPA. The majority of the speakers were colleagues from IMPEL.
- The department of Environment and Spatial Development of the Flemish Government hosted the conference.

The IMPEL Mini Conference on Compliance Assurance was **organized in a hybrid manner with approximately 40 participants on site and the same number online.** The venue, offered by the Flemish Government, was the Virginie Loveling building (VAC Gent) at Koningin Maria Hendrikaplein 70, Ghent (Room 21.04 Jacob van Artevelde on Wednesday 28/09/2022 and Room 00.01 Karel Waeri on Thursday 29/09/2022). A social dinner on Wednesday evening was held at restaurant Sgol, Emile Braunplein 40, Ghent.

The IMPEL Mini Conference was very international with participants from **approximately 25 countries.**





4. Presentations and Discussions

The **presentations** of the Mini Conference are included in the annexes to this report:

- **Annex I** gives an overview of the presentations of **day 1** of the Mini Conference. The first presentation gave an insight into the drivers for compliance behaviour as a basis for choosing interventions such as Compliance Promotion actions. The other eight presentations illustrated good **examples of the four categories of Compliance Promotion actions**, based on the Flemish study (see p.6), those being: **information and training, technical assistance, transparent communication and compliance incentives**.
- **Annex II** includes the presentations of **day 2**. Putting the **topic of the Mini Conference in a broader perspective**: they focused on Compliance Strategies of the US EPA or they made the link with new European developments on the issue of Compliance Assurance - the new proposal⁴ by the EU Commission for the Environmental Crime Directive and the Regulatory Framework Subproject of Climate Change Emergency Programme⁵ of the Cross Cutting expert team of IMPEL.

What follows are some topics from **the discussions that followed these presentations**:

Regarding Compliance Promotion (day 1):

- The **importance of data** as a basis **for developing the appropriate actions of Compliance Promotion**. Output data on compliance are relevant and, more **specifically, compliance data** on specific sectors, such as compliance rates, are important. It could also be of benefit to get feedback from the relevant sector federations on these rates. Another way of gathering relevant information for making decisions on Compliance Promotion actions, is by conducting behavioural surveys.
- The full use of Compliance Promotion as a strategy together with strategies of compliance monitoring and follow-up and enforcement, was considered as part of a more **holistic and integrated approach of compliance**. In some cases, this approach resulted in a budget shift regarding compliance, such as the budget for education which has been increased in recent years.
- Different **approaches of information sharing, training and technical assistance as forms of Compliance Promotion** were demonstrated and discussed. The costs of running informative websites, training programmes and assistance centres can be quite high as can efforts on the part of the government. However, some good examples of a positive impact on the compliance behaviour were presented. It is important for a government that invests in Compliance Promotion websites, programmes or centres to be constantly active in promoting them (via monthly news letters, through the sector federations,

⁴ [Environmental Crime \(europa.eu\)](http://europa.eu)

⁵ [Climate Emergency Umbrella Programme | Impel](#)



through success stories, by ranking it high in google search, by inspectors in the field) and to be flexible (responding quickly to new situations f.i. new legislation, new products...).

- The **strength of transparent sharing of compliance information** as a tool **for achieving better compliance**. This sharing of information can be public but it can also be, for example, confined to the sector concerned or even to an individual legal entity. Specific 'name and shame' actions can be set up either publicly, or at sector or individual level. But even just sharing information, without explicit additional actions, can affect compliance behaviour directly or through litigation. The applicability of this form of Compliance Promotion is different for different countries given the different legal systems and the differences in freedom or restriction of information sharing.
- Different **approaches to sharing compliance information and how they affected compliance behaviour** were demonstrated and discussed. Impressive databases are the basis. Relevant topics discussed were: validation of the data, the use of inspector's data on compliance, the use of self-reporting data of non-compliance, real time data, getting information from different authorities, the gradual release of parts of the database... Another topic was the reaction from the inspectors (resistance had to be overcome, adjusting how to inspect later on), the public (help with the validation) and the sector federations (court cases at start-up, adjusting compliance behaviour at a later stage). It was noted that publication of compliance information also affects banks and insurance companies.
- Also **compliance incentives such as adjusting the inspection frequency or the supervisory levies according to the past compliance**, need a well-developed database and a well-thought-out scoring system. A good practice was presented. A topic of discussion was how to motivate the inspectors to give scores to the multiple criteria in a uniform way. Training, leadership and audits are key here.
- Examples of **compliance incentives** by entering into partnerships such as **private assurance**, were presented and discussed, both in session 4 (regarding waste) and in session 2 (assistance centre for farmers). These testimonies illustrated the potential of public-private systems for compliance assurance. However, it was clear that there is a learning curve here and that the inspection authorities had to remain in control of the system.

Compliance Promotion in a broader perspective (day 2):

- The tools of Compliance Promotion were put into five categories by the US EPA: Compliance Assistance, Compliance Incentives, Compliance Monitoring, Transparency, Communication. The aspect of on-site or off-site creative information gathering, referred to as Compliance Monitoring here, is considered to be a part of the Compliance Promotion tools (this is a slightly different interpretation from that of Europe). As data gathering and a well-developed database are key for developing the appropriate actions of Compliance Promotion, this idea can be supported. These Compliance Promotion activities and informal and formal enforcement activities are deployed following an **escalation principle**.
- Compliance Promotion is **recognised as a strategy** in its own right alongside the strategies of Compliance Monitoring and Follow-up & Enforcement in the proposed revision of the **Environmental Crime directive**. Article 15 of the proposal determines that Compliance Promotion actions should be taken by the Member States and that outcome monitoring should include the effect of the Compliance Promotion.



- The **Climate emergency** demands prompt action. Coupled with this, a stronger mandate to change to achieve successful outcomes is a given. There are tasks and opportunities for environmental inspectorates here. Nevertheless, the gap between the climate community and environmental inspectorates is very wide. Risk-analysis and planning will help to integrate climate objectives into the inspection plans by shifting the focus of the environmental inspections where appropriate. Also a **more flexible approach** is needed, making use of a broad range of strategies and tools to achieve compliance. This is where the **Compliance Promotion actions and tools** enter into the picture.



5. Conclusions

A preliminary concluding discussion with the participants at the end of day 1, gave some further information on the use of the strategy of compliance promotion, presented some topics for further discussion, revealed some other examples of compliance promotion and explained further work done in Flanders. After broadening the perspective of the subject the next morning, a more in depth discussion was held at the end of day 2 with attention to other developments in the field of compliance assurance. The closing of the meeting was preceded by the overall conclusions of the mini conference and views on further work to do in this field by IMPEL.

The **overall conclusions** of the Mini Conference on Compliance Assurance, with focus on Compliance Promotion, are the following:

- The most important conclusion of the Mini Conference is to utilise a **holistic and integrated approach to Compliance Assurance**. This means that a broad spectrum of compliance strategies, interventions, tools and actions should be considered in order to address very different compliance issues and target groups and to face new environmental problems and climate emergencies, in an appropriate way.
- In this spectrum, **Compliance Promotion is a full-fledged strategy** that stands and works together with the strategies of compliance monitoring and follow-up & enforcement.
- Four categories of **Compliance Promotion tools** were defined: **information and training, technical assistance, transparent communication and compliance incentives**. Good practices were presented.
- **Extensive data collection, a well-developed database and well-thought-out systems for data use are key** for developing the appropriate actions of Compliance Promotion.

Proposals for further work to do in this field by IMPEL:

- **Sharing knowledge, experiences, visions and good practices** between its members is a **key activity for IMPEL**. The Mini Conference offered a great deal of content. It presented inspiring ideas to take home for implementation in the individual administrations.
- The Mini Conference inspired project managers to build content in their own projects (Climate Change topic in Industry & Air projects, ideas about content build in the KIP project...). The **cross-over effect** of the content of the Mini Conference **within the IMPEL network** is expected to give results at a later stage.
- The **Implementation Challenge Report of IMPEL** and the preliminary survey can be **stretched** to these topics.



Annexes



Annex I. Presentations of Day 1 – Compliance Promotion –
examples of the 4 categories



Content:

Presentation 1: Marinus Jordaan - Netherlands/Association of Regional Environment Inspection Agencies, The Netherlands

Presentation 2: Hugh Coughlan - Eastern-Midlands Regional Waste Management Planning Office, Ireland

Presentation 3: Simon Bingham - Scottish Environmental Protection Agency (SEPA), United Kingdom

Presentation 4: Sebastien Janssens – Flemish Land Agency (VLM), Belgium

Presentation 5: Michael Barrette - Enforcement Targeting and Data Division, US EPA

Presentation 6: Kealan Reynolds – Environmental Protection Agency, Ireland

Presentation 7: Bart Pannemans – Department of Environment & Spatial Development of the Flemish Government, Belgium

Presentation 8: David Pugh – Environment Agency (England), United Kingdom

Presentation 9: Samira Ghaznawi, Robbe Deleu and Aranka Vandesande – Flemish Waste Agency, Belgium



Anno 2018

Marinus Jordaan
Toezichtslab DCMR

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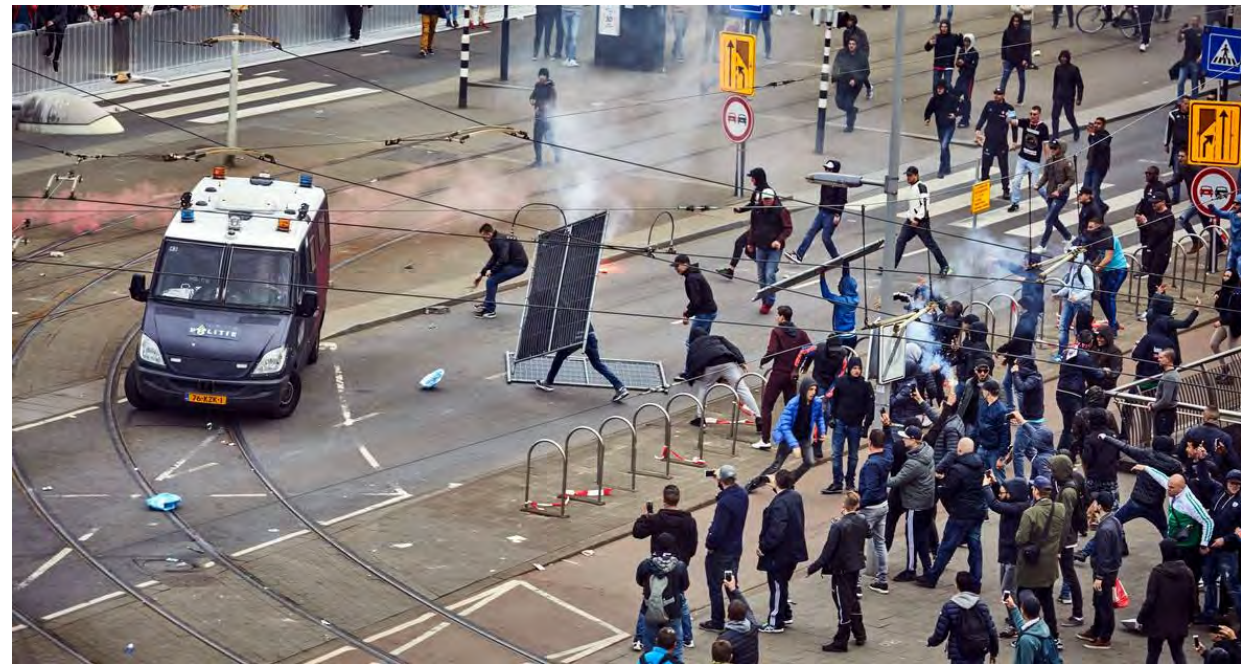
Human kind

A Hopeful History

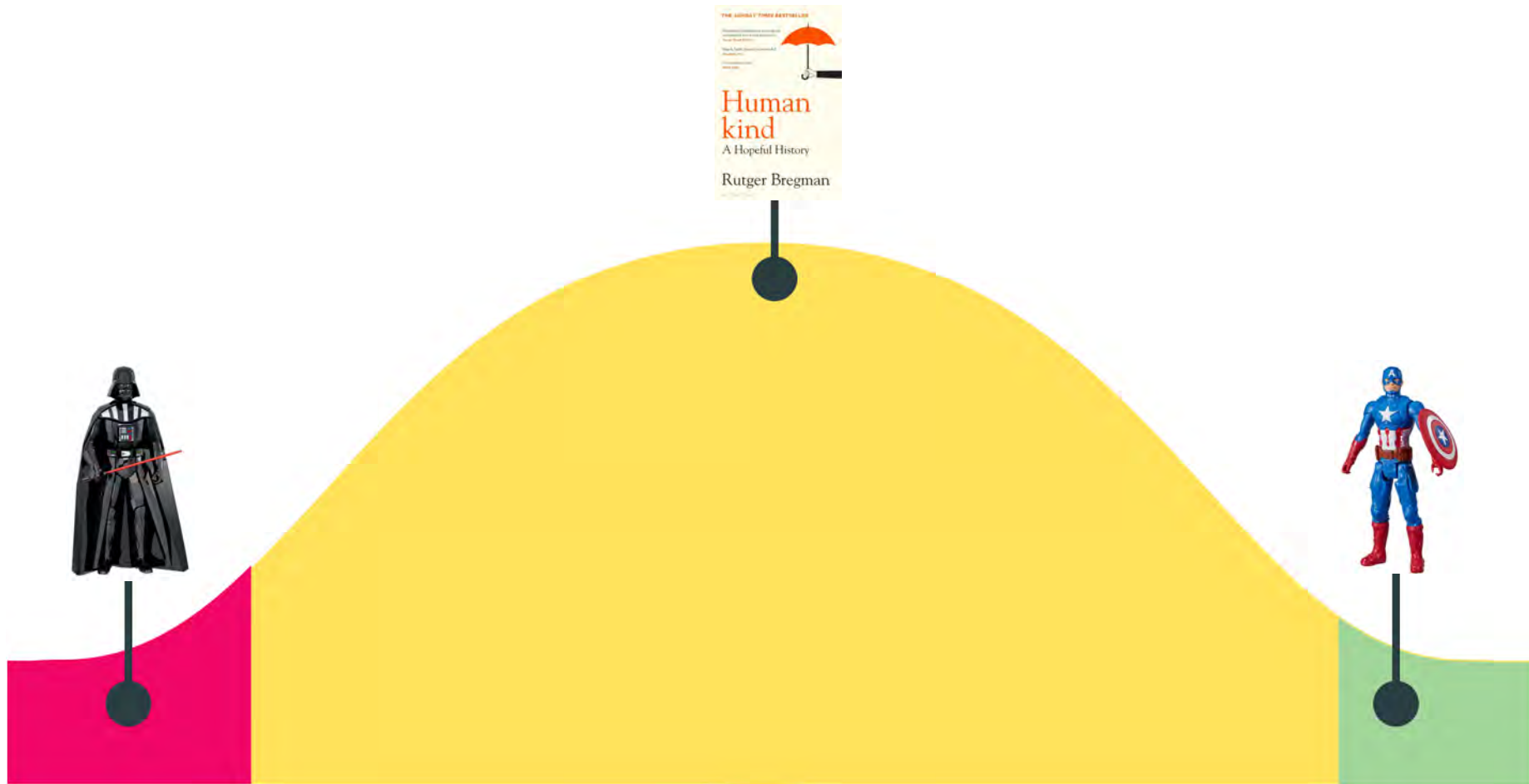
Rutger Bregman

BLOOMSBURY

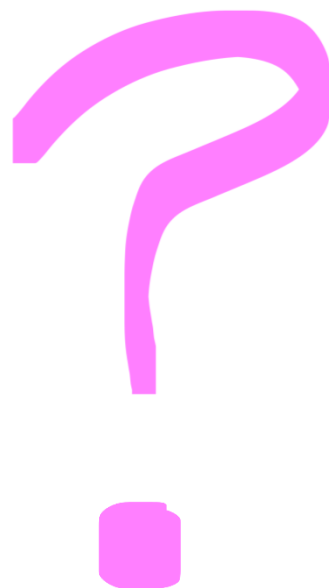
The logo for DCMR milieudienst Rijnmond, featuring a stylized blue wave icon followed by the text 'DCMR milieudienst Rijnmond' in blue and green.



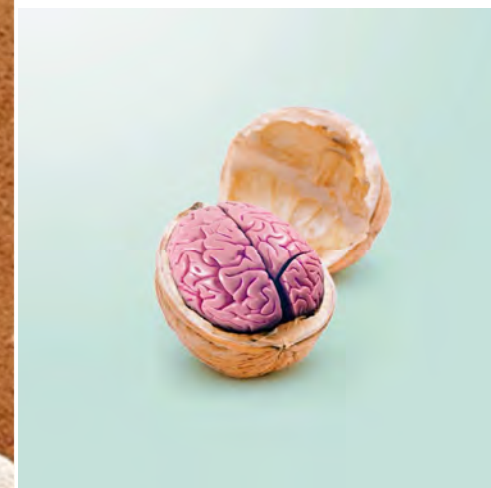
PEOPLE WHO CAN BE INFLUENCED



**WHAT % OF BEHAVIOUR IS
CONSCIOUS?**



WHAT % OF BEHAVIOUR IS CONSCIOUS?



HOW TO GET COMPANIES COMPLIANT?



Doing nothing makes sense(er)
Too difficult/hassle
Lack of staff, time, attention or resources
Don't know where to start
Resistance/emotions/injustice
Bad leadership
Rotten (spots in) culture
Lack of support owner(s)
Uncertainty (e.g. about future, payback period, or quality)
Conflicts of Interest
Assumptions about behavior of competitors

TWO EXAMPLES FROM OUR PRACTICE

CS524119



	Geconstateerde overtreding	Overtreding ongedaan maken	Relevante wetgeving
1	Meerdere vaten en verpakkingen met bodembedreigende en/of brandgevaarlijke producten als voorraad of werkvoorraad gebruikt, staan niet op een lekbak.	Plaats de vaten en verpakkingen op een lekbak of voer ze af als ze leeg zijn of niet meer gebruikt worden.	Artikel 4.1 Activiteitenbesluit milieubeheer juncto artikel 4.3 Activiteitenregeling milieubeheer juncto PGS 15 voorschrift 3.1.3
2	Er waren geen absorptiemiddelen aanwezig in de inrichting om morsingen en lekkages te verhelpen en op te ruimen.	Zorg voor een voldoende voorraad aan absorptiemiddelen in de inrichting.	Artikel 2.9 Activiteitenbesluit Milieubeheer juncto artikel 2.3 lid 7 Activiteitenregeling milieubeheer.

"When you violate one of our unwritten rules you'll know it by the unspoken censure."



What to do with problematic companies?

IT DEPENDS...



MVP: measuring safety perception





METING VEILIGHEIDSPERCEPTIE

Lerend de veiligheid verbeteren



Subjective truth

Efficiënt instrument

No benchmark

Aimed at improvement

Not sanctioning but dialogue and stimulation

WHICH SUBJECTS?



SIMPLIFYING WARNING LETTER



Ayman Cars doe het zelf garage
T.a.v. de heer M Masaoudi
Schansweg 61
3042 HT ROTTERDAM

Onc kenmerk: 9999125272_9999613934
Uw kenmerk: -
Contactpersoon: M. Degenaar
Telefoonnummer: 010 - 246 83 99

Onderwerp: Resultaten uitgevoerde controle Wet milieubeheer

Geachte heer Masaoudi,

Op 7 mei 2019 controleerde een toezichthouder van de Schansweg 61 in Rotterdam. Tijdens de controle zij milieubeheer en de bijbehorende Activiteitenregeling n

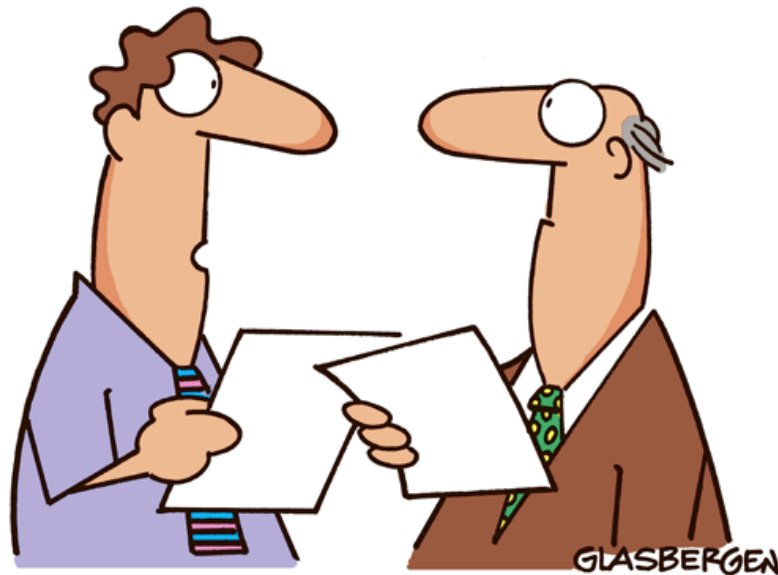
Overtredingen
Tijdens de controle zijn twee overtredingen geconstateerd. Wij gaan ervan uit dat deze brief de overtredingen ongedaan maakt.

	Geconstateerde overtreding	Overtreding ongedaan maken	Relevante wetgeving
1	Meerdere vaten en verpakkingen met bodembedreigende en/of brandgevaarlijke producten als voorraad of werkvoorraad gebruikt, staan niet op een lekbak.	Plaats de vaten en verpakkingen op een lekbak of voer ze af als ze leeg zijn of niet meer gebruikt worden.	Artikel 4.1 Activiteitenbesluit milieubeheer juncto artikel 4.3 Activiteitenregeling milieubeheer juncto PGS 15 voorschrift 3.1.3
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DON'T INVENT THE WHEEL TWICE

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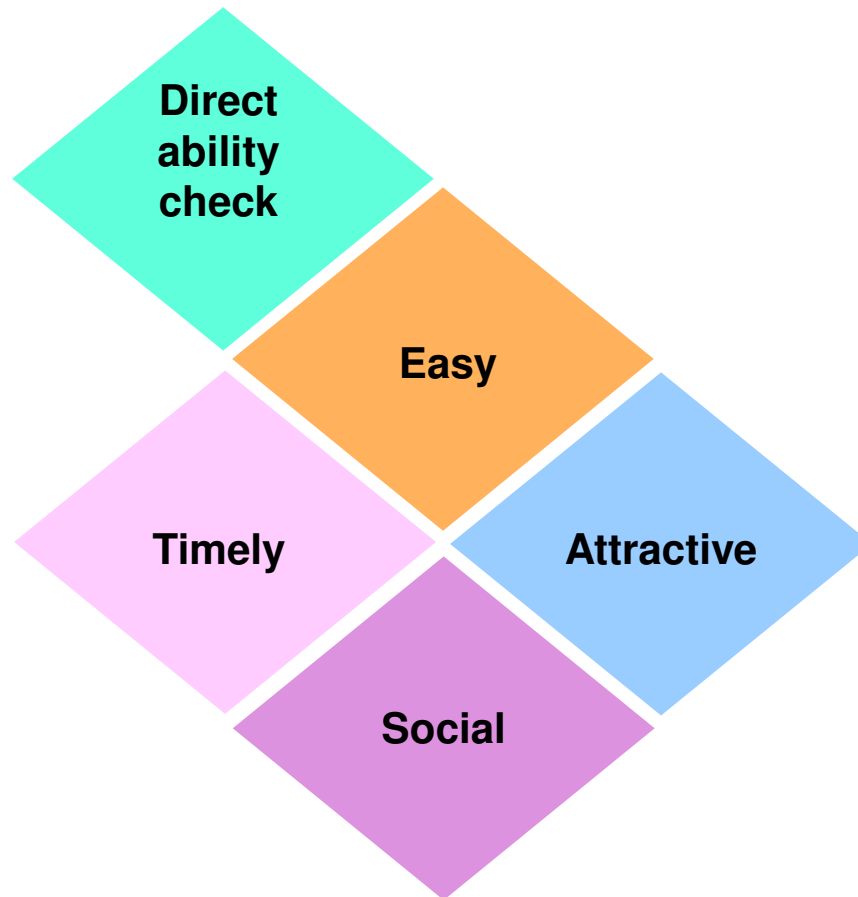
**“I found a quick fix for our company’s financial problems.
I removed the red ink cartridge from the printer.”**

A behavioral approach is:

Trying to understand why it makes sense for a company to (not) display a certain behavior and find the buttons that move the company in the right direction.

Have a conversation, be curious, test assumptions, look at behaviour, attitude, but also the environment in which this takes place (culture, leadership, formal aspects of how the company organizes itself).

INTERVENTION CHECKLIST



THANK YOU

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<https://www.linkedin.com/in/niekh/>

HUGH COUGHLAN

Regional Co-ordinator

Eastern-midlands Regional Waste

Management Planning Office

(RWMPO)

MINI CONFERENCE COMPLIANCE ASSURANCE

26th to 29th September

Ghent

mywaste

The main element you cannot delegate to your cloud service provider is your responsibility for security, compliance and customer trust.

Stephane Nappo



Compliance Theory/Real World Examples

Education

Education is key to addressing climate change (UN)

According to the U.N:

“Education can encourage people to change their attitudes and behaviour; it also helps them to make informed decisions. In the classroom, young people can be taught the impact of global warming and learn how to adapt to climate change. Education empowers all people, but especially motivates the young to take action. Knowing the facts helps eliminate the fear of an issue which is frequently coloured by doom and gloom in the public arena.”



Compliance Theory/Real World Examples

Awareness

Awareness campaigns for behavioural change

According to Climate Adapt:

“Awareness raising is an important component of the adaptation process to manage the impacts of climate change, enhance adaptive capacity, and reduce overall vulnerability.”

“Awareness raising is a complex task with results hard to predict. Although **it is very difficult to measure the effectiveness of awareness raising campaigns as there are few outcome indicators**, frequently conducted qualitative and quantitative surveys can provide valuable insights.”



Compliance Theory/Real World Examples

Effectiveness – Case Studies

The Effectiveness of an Intervention to Promote Awareness and Reduce Online Risk Behavior in Early Adolescence

Description of study:

The study consisted of 800 Belgian primary school children – half received a 10-minute intervention indicating online risks, the other half (control group) received a 10-minute presentation concerning online applications without any emphasis on risks.

Results:

Children in the intervention group were more likely to be aware of online risks directly after the intervention, even 4 months after. Children in the intervention group were also more likely to report online risky behaviour.

Compliance Theory/Real World Examples

Effectiveness – Case Studies cont.

The influence of the Act F.A.S.T stroke campaign on the general public in Ireland

Description of study:

The aim of the study was to identify the influence of the Act F.A.S.T stroke campaign on the general public in Ireland

- *Phase One (Pre campaign):* Data was collected on a cross-section of the public to obtain baseline information on stroke warning signs
- *Phase Two (Post campaign):* Data was collected from participants 18 months after the campaign

Results:

- Results from Phase Two reported that 93% heard or saw the campaign yet only 37% could recall the campaign name or the slogan
- Post Campaign, **over 80% recognised the warning signs of stroke**
- Post campaign there was **an increase of 54%** of who stated that they would go straight to hospital for stroke symptoms
- However, **the influence of the campaign in changing behaviour was not as evident.** Further research is needed to examine factors that influence behaviour when a stroke strikes.

Compliance Theory/Real World Examples

Effectiveness – Case Studies cont.

Individualized diabetes nutrition education improves compliance with diet prescription

Description of study:

67 patients with Type-2 diabetes in South Korea were put on an education programme consisting of one class session for 1-2 hours in groups of 4 to 5, lasting 3 months.

Results:

After 3 months, the patients in the education group showed improvement in dietary behaviour and food exchange knowledge. No such improvements were observed in control group.

In conclusion, the individualized nutrition education was effective in adherence to diet recommendation and in improving glycaemic control and lipid concentrations.



5.1 Million Population

77,000 approx. complaints in 2020

13.5 million tonnes collected per annum

129,100 inspections in 2020

3.1 million tonnes managed MSW per annum

16,900 enforcement actions in 2020

42% Recycling Rate approx.

377 enforcement prosecutions in 2020

Ireland by Numbers

The Three Regions



connacht-ulster
waste region



eastern - midlands
waste region



southern
waste region



3 Waste Regions

3 Regional Waste Management
Planning Lead Authorities (RWMPO)

3 Regional Waste Enforcement
Regional Lead Authorities (WERLA)

1 National Waste Collection
Permit Office (NTFSO)

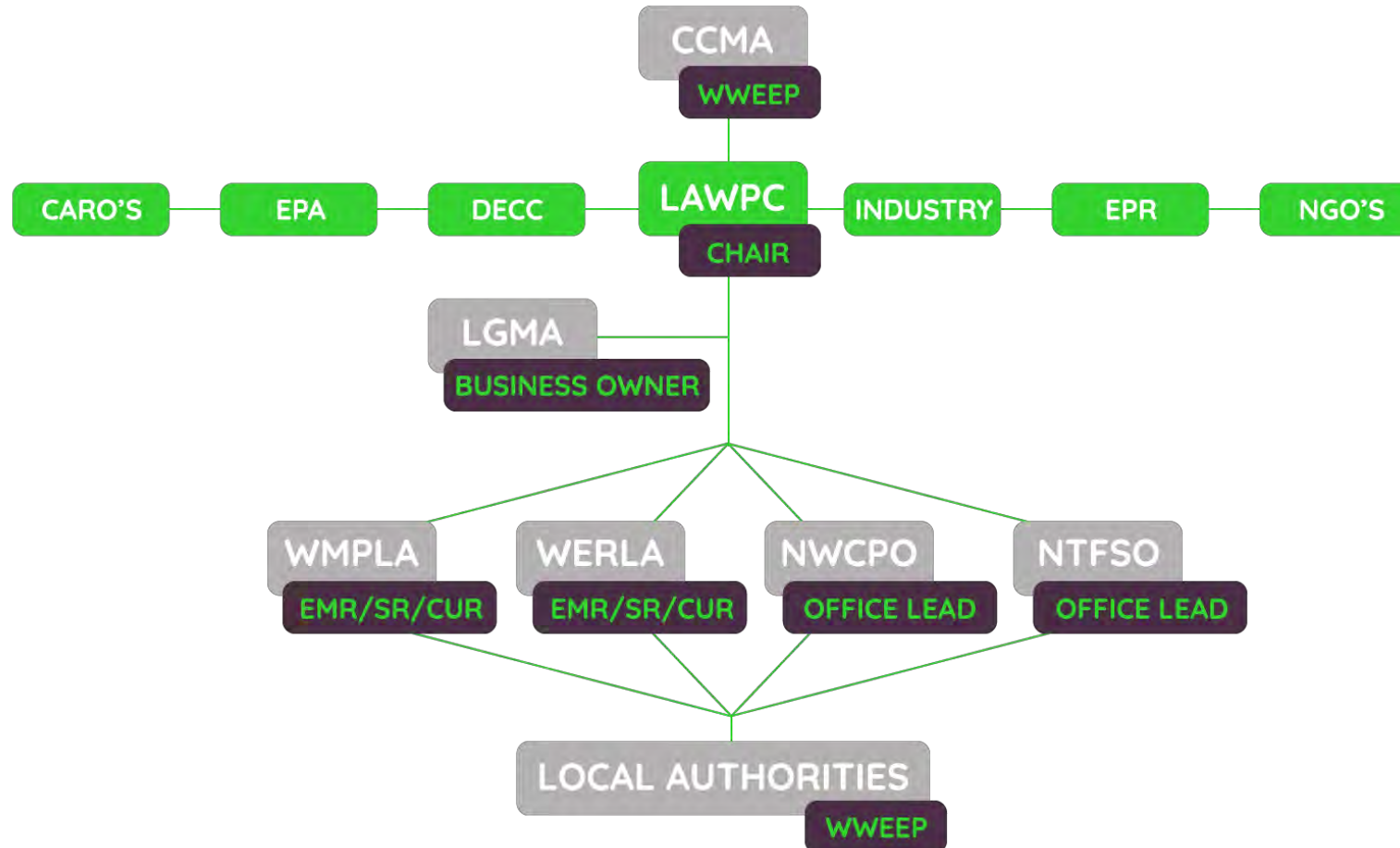
1 National Transfortier Shipment
Office (NTFSO)

31 Local Authorities

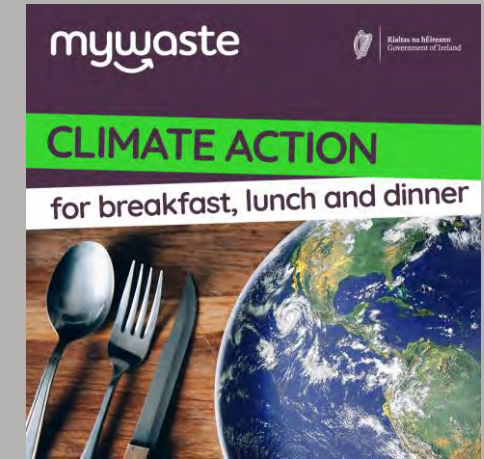
Local Authority Waste Management Operational Structures



Indicative Relationship Structure from Local Government Perspective



One National Communication Platform for Waste – mywaste.ie



CASE STUDY

1

Bye-Laws for the Storage & Presentation of Household & Commercial Waste

Key Components



Standards for Storage of Waste

Standards for Presentation of Waste

Standards for Segregation of Waste

Obligation to have contract in place with a service provider or have proof of ongoing disposal at an approved facility

Adoption Process Phase

Agreed Policy in Regional Waste Management Plan



Briefings to Steering Groups and key stakeholders

National Template & Information Pack to each Local Authority

Each Local Authority brought the Bye-Laws through statutory process within their functional area which included public consultation

Bye-Laws adopted by Elected Members in majority of 31 Local Authorities

Implementation Phase



Toolkit Prepared for Enforcement Teams

Engagement with Data Protection
Commissioner re Data Protection Impact
Assessment

National Awareness Campaign

Targeted Programmes in some Local Authorities

OUR INSPECTORS ARE CURRENTLY MONITORING YOUR AREA. AVOID A FINE BY STAYING WASTE COMPLIANT.



You will find everything you need and want to know about managing your waste responsibly, efficiently and in the way that suits you at www.mywaste.ie

Browse this site for your local waste services, bring banks, recycling facilities along with ways to help you prevent waste, reuse and upcycle.

All Local Authorities are adopting similar Bye-Laws ensuring a consistent approach to managing waste across Ireland.

mywaste

ARE YOU WASTE COMPLIANT?

YOU MUST USE ONE OF THESE OPTIONS



KERBSIDE COLLECTION

OR



AUTHORISED WASTE FACILITY



Find out more at www.mywaste.ie

FAQs

DO THESE BYE-LAWS APPLY TO ME?

Yes: these bye-laws will apply to all households, apartments and commercial premises.

HOW DO I COMPLY WITH THE BYE-LAWS?

In order to manage your waste correctly you need to be able to prove that:

You have a contract in place with an authorised waste collector (bin sharing is permitted for which proof of agreement is required);

OR

You can demonstrate regular use of an authorised waste facility.

*check out www.mywaste.ie to find your local authorised waste facility

WHY DO WE NEED THESE BYE-LAWS?

- To help you manage your waste in an environmentally acceptable manner;
- To ensure that your waste is only given to an authorised door-to-door waste collector or brought to an authorised waste facility;
- To help ensure your waste is correctly segregated;
- To reduce illegal dumping and backyard burning.

WHAT HAPPENS IF I DON'T COMPLY?

If you fail to comply with any of the requirements of the bye-laws it may result in a Fixed Penalty Notice (Maximum €75) being issued by this Local Authority or a member of An Garda Síochána. It may also lead to a fine on conviction of up to €2,500.

WHAT DO I DO IF I LIVE IN A MANAGED APARTMENT COMPLEX?

The bye-laws will still apply; the management company is to ensure adequate containers are provided for residual and recyclable wastes in designated waste storage points. They are also obliged to provide you with the written information regarding the arrangements in place. Segregation within the apartments will be the responsibility of the occupant, in order for the segregated system to work all apartments must play their part.

IS THERE ANYTHING ELSE I NEED TO DO?

Yes: you must segregate recyclable waste from your residual waste and present these separately. If you are living in an urban area, small town or village with a population of over 500 you must also segregate your food waste.

Campaign Material



mywaste

ARE YOU WASTE COMPLIANT?

请在以下选项中选择一项（必填）



街道垃圾收集

—— 或 ——



经认证的废品设施

mywaste

ARE YOU WASTE COMPLIANT?

MUSISZ SKORZYSTAĆ Z JEDNEJ Z TYCH OPCJI



ZBIÓRKA Z GOSPODARSTW DOMOWYCH

—— LUB ——



AUTORYZOWANY ZAKŁAD UTYLIZACJI ODPADÓW

mywaste

AN BHFUIL TÚ COMHLÍONTACH MAIDIR LE DRAMHAÍL?

NÍ MÓR DUIT ÚSÁID A BHAINT AS CEANN DÍOBH SEO



BAILIÚ COIS COSÁIN

—— NÓ ——



SAORÁID DRAMHAÍOLA ÚDARAITHE

mywaste

ARE YOU WASTE COMPLIANT?

YOU MUST USE ONE OF THESE OPTIONS



KERBSIDE COLLECTION

—— OR ——



AUTHORISED WASTE FACILITY

The Problem Phase

Issues with use of Eircodes for waste enforcement purposes

Statutory basis to store data of households potentially not availing of an authorised service not explicitly stated in Waste Management Act 1996

COVID 19 PANDEMIC

The Resolution Phase

Further intensive discussions with Data Protect Commissioner to resolve issues re Eircodes, Data Protection Impact Assessments



Regulations to be introduced to allow data to be collected of households not availing of an authorised service

Household Waste Collection is a 3 Year National Priority so targeted programmes utilising Bye-Laws expected

Impacts

National Approach was well received and supported across society



Consistent set of rules governing waste storage and presentation now in place nationally

Initial Data shows increase in participation with authorised services

Collector Permit Regulations/Conditions
= Waste Collector

Waste Byelaws for Storage & Presentation =
Householder/Business

Clear distinction in our approach with
householders/business and the waste collector

CASE STUDY 2

Commercial Waste



Did you know?

In Ireland, almost 70% of the contents of commercial general waste bins could be redirected to recycling or brown bins*.

*EPA survey

Background

- 2018 National Waste Characterisation by EPA showed 70% of Commercial Residual Waste Bin could be recycled
- RWMPO's submitted a Business Case to develop a national programme to assist commercial sector to improve awareness in order to improve segregation of materials
- Comprehensive Toolkit developed in partnership with commercial representative bodies, other key stakeholders in the wider waste sector also consulted



Toolkit

MyWaste developed a landing page specifically for businesses to help and encourage them to segregate and recycle their waste. Content on this page is designed to give business owners and employees the information they need to implement good waste management practices in their business or workplace. Waste prevention, waste segregation and recycling are all aspects of waste management that can be improved in businesses and workplaces across Ireland by implementing some simple practices and actions.

Resources on this page can assist businesses in their waste management journey and include downloadable posters, bin labels, a guidance booklet, a checklist and four short training animations. In addition to the downloadable options, printed materials are available free of charge.



**welcome to how
to manage your
business waste**

Toolkit

– Guide & Tutorials



Toolkit – Tutorial sample



**How to prevent and
recycle waste**

Bloom Signage



HELP KEEP IT CLEAN !

Ireland's guide to waste
mywaste

Make sure you match the right waste with the right bin...thanks!
Bí AIREACH ! Roghnaigh an bosca bruscair ceart le do thoil !



bia food

- Bia amh (Raw food)
- Bia cócaráilte (Cooked food)
- Fuilleach bia gan iarraidh (Unwanted leftovers)
- Cupáin innhúirínithe (Compostable cups)
- ni ghlactar le hearraí gloine, plaisteacha ná miotail (no glass, no plastics, no metals)**
- Máilí tae & driadar caife (Tea bags & coffee grounds)
- Máilí innhúirínithe (Compostable bags)
- Pacáistíocht innhúirínithe (Compostable packaging)
- Tuáilí & naipcíní páipéir (Paper towels & napkins)

athchúrsáil recycle

- Buidéil & coméadán phlaisteacha (Plastic bottles & containers)
- Tobáin & traidirí plaisteacha (Plastic tubs & trays)
- Earráí plaisteacha bogha (Soft plastics)
- Cannaí & stáin (Cans & tins)
- glan, tirim & scaoilte (clean dry & loose)**
- Cannaí alúmanaim (Aluminium cans)
- Cartchár (Cardboard)
- Cartáin (Cartons)
- Páipéir & irisleabhair (Paper & magazines)

ginearálta general

- Cupáin indúscartha neamh-innhúirínithe (Non-compostable disposable cups)
- Ceirtní taisce (Wet wipes)
- Scrúgail & coméadán alúmanaim trauilíthe (Soiled aluminium foil & foil containers)
- Gráithe briste (Broken crockery)
- ni ghlactar le bia, ábhair in-athchúrsáilte ná cadhnraí (no food, no recyclables, no batteries)**
- Earráí gloine briste (Broken glassware)
- Salachar urláir (Floor sweepings)
- Earráí neamh-athchúrsáilte agus earráí innhúirínithe (Non-compostable & Non-recyclable items)
- Mascanna aghaidhe & lámhainní indúscartha (Disposable face masks & gloves)

Impacts to Date

Endorsed and Supported by Commercial
& Waste Sectors



500+ packs distributed, materials also can be
downloaded

Material also adapted for Universities & GAA
Clubs Programme

Further Funding from Government for 2nd Phase
– To develop 6 National Hubs in Cities/Towns to
integrate use of materials/guidance

Parallel Compliance Measures

Legislation introduced to eliminate flat charging by commercial waste collectors

Commercial Waste is a National Enforcement Priority over the next 3 Years.

A specially designed awareness booklet for use by Enforcement Teams has been prepared and is referenced in all related communications by the Waste Enforcement Lead Authorities (WERLA)

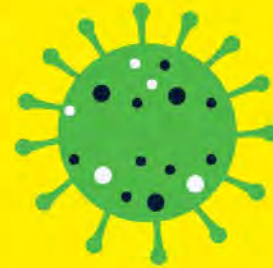


Other Examples of Note

National Co-Ordination by Local Government Sector to ensure business continuity during Covid 19 Pandemic

HOW TO MANAGE YOUR WASTE IF YOU ARE TESTED COVID19 POSITIVE:

Coronavirus
COVID-19



Waste must be managed in accordance with HSE guidelines.

These are:

- Put all your personal waste (gloves, tissues, wipes, masks) in a bin bag & tie when almost full;
- Put this bin bag into a second bin bag & a tie a knot;
- Store the bag safely for 3 days, then put the bag into your wheelie bin for collection.

Further details available at www2.hse.ie/conditions/coronavirus

mywaste.ie



Other Examples of Note

Annual Validation Programme for Environmental Returns since 2015

Data is a key part of intelligence gathering

Data can be a good barometer of wider performance

Data assists towards strategic planning and a more risk based approach



Other Examples of Note

National Anti-Dumping Campaign

**YOUR
COUNTRY.
YOUR
WASTE?**

Illegal dumping
is costly. It threatens
our environment.
Let's all take
responsibility.



Other Examples of Note

National Template Permit/Cert of Reg
Application Form & Conditions



Other Examples of Note

Food Waste Recycling Caddy Rollout



Outcomes



40 Total Pieces of media coverage



Total Media Reach*:
2,505,652



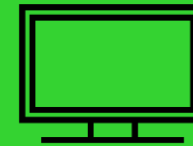
Potential Total Social Media Reach: **702,113**



36 Pieces of Online coverage



3 Pieces of Broadcast coverage



1 piece of Television coverage

*Based on a 48-hour news cycle

Clarity of Purpose

Co-Operation

Collaboration

Co-Ordination

Communication

Compliance/Compliance Action

Thank You

Questions / Comments?

Hugh.Coughlan@dublincity.ie

mywaste

SCOTTISH ENVIRONMENT PROTECTION AGENCY

NetRegs

www.netregs.org.uk

28 September 2022

A PRESENTATION TO THE IMPEL CONFERENCE ON COMPLIANCE ASSURANCE

- Background
 - Scottish and Northern Irish businesses
- NetRegs
 - Overview
 - Vision
 - Guidance principles
 - How we develop guidance
- Key statistics
- Feedback
- The NetRegs team

Scottish and Northern Irish Businesses

- The majority of businesses in Scotland and Northern Ireland are Small and Medium sized Enterprises (SMEs)
- Smaller businesses can find regulatory guidance complex and difficult to understand – ***They often don't have the time or the expertise.***



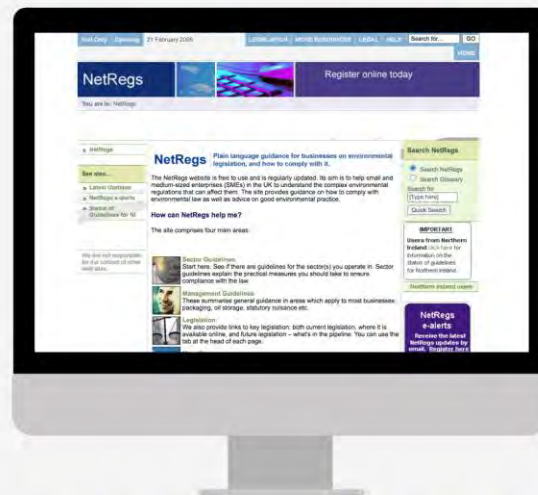
NetRegs

- Website launched in 2002 as UK wide web guidance, by the UK environmental regulators: EA, SEPA and NIEA
- EA withdrew in 2012. Now run in partnership by SEPA and NIEA

Features

- Environmental guidance for SMEs: **regulatory guidance** (what you must do) and **good practice guidance**
- Easy to understand, free to use, anonymous use website.

Evolution of NetRegs



2002 - 2012

NETREGS OVERVIEW CONTINUED

NetRegs guidance covers:

- 36 business sectors
- 12 main environmental topics
- >740 business activities

In addition we offer:

- 34 e-learning courses
- 7 online self-assessment checklists
- 35 best practice videos
- 15 printable guidance documents (for high risk activities/sectors)
- Monthly email updates



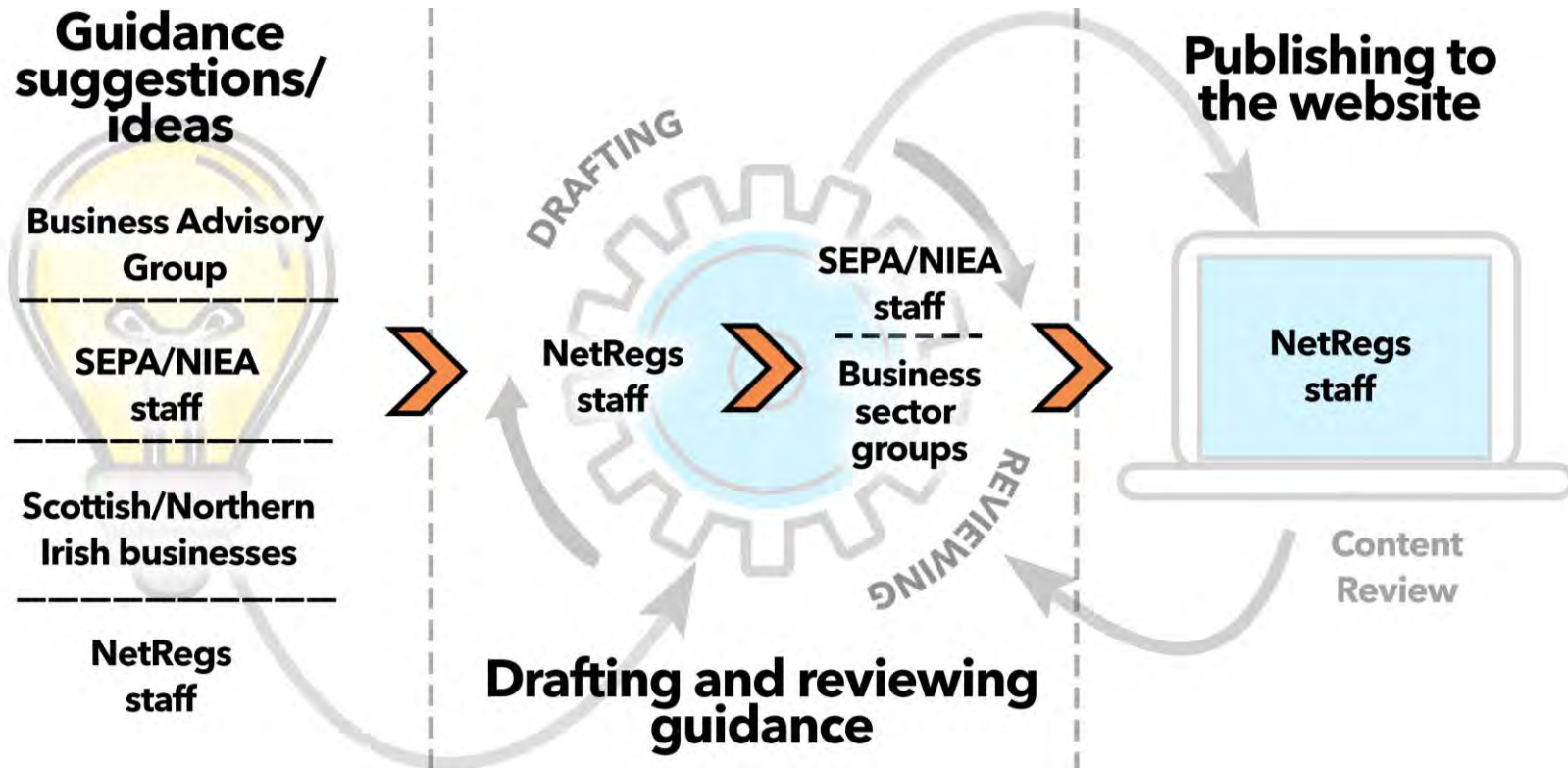
Vision

- To be the **number 1** source of environmental regulatory advice in Scotland and Northern Ireland.
- Be **accessible** for all.
- To be **trusted** and **well-respected** by users and partners.
- To be a means for Business users to **understand** environmental regulations and as a result **comply** with.
- To help businesses to recognise the benefits of **good environmental performance**.
- To support **sector improvements**.

GUIDANCE PRINCIPLES



HOW DO WE DEVELOP OUR GUIDANCE?

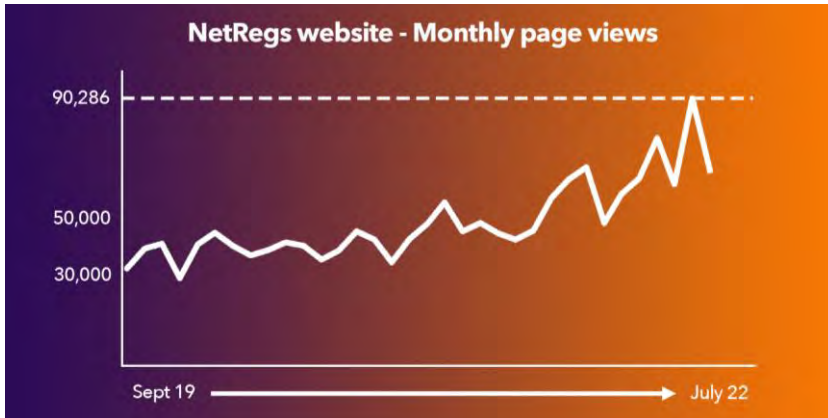


NETREGS USAGE

Statistics

Usage of the NetRegs website has been growing over the last few years.

Comparing May 2020 to May 2022, we have seen the number of pages viewed more than double, up by 131%.



On average per month (Jan 2022 - July 2022):

- **37,841** Users visit the NetRegs website
- **63,587** Pages are viewed

The most popular pages include:

- Preventing water pollution
- Preventing air pollution
- Guidance for Pollution Prevention (GPPs)
- Waste Duty of Care

NETREGS USAGE CONTINUED

Other statistics

- **6,417** subscribers to the monthly email update
- **60,592** video views on the NetRegs YouTube channel
- **2,530** registered users of the e-learning tools
- **3,911** active users of the online self-assessment tool

NetRegs estimates it is saving businesses between

£44.6M & £58.7M per year, or
£1,179 & £1,552 per business per year.

The sources of these savings are possibly due to one or more of the following benefits:

- reduced risk of prosecution or fines,
- reduced costs
- attracting new and retaining existing customers.

FEEDBACK

Feedback

“NetRegs is a fantastic resource which I find invaluable.”

NetRegs survey respondent

“We have found that using NetRegs has saved us, and our clients’ money, in terms of time and resources and has helped our business be more efficient.”

Changeworks Recycling

“Whichever business sector you are in, and whatever the environmental topic, NetRegs is a very useful and effective tool to guide any organisation towards achieving cost-effective compliance with environmental legislation.”

The Scottish Council for Development and Industry

“Very useful website, popular with some of our auditing bodies...”

NetRegs survey respondent

The NetRegs team



NetRegs

environmental regulations online

www.netregs.org.uk

The NetRegs
team
(SEPA and
NIEA)



Gillian Bruce
NetRegs Unit Manager
(SEPA)



Theresa Kearney
Principal Scientific Officer -
Regulatory Transformation
(NIEA)



Alan Parnell
Senior
Technical
Support Officer
(SEPA)



Andrew Wallace
Senior
Technical
Support Officer
(SEPA)



**Alexandra
O'Paula**
Technical
Support Officer
(SEPA)



**Catherine
McPherson**
Deputy Principal -
NetRegs Advisor
(NIEA)



Contact details

Andrew Wallace

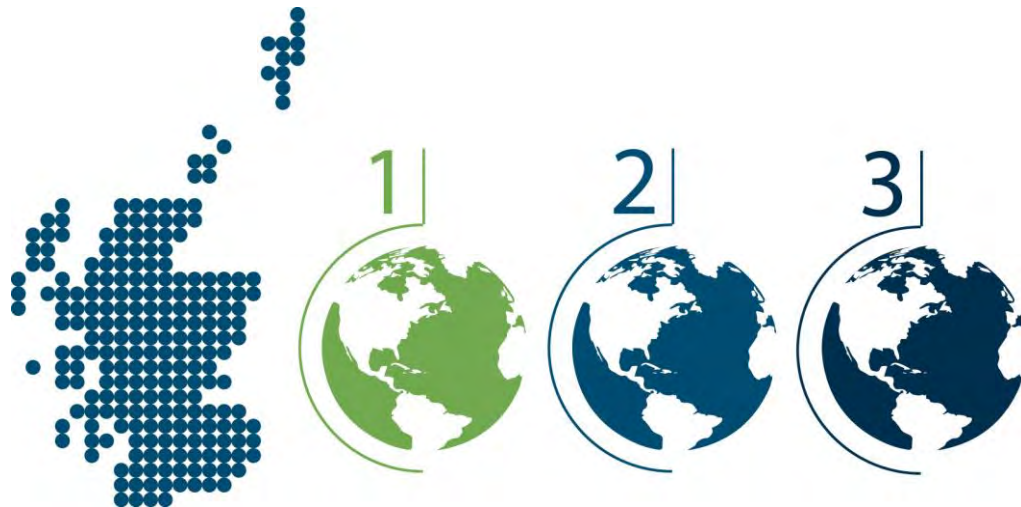
Senior Technical Support Officer

Email: andrew.wallace@sepa.org.uk

www.netregs.org.uk www.sepa.org.uk

 ScottishEnvironmentProtectionAgency

 ScottishEPA





Guiding farmers In the context of the Nitrates Directive, Flanders (2008 - 2024)

VLAAMSE
LAND
MAATSCHAPPIJ

Mini Conference Compliance Assurance, 28-29 September 2022, Gent
Sebastien Janssens, Vlaamse Landmaatschappij

Guiding farmers in the context of the Nitrates Directive

European Directive (91/676/EEC), since **1991**

concerns the **protection of water against pollution caused by nitrates** from **agricultural sources**

- surface water; ground water; estuaries, coastal and marine waters
- polluted waters, or waters at risk of pollution
- **nitrogen** (nitrogen-cycle), with links to other nutrients (P)
- drinking water, biological life (eutrophication)

designation of Nitrate Vulnerable Zones (NVZs): areas of land draining into polluted waters or waters at risk of pollution

and/or application of measures to counter (the risk of) pollution

=> Member States : establishing Manure Action Plans, to be implemented by farmers (compulsory in NVZs), and translation in legislation

Nitrates Directive

establishment of **Codes of Good Agricultural Practices, mandatory within NVZs**

- **period(s)** when nitrogen fertilizers can be applied
- **limitation** of fertilizer application (max. rate: mineral and organic)
- in line with crop needs and avoiding nutrient losses (leaching during wet season)
- maximum amount of livestock manure to be applied in areas covered by the Action Programs corresponding to 170 kg nitrogen/hectare/year
derogation (?) to use more animal manure (less chemical fertilisers), under particular conditions
- limitation of the conditions for fertilizer application:
on steeply sloping ground, frozen or snow covered ground, near water courses, ... to prevent nitrate losses through leaching/run-off
- requirement for a minimum storage capacity for livestock manure
- crop rotations, soil winter cover, and catch crops (against leaching and run-off)
- ...



Nitrates Directive

Member States **monitoring and reporting** (every four years), on:

- nitrates concentrations in groundwaters and surface waters, and eutrophication
- assessment of the impact of action program(s) on water quality and agricultural practices
- revision of NVZs and action program(s)
- estimation of future trends in water quality

Implementation Nitrates Directive, Flanders

in Flanders, Nitrates Directive

Manure Action Plan (MAP): since 1991, now MAP6 (2019 - 2022)

translation into legislation: **Mestdecreet** (“Manure Decree”):

Nitrates Directive (NO_3^-)

also, NEC Directive (NH_3 , NO_x , VOCs, SO_2)

Guidance in the context of the Nitrates Directive, Flanders

Counselling - Guiding farmers

organised by the Flemish government

since 2007, funded by the Ministry of Environment

part of flanking policy: additional to legislation, supporting the goals

sequence of approaches (“carried-out” → “(only) funded” → “steered”)

Bedrijfsadvies (**BAS**) : 2007 - 2017

“Farm consultancy and sensitizing” (“Business Advice Service”)

Coördinatiecentrum voor voorlichting en begeleiding duurzame bemesting (**CVBB**)

2012 - 2020

“Coordination center for education and guidance on sustainable fertilization”

Begeleiding Betere Bodem en Waterkwaliteit (**B3W**)

“Counselling Service towards a Better Soil and Water quality”

2022 - 2024



Guidance in the context of the Nitrates Directive, Flanders

additional to:

other guidance / advice / technical and administrative support,
by private, semi-public, or public players

- CAP-related, through the Ministry of Agriculture and Fisheries

 KRATOS-advice: 13 modules / units

 for instance: soil (erosion, fertility, compaction)

 also climate, water, soil, biodiversity, ...

 EIP: European Innovation Program : Operational Groups

- laboratories/institutions : fertilisation-, soil-, crop-advice

- academic/technical research centres for agriculture

- fruit and vegetable markets / auction rooms / food industry

- sellers of fertilizers and phyto-products

- accounting offices

- ...



Guidance, BAS

BAS “*farm consultancy and sensitizing*”, **2007 - 2017**

set up and executed by the VLM,

Flemish administration (Ministry of Environment)

VLM responsible for: implementation and control of the “manure-legislation”
policy monitoring and development

support: explanation of **legislation** and **administrative obligations**

sensitising and advising on **technical issues**

how to avoid / reduce nutrient losses ?

4 principles (“Rs”) while applying the fertilizer (mainly N and P)

Right **time**

Right **place** (in row, in strip, ...)

Right **type** (mineral / organic)

Right **rate**

N-dynamics in soil

mineralisation-processes of fertilizers/soil organic matter/crop residues/pre-crops/catch-crops, N-uptake, risks of losses

split fertilisation (starter fertilisation and top-dressing),
fertilisation advice,

importance of soil quality (pH, structure, SOM, rotation, ...)



Guidance, BAS

For free

Group guidance, *mostly* in the context of administrative/legal obligations

how to use a digital application for declaration requirements

how to make a (mandatory) fertilisation planning

(also in relation with technical issues)

half day, farmers need to sign up

Individual guidance

on administrative/legal obligations (see above), more emphasis on agricultural and environmental technical issues

at the farmer's request

mandatory counseling (in case of high residual nitrates, measured in Oct/Nov)

preparation of the case (with farm-data the VLM has), in depth conversation on the farm, written report with findings and with recommendations ("*audit*"), (very) limited follow-up

Guidance, BAS

digital application to make a fertilisation planning (*when, what, how much*)

information sheets (legal / technical)

development of a fertilisation tool (free “Demeter-tool”)

insight (*why*) on the (simplified) N-cyclus, SOM, P-accumulation calculations, after input of farm-data:

(guiding) N-fertilisation advice

evolution of SOM: by (changes in) the crop rotation, use of manure, ...
 increasing of decreasing P-content in the soil

The collage features several sheets from the 'Bedrijfsadvies is er voor u!' series:

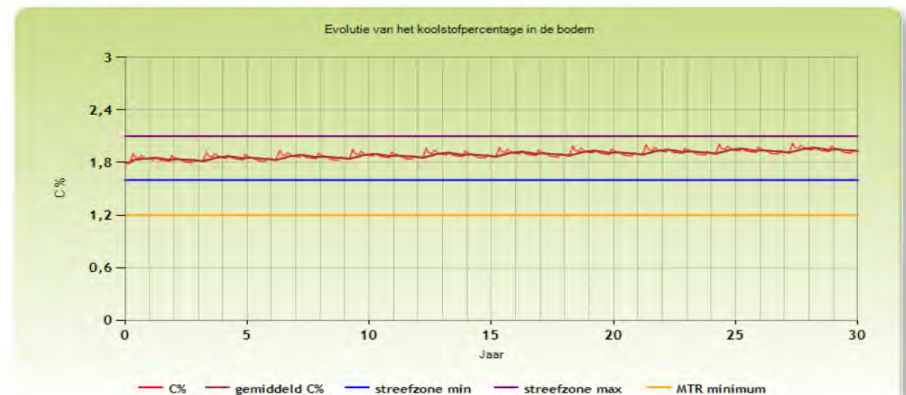
- TEELTKEUZE EN TEELTROTATIE**: Discusses crop rotation benefits and provides a planning diagram (Fig 3).
- Fosfor (P)**: Explains phosphorus availability and its role in soil structure.
- ORGANISCHE STOF IN DE BODEM**: Contains sections on 'Wat is organische stof?', 'Wat is de rol van organische stof in een optimale landbouwproductie?', and 'Hoe verloopt mineralisatie in de bodem?' with a diagram of the organic matter cycle.

Rotatie "fast1"

Jaar	Teelten en groenbedekkers	Toedieningen organisch materiaal
Jaar 1 (2016)	gele mosterd ingewerkt in februari bloemkolen, begin teelt in april en einde in juli	35 ton/ha runderstalmest in april
Jaar 2 (2017)	suikerbieten, begin teelt in maart en einde in oktober , oogstresten ingewerkt	35 ton/ha runderdrijfmest in maart
Jaar 3 (2018)	aardappelen, begin teelt in april en einde in september	

[Wijzig deze rotatie](#)

Evolutie van het percentage organische koolstof in de bodem



Guidance, CVBB

CVBB “*Coordination center for education and guidance on sustainable fertilization*” **2012 - 2020**

new non-profit structure, as flanking policy in response to MAP4 (continued in MAP5)

set up by farmer federations and Flemish provinces

carried out by provincial (regional) technical and research centres for agriculture (10), with steering by a coordinator

funded by Ministry of Environment, through the VLM as paying agency

administrations (among them: VLM and Department for Agriculture) had a (small) consultative role

education and guidance on sustainable fertilization, through

1. “water quality groups”:

area-focused, on river (sub-)catchment level

farmers and counsellors together, often on the field

investigating the origin of poor water quality (NO_3^- ; “red points”)

(very) comprehensive water-sampling

detecting rising nitrate-concentrations: when and where (streamlets), and searching for solutions



Guidance, CVBB

2. “intensive approach”:

area-focused, with the goal to reduce nutrient losses
(eliminating “red points”)

focus on farmers with nitrate sensitive crops: sensitizing through soil
sampling (spring and autumn – before/after) and guiding through N-advice
often a pluri-annual approach

3. “individual guidance”:

first open to all farmers,

later on: only for farmers with poorer environmental results
(=high nitrate residues) as monitored by the VLM

no (real) obligation for the farmer to step in

guidance package to be chosen by the farmer: a combination of

1 or more soil samplings

general and specific information provision,

feed-back on the nitrate residues

time scale: 1 year

cost partly to be paid by farmer :

50 euro + VAT, on a package worth 350 euro

Guidance, CVBB

4. “communication”

web-site, MAP-man-campaign with tricks and tips
support by the farmers organisations and their press-channels

Also:

deliberate independant attitude towards administrations (for instance VLM)
motivated as necessary to gain farmers’ confidence, to attain open discussion
with the farmers, and results on the field

initial point of vue, partly reconsidered from 2019 onwards:
end of BAS at the end of 2017
VLM provides list of farmers to be contacted

(almost) no communication on individual / specific farmers practices on the
field, and/or on the detection of (eventual) non complying conducts

general reporting of findings

general reporting of activities



Guidance, B3W

B3W “*Counselling Service towards a Better Soil and Water quality*”, **2021 - 2024**

part of the flanking policy MAP6, in replacement of CVBB

public contract, with the VLM as commissioning party

funded by the Ministry of Environment

contractor is multidisciplinary team: consortium of 13 partners (technical and research centres for agriculture ; more weight of research centres), with a project leader

contract for maximum 4 years, each year to be reconducted

close follow-up by and reporting to the VLM: content, format activities, budget

external advisory committee (administrations, farmers organisations)

annual work program (determines content, activities)

focus on water quality (reducing nutrient losses before, during and after the crop)

extra focus on soil (as a pre-condition for sustainable crop production and nutrient uptake)

Guidance, B3W

B3W= GOOD PRACTICES FOCUSED ON IMPROVING WATER AND SOIL QUALITY

goal is the uptake on the farms of good/sustainable practices and techniques:
existing and proven effectivity; also (more) innovative ones

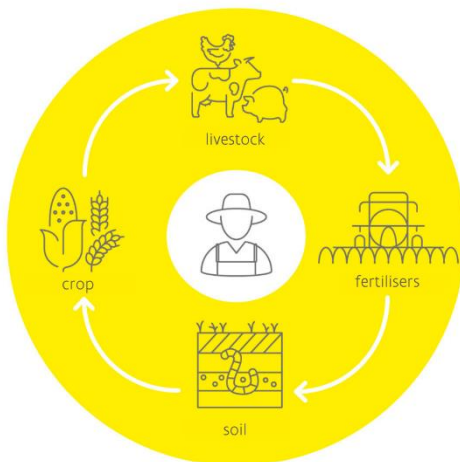
peer to peer learning between farmers about the implementation and practical
experience of appropriate techniques, “learning in groups”
counselling **for** farmers - counselling **by** farmers

hub for information exchange : back-office and front office

pursuing a global approach

important role farmers, and their knowledge and field experiences

counsellors: “technicians” but also “coaches” towards better
techniques/practices



Guidance, B3W

Field activities (*front-office*)

1. “thematic exchange moments”

demonstration of a sustainable/innovative technique (on farm)

farmers’ experience is the key factor (“*ambassador*”) :

“how to do it”: findings, points of focus, tricks and tips

30 persons max, to improve discussion and interaction

for example: fractionating N-fertilisation, in row fertilisation, use soil scan,
correct use of N-fertilisation advice, ...

2. “focus groups”

exchange knowledge on (more innovative) techniques

+/- 8 farmers, coming together 6 times in 2 years

small-scale tests on **own farm** to gain experience on existing / innovative technique
=> detect bottlenecks, points of attention, (extra) benefits

for example: cultivation of protein-rich crops, fertilisation techniques in potatoes and
vegetables, fertilisation in pear (fractionating), ...



Guidance, B3W

3. individual guidance

focus on farmers who are more difficult to reach (at (field-)events)

and who are often a bit behind on innovative/ 'right' techniques

detecting areas of improvement in nutrient- and soil management (own farm)

encouraging the uptake of better techniques, and follow up

general and specific information providing

list of farmers selected by Flemish Land Agency (VLM)

farmer must be intrinsically motivated

by-product: gaining more general information on (the average) status of nutrient and soil management

basic work points, often detected:

fertilisation dose at sowing/planting too high

soil organic matter content too low

pH too low

too late seeding of catch crops

sub-optimal use of animal manure (due to e.g. too little storage capacity on farm)



Guidance, B3W



Guidance, B3W

Communication (*front office + back office*)

key factor in reaching a broad audience (among stakeholders, first place farmers)

different communication channels

online platform (B3W-website), Facebook, B3W-newsletter, mailings

communication channels of project partners (13)

cooperation with third parties

(agricultural press, agricultural organisations, crop advisors, ...)

general information, findings of the field-activities, seasonal relevant information,
ad hoc messages

different communication formats

infosheets

infographics

testimonials from farmers

digital posts

in depth articles

agricultural fairs



Guidance, B3W

‘Een goed afgestelde kunstmeststrooier kan een groot verschil betekenen in de opbrengst van je gewas. Ook de huidige kunstmestprijzen en de strenge bestedingsnormen zorgen ervoor dat het precies werpen van de korrels steeds belangrijker wordt.’

MAARTEN PAEPEN
LOONWERKER
PAEPEN WALTER AGRICULTURE



B3W

Begelidingsdienst voor betere bodem en waterkwaliteit

B3W Begelidingsdienst voor betere bodem en waterkwaliteit

GRAS ONDERZAAMEN BIJ MAÏS: ZO DOE JE HET!

Big mes onderzaien krijgen maïs en gras zijgeel of katoenliet te groeien. Het kurt het gras samen met de maïs restanten of het na opbrengste van de oogstperiode, van 10 tot 12 augustus tot 15 september. Daarvoor kan het gras zacht na de oogst samen verder uitbreiden. Dit proces wordt ook aangeduid met 'hoer ploeg' of 'hoer'.

Voordelen van onderzaien

- Nut onderzaien van gras (1) maakt begrazing veiliger voor de koeien
- een lager droge stofgehalte
- een lagere voerwaarde
- een betere bodemstructuur
- een snellere herstel van de bodem

Tips voor een geslaagde onderzaai

- voorbereiden van gras (1) met behulp van een hoerploeg
- voorbereiden van gras (2) met behulp van een hoerploeg
- voorbereiden van gras (3) met behulp van een hoerploeg
- voorbereiden van gras (4) met behulp van een hoerploeg
- voorbereiden van gras (5) met behulp van een hoerploeg
- voorbereiden van gras (6) met behulp van een hoerploeg
- voorbereiden van gras (7) met behulp van een hoerploeg
- voorbereiden van gras (8) met behulp van een hoerploeg
- voorbereiden van gras (9) met behulp van een hoerploeg
- voorbereiden van gras (10) met behulp van een hoerploeg

Over B3W
B3W is een adviesdienst die u helpt bij het nemen van beslissingen over het gebruik van kunstmest op uw landbouwbedrijf. Het is een gratis dienst die u kunt vinden op www.b3w.vlaanderen.be.

B3W.VLAANDEREN.BE

B3W adviseert Resultaten van bemesting volgens advies en gefractioneerd bemesten in aardappelen in 2021

Uit een B3W-advies uit de afgelopen jaren blijkt dat gefractioneerd bemesten voor een betere bodem en waterkwaliteit zorgt. Dit wordt onderzocht door een onderzoek van de Vlaamse Landmaatschappij (Vlaamse Landbouwersbond).

Wat was je bemesting?

B3W adviseert om te bemesten met 100 kg N/ha en 100 kg P/ha. Dit kan worden gedaan met een gefractioneerd bemestingsplan.

Over B3W

B3W is een adviesdienst die u helpt bij het nemen van beslissingen over het gebruik van kunstmest op uw landbouwbedrijf. Het is een gratis dienst die u kunt vinden op www.b3w.vlaanderen.be.

B3W Bodemverdichting

Verdichting treedt op als de bodem samengebruikt en vervoerd wordt, dit veelal onder invloed van menselijke activiteiten. Het gevolg is dat de bodem een lagere hoeveelheid porieën bevat die zich kunnen vullen met lucht of water.

Wat is bodemverdichting?

Door steeds meer droge en natte periodes worden de grondlagen aktiever.

Wat is bodemverdichting?

- Door steeds meer droge en natte periodes worden de grondlagen aktiever.
- Door steeds meer droge en natte periodes worden de grondlagen aktiever.

Bodemverdichting voorkomen

- Optimaliseren de grond
- Breiden kanalen
- Bekken van organisch materiaal
- Luchtbreken

Bodemverdichting behandelen

- Droog werken
- Droogwerken

B3W.vlaanderen

Favorieten · 25 november om 13:00

Tips rond bemesting bij aardappelteelt?

Neem een kijkje op ons platform: <https://b3w.vlaanderen.be/kenn.../aardappelen/bemestingstips> of bezoek ons dit weekend op Interpom-beurs!

#b3w #interpom #patatjes #bemesting

Efficiënt bemesten

- Verlaag de basisbemesting
- en bemest bij wanneer nodig

<https://b3w.vlaanderen.be>

B3W
Begelidingsdienst voor betere bodem en waterkwaliteit

Guidance, B3W

Information preparation (*back office*)

compiling and preparing scientific and technical information

support for the advisors in their field-activities (*internal data-base*)

support for the farmers (*external data-base*)

“mine” of information to support communication

broad accessibility to the information through the B3W-platform

importance of

validated information

identical information (identical “messages”)

right format for effective information dissemination

Guidance, Flanders, an overview

overview: sequence of approaches

“carried-out” → “(only) funded” → “steered” (from government’s / authorities point of view)

Farm consultancy and sensitizing (BAS, 2007): **establishment of a new approach**

towards the farmers : mix administrative, legal, technical
support mostly positively received
in some cases, build-up of a (long-term) relation

new and interesting challenge for the VLM-employees, as advisor
importance of informing /advising
counselling activities clearly separated from the controlling activities of VLM

at the end of 2017 : (sad) ending of BAS

budgetary savings round => (re-)centering public agencies on their main
tasks

- legal obligations + enhanced controls (administrative and on the field)

- in the meanwhile: the establishment of CVBB-counselling



Guidance, an overview

Coordination center for education and guidance on sustainable fertilization
(CVBB, 2012 – 2020)

establishment of a broader approach

larger involvement of the farmers, and local stakeholders (area-oriented operations)

involvement of technical centres : technical support (soil and water analysis / fertilisation advise)

broader operational activities

increased insight in challenges (origins, reasons, remedies/remedying)

Counselling Service towards a Better Soil and Water quality” (B3W, 2022 – 2024)

stronger or new emphasises on:

(existing) solutions: effective uptake of practices and techniques on the farm

peer-to-peer learning, and bottom-up approach / farmers’ role

communication and appropriate formats



Guidance, lessons learned

lessons learned : sequence of approaches

still a lot of work to do, improvements can be made on the individual farms

importance of (technical) counselling, “inside” the legal framework

the (positive and fair) approach: be clear about current situation, challenges, existing and coming solutions (techniques / practices)

stimulate self-questioning of current practices

role and responsibility of the farmers (and other stakeholders)

do stimulate and support efforts to do better

if necessary, ask or urge them to do better

right and precise practical information, concerning the farm(ers) and useful for them

diversity of activities (on the field) to reach different types of farmers

“ fore-runners”, and “those (far) behind”



Guidance, lessons learned

(broad) communication (diverse and right formats)

skills inside the counselling service / of the counsellors

technical, social and communicative

open and cooperative mind, but setting the goals and promoting/achieving the goals

understanding / detecting the reasons of resistance, but (try to) work them away

work on the right topics (big ones, easy wins, ...), prioritize the topics

think at the start about the (necessary) interaction and catalysing effects between field activities / communication / information providing

raise and increase the (basic) insights

make the farmers understand things

do not overwhelm farmers with unnecessary information

(right balance: (necessary) general information and very practical information)

work closely together in the service and align with each other

(strategy, operations, communication)



Guidance, lessons learned

(also) self-questioning the way of operating the counselling service:

that is: constantly improving

how to reach more/better “the left behinds” and “the less interesteds”

subsidized counselling sets the tone, but is not the only player in the scenery
make contacts, work together, search for synergies with stakeholders

Guidance, B3W

sebastien.janssens@vlm.be (VLM)

saartje.degelin@b3w.vlaanderen.be (project leader B3W)

for more information, further discussion, possible ways of collaboration and support ...



Thank you very much

**VLAAMSE
LAND
MAATSCHAPPIJ**



Providing Transparency on Compliance and Enforcement Information

DRAFT - SEPTEMBER 28, 2022

MICHAEL BARRETTE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE

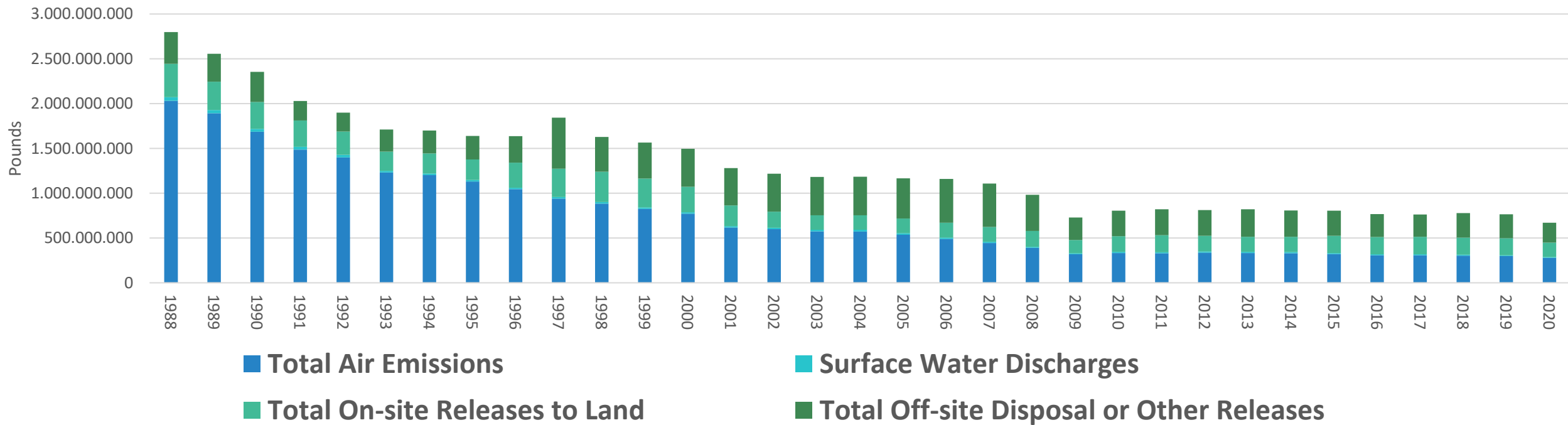
Presentation Overview

- Overview of Transparency as a Motivator for Industry Performance
- Background/History on United States Environmental Protection Agency (US EPA)'s Release of Enforcement and Compliance History Online (ECHO)
 - Purpose and Goals
 - Barriers and Challenges For Releasing Public Data
- Content and Functionality of Public Data Release within ECHO
- Trends, Use Stats and Key Users
- Outcomes of Public Data Release
- Recent Developments and Coming Innovations

Providing Transparent Information – the US EPA Experience

US EPA used a non-regulatory approach - self-reported pollution releases (Toxics Release Inventory - TRI)

TRI Trend Report for Facilities Using 1988 Core Chemicals



Transparency and Compliance

- US EPA's Office of Enforcement and Compliance Assurance
 - followed-up TRI success with its own data release.
- Prepared for public release between 1996 and 2002.
- Enforcement and Compliance History Online (ECHO)
 - Provide public transparency.

What is ECHO?

Enforcement and Compliance History Online - <https://echo.epa.gov>

US EPA's public website: compliance information about regulated facilities

- How they are regulated
- When they were inspected
- Whether violations of environmental regulations were found
- Whether enforcement action was taken

Dashboards: overall enforcement and compliance status trends, and some datasets for download

Integration of data: major US EPA information systems for public use

ECHO Gov: companion site used for program management

- For authenticated US, State and local government employees.

Goals of ECHO

- Single point of access:
 - Public and businesses information on environmental compliance
- Informed decision making on environmental issues
 - Citizen and community
- State and local government tool
 - Evaluation of compliance problems
 - Determining priorities
- Monitoring compliance

Transparency and Program Management

Serves as a national registry for compliance and enforcement information

- Review of reports and dashboards, create customized reports and datasets, and download all underlying data.
- Transparency provides public accountability.
- Reduces administrative Freedom of Information Act (FOIA) workload.

ECHO.gov promotes focus: compliance and enforcement program management.

- EPA and states can only inspect a small percentage of regulated facilities:
 - ECHO facilitates identification of the highest risk facilities with emissions, demographic, and ambient conditions data.
- Supports pre-inspection, multimedia review of facility compliance and enforcement records with pollutant release data.
- Hub for EPA oversight of state compliance and enforcement programs

ECHO Earlier Years – Key Challenges

- Challenge of Integration of data:
 - Each program has its own data system.
- Inconsistent data management and metadata management
- Industry concerns:
 - Data quality
- Feedback loop is critical
 - Erroneous data could be flagged and corrected promptly
- Data quality reviews need to be robust

ECHO Keys To Success

- Initial Launch
 - Network of data stewards/data owners responsible for curating data
 - Online error reporting:
 - responsive to possible data errors routed to US EPA data stewards
 - Integrate feature: citizen tips and complaints
- Improvements
 - Customer focused: developing new features
 - Evidence based government performance:
 - Provide high-level statistics and trend views
 - Develop visualization and mobile-responsive design

Key Development Milestones

1990 – US EPA develops integrated compliance data system after Exxon Valdez spill shows that US EPA cannot pull Exxon’s corporate profile.

1996 – The President’s White House Reinvention Project requires US EPA to release compliance data for 5 pilot industries.

1998 – US EPA releases reports for 5 industries to meet White House goal.

2002 – US EPA releases all compliance and enforcement records under the ECHO website.

2008 – ECHO surpasses 1 million queries in a year for the first time.

2011 – White House calls on other government agencies to follow ECHO transparency model.

2022 – ECHO adds email alert notifications.

Customers and Stakeholders

- Citizen groups, non-governmental organizations, reporters, regulated entities, academic researchers, US EPA and state/local/tribal environmental agencies, other federal government agencies, green investing groups and more.
- Mobile device users:
 - report potential environmental violation with photos and videos.
- States and US EPA collaborate on the ECHO Governance Team.
- Network of more 200 US EPA and state/local data stewards:
 - data quality, participates in annual verification process, and responds to error notifications.
- US EPA program offices: ECHO assists with regulatory development.
- ECHO data in US EPA's visualization environment used Agency-wide.

- Quick Search
- Search Options
- Analyze Trends
- Find EPA Cases
- Data Services
- Help
- News

Search Options

ECHO provides a variety of ways to identify facilities of interest. Search for facilities by media program using the links below or use media-specific tools to conduct additional analyses.

Cross Program

- [All Media Programs Facility Search](#)
- [Map Any Facilities with Enforcement and Compliance Data](#)
- [Corporate Compliance Screener](#) ★
- [ECHO Notify](#) ★

Air (CAA)

- [Air Facility Search](#)
- [Map Air Facilities](#)

Hazardous Waste (RCRA)

- [Hazardous Waste Facility Search](#)
- [Map Hazardous Waste Facilities](#)

Wastewater/Stormwater/Biosolids (CWA)

- [Wastewater/Stormwater/Biosolids Facility Search](#)
- NPDES Program Areas Facility Searches
 - [Biosolids](#)
 - [Biosolids Annual Report](#)
 - [Industrial Stormwater](#)
- [Map Water Facilities](#)
- [Water Pollutant Loading Tool](#) ★
- [NPDES DMR Non-Receipt Status Search](#)

★ Popular Feature

Drinking Water (SDWA)

- [Drinking Water System Search](#)

Analyze Trends

ECHO provides many features to a variety to explore compliance and enforcement data. Use the links below to display trends through dashboards, maps, and charts.

Track Performance

- EPA/State Dashboards
 - [Air / Wastewater / Drinking Water / Hazardous Waste / Pesticide](#)
- [EPA/State Comparative Maps](#)
- [NPDES DMR Non-Receipt Status Search](#)
- [State Review Framework \(SRF\)](#)
- [SRF Recommendations](#)
- [Archived Tools](#)

Data Visualization

- [Data Visualization Gallery](#) ★
- [NPDES eRule Dashboards](#)

Pollution Analysis

- [Water Pollutant Loading Tool](#) ★

★ Popular Feature

- ECHO includes 35 applications.
- ECHO tables also support 18 data visualization tools (17 Qlik, 1 GeoPlatform), of which ECHO team owns 9.

ECHO Navigation Guide

- Perform a search to locate regulated facilities near a specific address, city, state, and/or zip code
- Perform a search to locate regulated facilities by facility name or ID



Quick Search



Search Options

- Search for facilities by media program – with a focus on:
 - Clean Air Act (CAA)
 - Clean Water Act (CWA)
 - Resource Conservation and Recovery Act (RCRA)
 - Safe Drinking Water Act (SDWA)
- Filter results by location, facility or system characteristics, enforcement and compliance activity, or pollutant
- View facilities on a map or data table
- Facility reports display 3 years of violation data and 5 years of compliance monitoring and enforcement data

- Display trends in compliance and enforcement data through dashboards, maps, and charts
- Analyze Discharge Monitoring Report (DMR) data
- Use tools to analyze pollution sources



Analyze Trends



Find EPA Cases

- Search for EPA enforcement cases by case or docket number, environmental statute, date, company name, or facility locations
- View EPA case status, milestones, and penalties

- Download national data sets comprising more than 15+ years of compliance monitoring and enforcement data
- Access ECHO web services
- Access ECHO map services



Data Services



Help

- View 5-10 minute video training tutorials
- Register for live webinars
- Access documentation to better understand results
- Learn about data available in ECHO and weekly data refreshes
- Read Frequently Asked Questions
- Review the ECHO Tool Guide

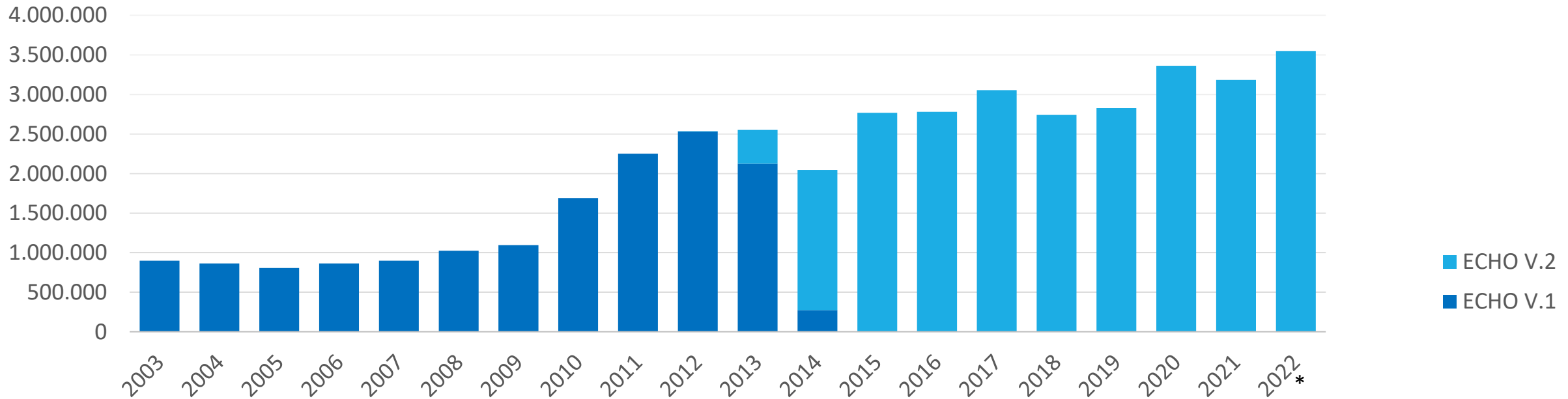
- Read about the latest ECHO News
- Join the ECHO Listserv



News

Use of ECHO is Growing Over Time

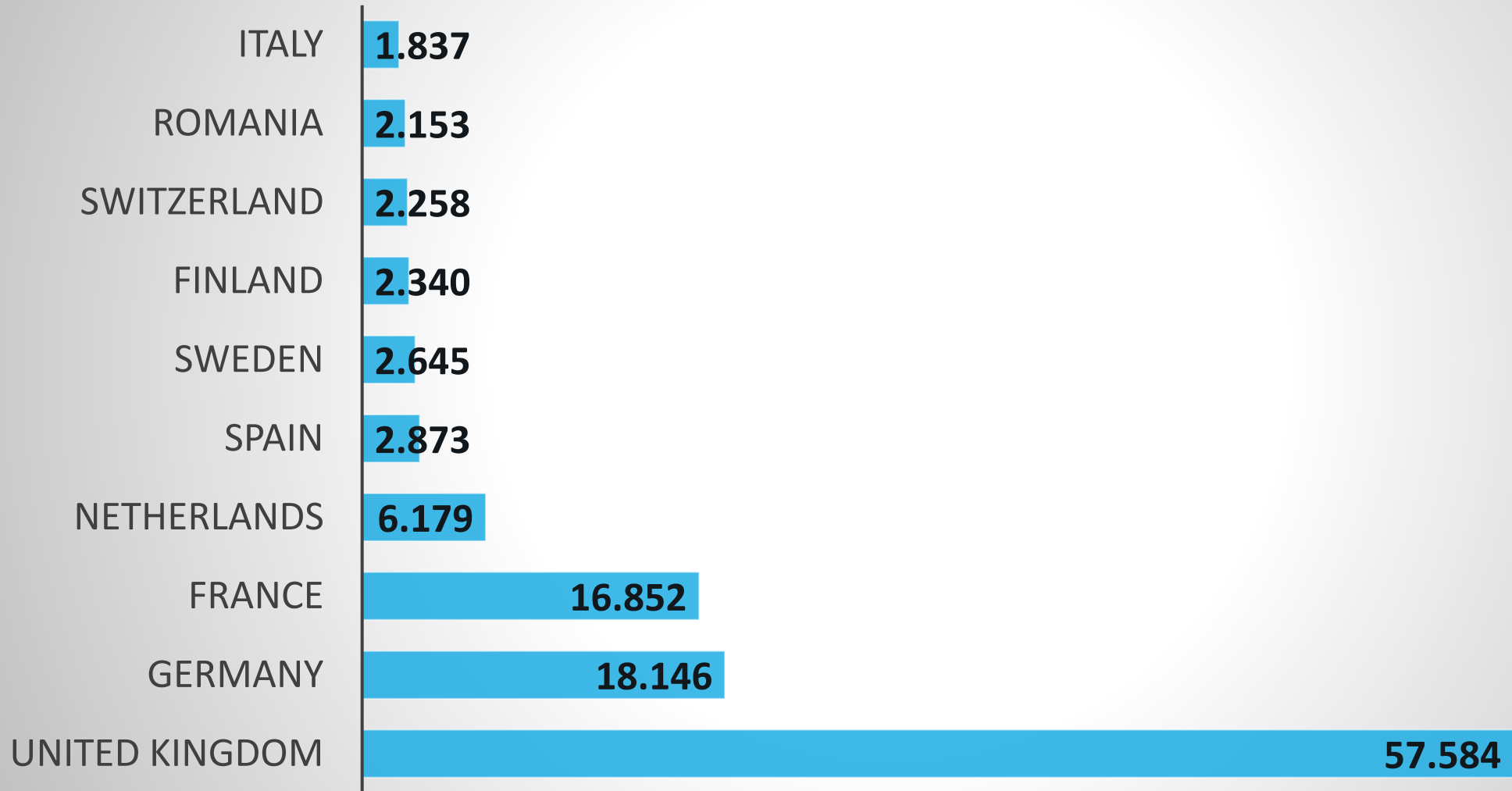
PAGEVIEWS BY FISCAL YEAR



* FY2022 is incomplete

NOTES: Usage includes public and government. ECHO V.1 (legacy mainframe) use measured in queries; modernized ECHO V.2 use measured in page views. *Limited functionality in FY2014. Legacy Water Pollutant Loading Tool retired January 2018.*

ECHO - European Pageviews: 2020 to present



ECHO Content

Compliance history for more than 1,200,000 US EPA-regulated facilities

- Three-year compliance status and five-year inspection and enforcement history
- US EPA and state, local, and tribal environmental agency data for:
 - Air Regulations - Clean Air Act stationary sources
 - Water Discharge Regulations - Clean Water Act permitted dischargers
 - Hazardous Waste Regulations - Resource Conservation and Recovery Act handlers
 - Public Water Systems Regulations - Safe Drinking Water Act reporters

US EPA data for other statutes like Emergency Planning and Community Right-to-Know Act (EPCRA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and Toxic Substances Control Act (TSCA):

- Inspections
- Enforcement Action Details

ECHO Influencing Corporate Behavior

- Loss of business: Hazardous waste concerns
- Investor Concern
- Job Performance
 - Employee job standards: method for keeping “clean record”
- Insurance and borrowing: impact of poor compliance records
- Green Marketing
- Negative publicity/corporate image
 - Media, environmental or community

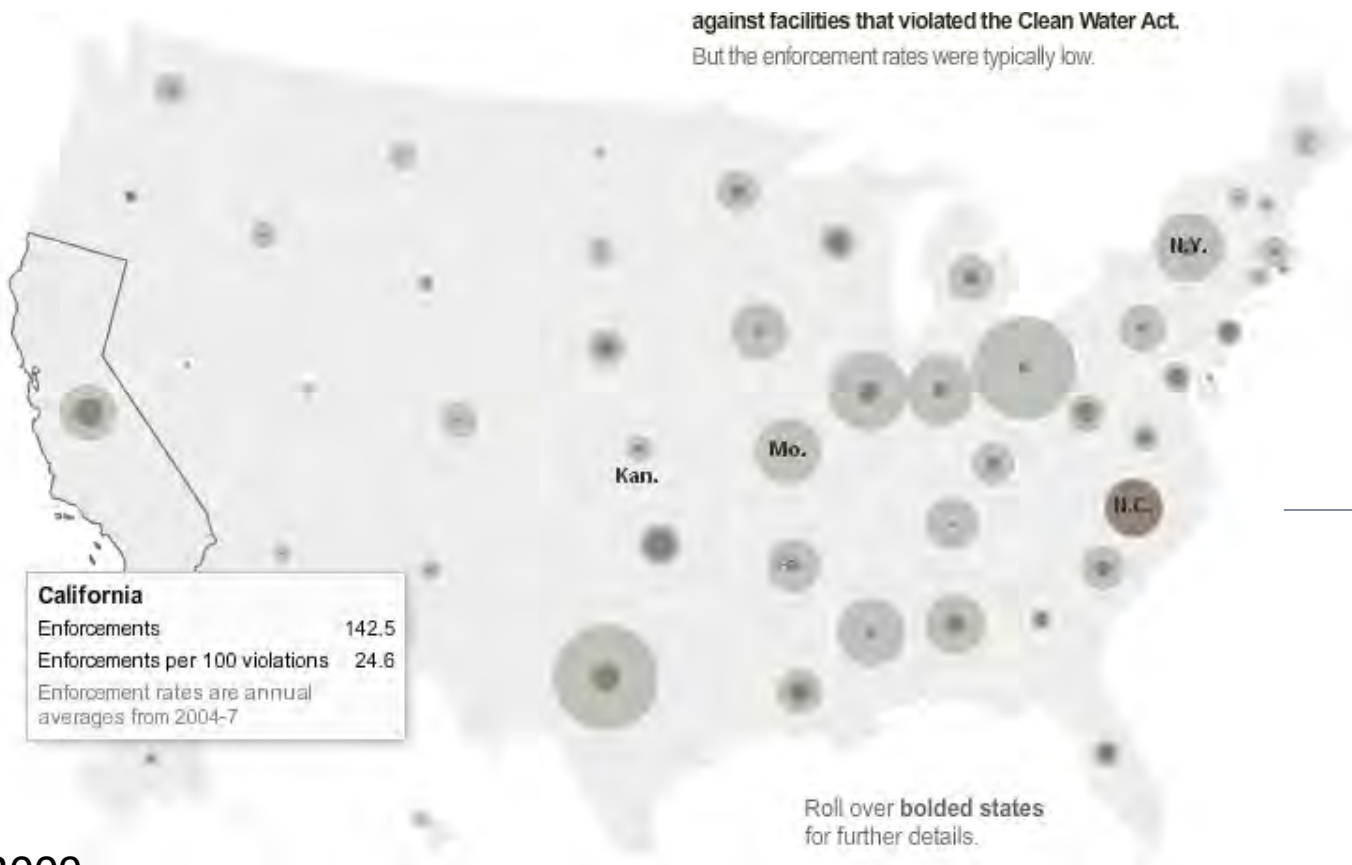
Public Uses That Influence Enforcement

- Citizen participation in enforcement “citizen suits”
- Reporting environmental violations
 - Tips/complaints/whistleblowing
 - Government scrutiny
- Environmental Justice
- Spotlight environmental problems
 - Data mining: Environmental groups, academics, media

Go

Clean Water Act Violations: The Enforcement Record

The New York Times surveyed violations of the Clean Water Act in every state. The survey found that in many states, more than 50 percent of regulated facilities violated the Clean Water Act, but enforcement actions against polluters were infrequent. | [Related Article »](#)



Example of Public Data Use NY Times

Toxic Waters Series - Evaluation of Clean Water Act Enforcement by State

Published Sept 13, 2009

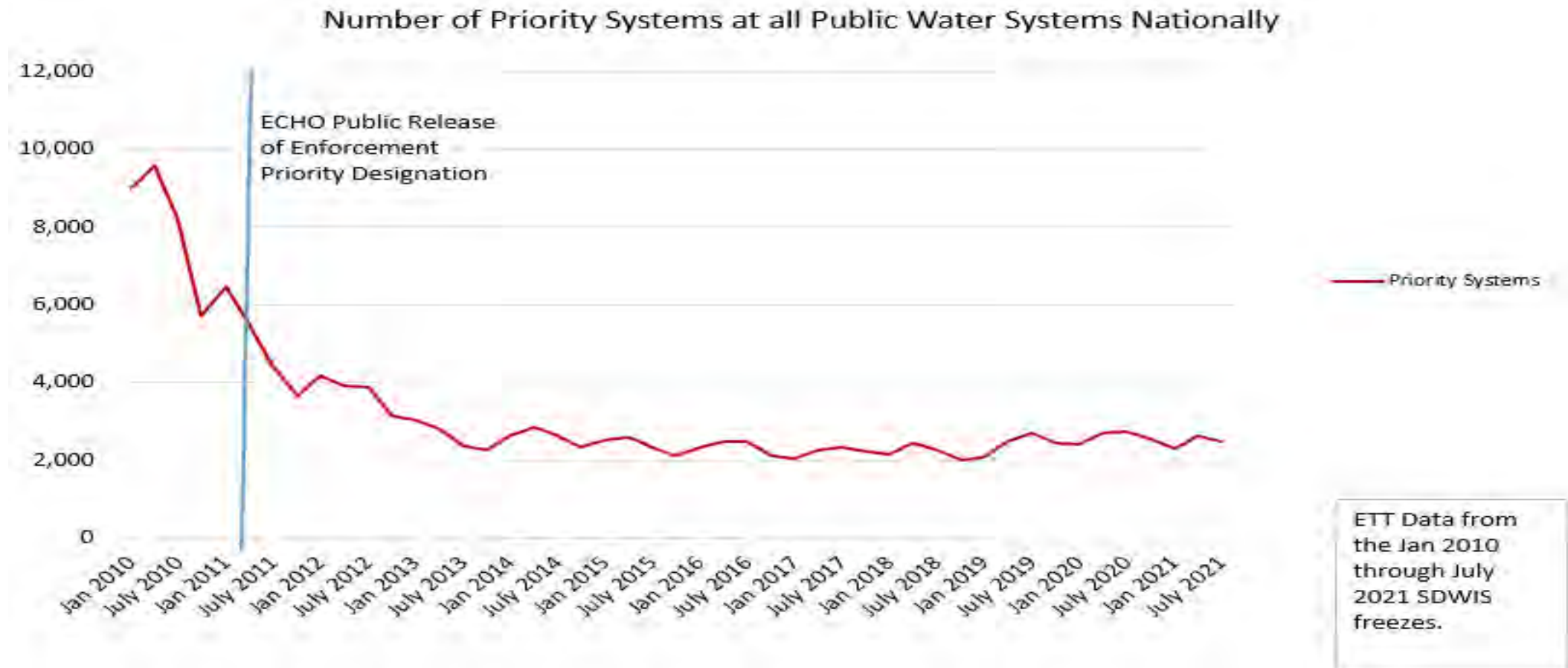
ECHO Influencing Enforcement Programs

- Enforcement Cop on the Beat:
 - Statistics: Trends on inspections and enforcement actions
 - Increased inspection results in more violations
- Supports Inquiries to Compliance and Enforcement questions:
 - Are inspectors identifying compliance problems?
 - Are enforcement and penalties providing adequate deterrence?
 - Are Agencies taking appropriate actions to recover economic benefit of violations?
 - Are the penalties to regulated entities enough to ensure future compliance?

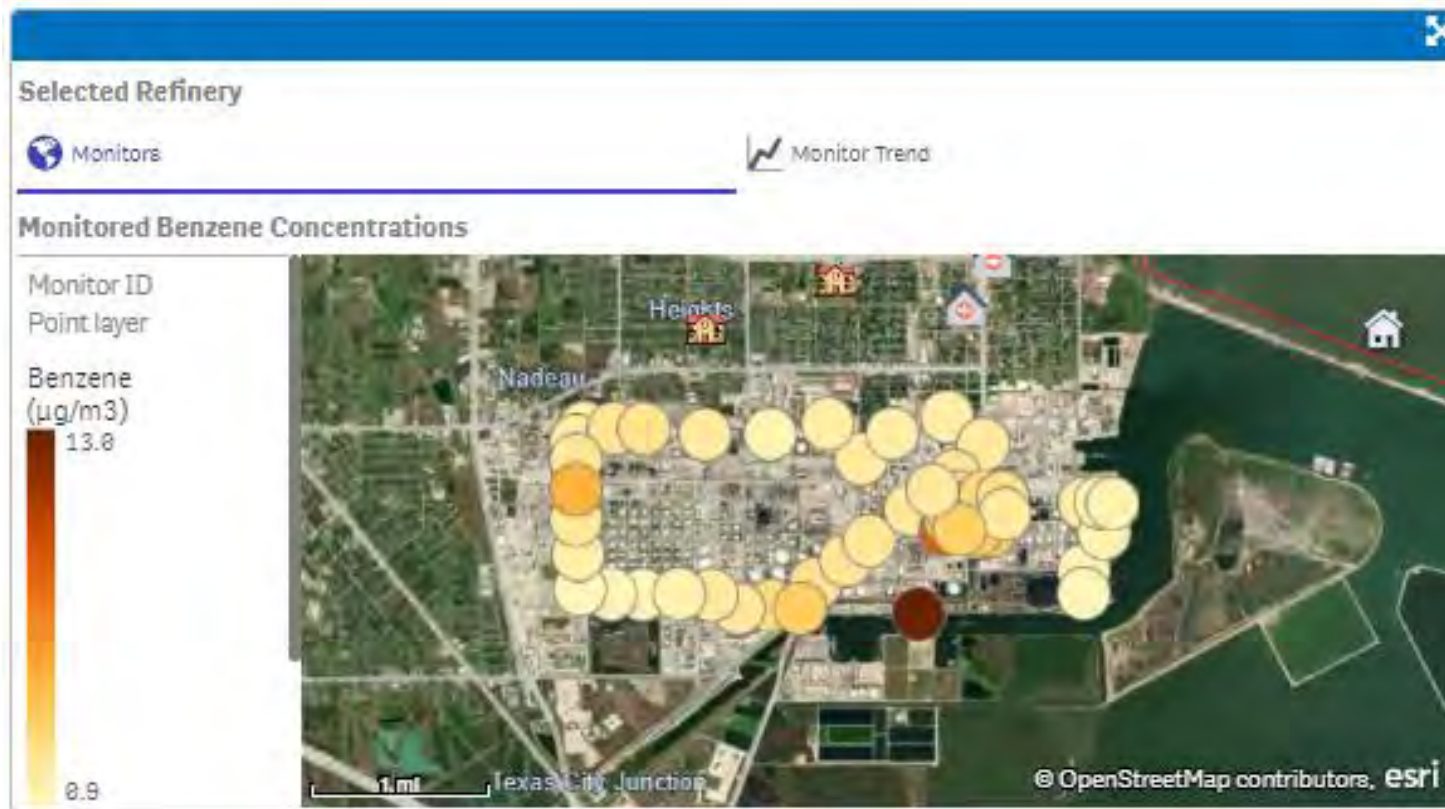
Innovations: Influence Compliance Behavior

- Ranking Facilities On Compliance Records
 - Reduction in violations
 - US EPA's Drinking Water Program uses rankings of public water systems.
- Email Alerts from ECHO Notify
 - For local communities when a violation happens.
- Connecting Hazardous Emissions with Community Data –
 - Benzene Fenceline Monitoring Tool: shows amounts of release and nearby schools and hospitals.
- Environmental Justice
 - ECHO provides maps showing environmental justice concerns.

Examples of Behavior Change – Scoring Systems



Empowering Communities with Benzene Monitoring Data Near Refinery Fenceline



- In August 2022, EPA published an interactive dashboard letting communities see nearby benzene releases that are reported every 2 weeks.
- [Link](#)

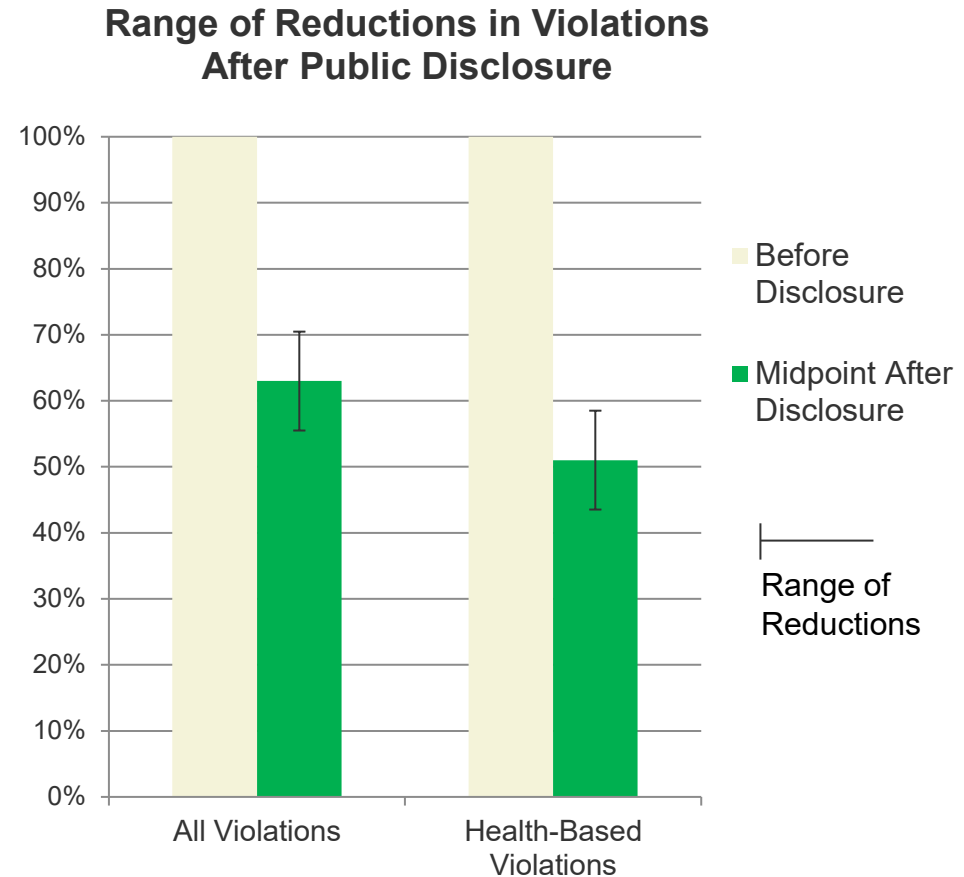
Transparency Impacts : EPA required mailing of drinking water reports drives violation reductions

US EPA required drinking water suppliers to mail annual Consumer Confidence Reports directly to consumers

Total violations reduced by **30%-44%**

More severe health violations reduced by **40-57%**

Brennear & Olmstead study



Wrap Up

- The US EPA has used data transparency extensively in the enforcement and compliance program and has seen that information influence facilities to fix problems.
- If transparent data can promote compliance or fast correction of violations, that allows the enforcement program to focus on bigger non-compliance issues.
- Presentation of both facility data and trend/performance information for state or local government entities also provides additional public accountability that those programs develop a robust program.

Questions?

If you have questions after today's presentation, contact barrette.michael@epa.gov

NOTE: a demonstration of ECHO is planned for Day 2 of the Conference.

Reference and Background Information

Quotes and Reaction to ECHO Release

US EPA

- ECHO is the biggest step forward in “public-right-to-know” since the Toxics Release Inventory was published in 1998.

State governments:

- “This tremendous effort is a great example of how the federal government and the states can work together to develop useful and innovative resources to further protection of our environment and public health.”
- The system “gives the public...a much greater ability to get answers to their questions regarding compliance on the part of corporate neighbors.”

How does US EPA Enforcement Work in the US?

- Most statutes are delegated to states
 - States have the first responsibility for compliance monitoring and enforcement
- **Examples of delegated programs are:**
 - Clean Water Act (CWA) direct dischargers
 - Clean Air Act (CAA) stationary source dischargers
 - Resource Conservation and Recovery Act (RCRA) hazardous waste handlers
 - Safe Drinking Water Act (SDWA) public water systems
- US EPA retains its own enforcement authority even after a state receives delegation and runs a parallel compliance monitoring and enforcement process
- Some US EPA programs are directly run by US EPA.

How does US EPA Enforcement Work?

- The typical progression of an enforcement case would be:
 - Identifying a violation (from inspection or self report)
 - Classifying the severity of the violation to determine if a formal action is needed
 - Determining if criminal enforcement elements exist
 - Pursue legal action against the violating facility (each statute has penalty policies that govern the amount of fines US EPA can levy)

What does it mean if a facility has identified violations?

In general, a violation identified at a facility means the facility has been noted as out of compliance with an environmental requirement set forth by the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, or Safe Drinking Water Act statutes and their respective regulations. US EPA learns of violations by several means, depending upon the statute, including regular reporting by the regulated facilities and US EPA or state inspections. A violation may indicate that the facility released excessive pollutants, that a hazardous waste handling requirement was not met, or that a facility failed to submit a required report. The type of violation identified will be indicated in the *Detailed Facility Report*.

Violation: Defined as noncompliance with one or more legally enforceable obligations by a regulated entity, as determined by a responsible authority. Included in this category are violations of legally enforceable obligations under pre-existing Final Orders (e.g., violations of compliance schedules included in enforcement orders)

What does it mean to have a status of Significant Noncompliance (SNC), High Priority Violation (HPV), or a Serious Violator?

SNC (this term is used in the Clean Water Act and Resource Conservation and Recovery Act programs), HPV (this term is used in the Clean Air Act program), or Serious Violator (in the Safe Drinking Water Act program) is the most serious level of violation noted in US EPA databases. This designation provides an indication of whether violations or noncompliance events at a given facility may pose a more severe level of concern for the environment or program integrity.

Click on the [Data Dictionary](#) link, identified with a book icon, from any *Detailed Facility Report* for a list of violation categories included in the SNC and HPV definition. For Serious Violators under the Safe Drinking Water Act, see the [Drinking Water Search Results Help](#).

Three-Year Compliance History by Month/Quarter

- [Air Compliance Status \(CAA\)](#)
- [Water Compliance Status \(CWA/NPDES\)](#)
- [Hazardous Waste Compliance Status \(RCRA\)](#)
- [Drinking Water Compliance Status \(SDWA\)](#)

Sources of ECHO Data

ECHO extracts data from other US EPA data systems, typically on a weekly basis:

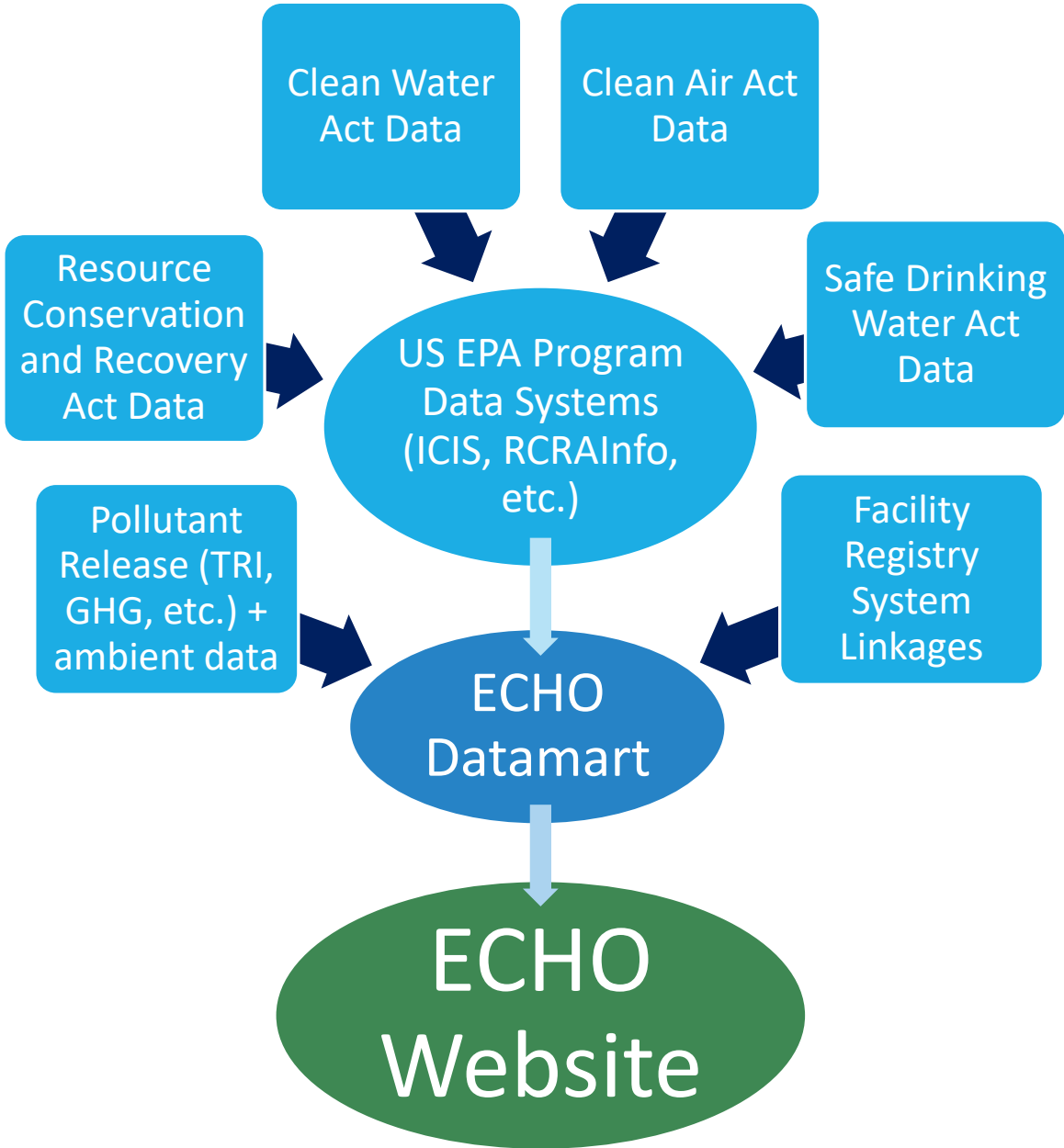
Compliance Information

- Clean Water Act (ICIS-Water)
- Clean Air Act (ICIS-Air)
- Hazardous Waste - Resource Conservation and Recovery Act Information System (RCRAInfo)
- Safe Drinking Water Act (SDWIS)
- US EPA enforcement cases for all environmental laws (ICIS FE&C)

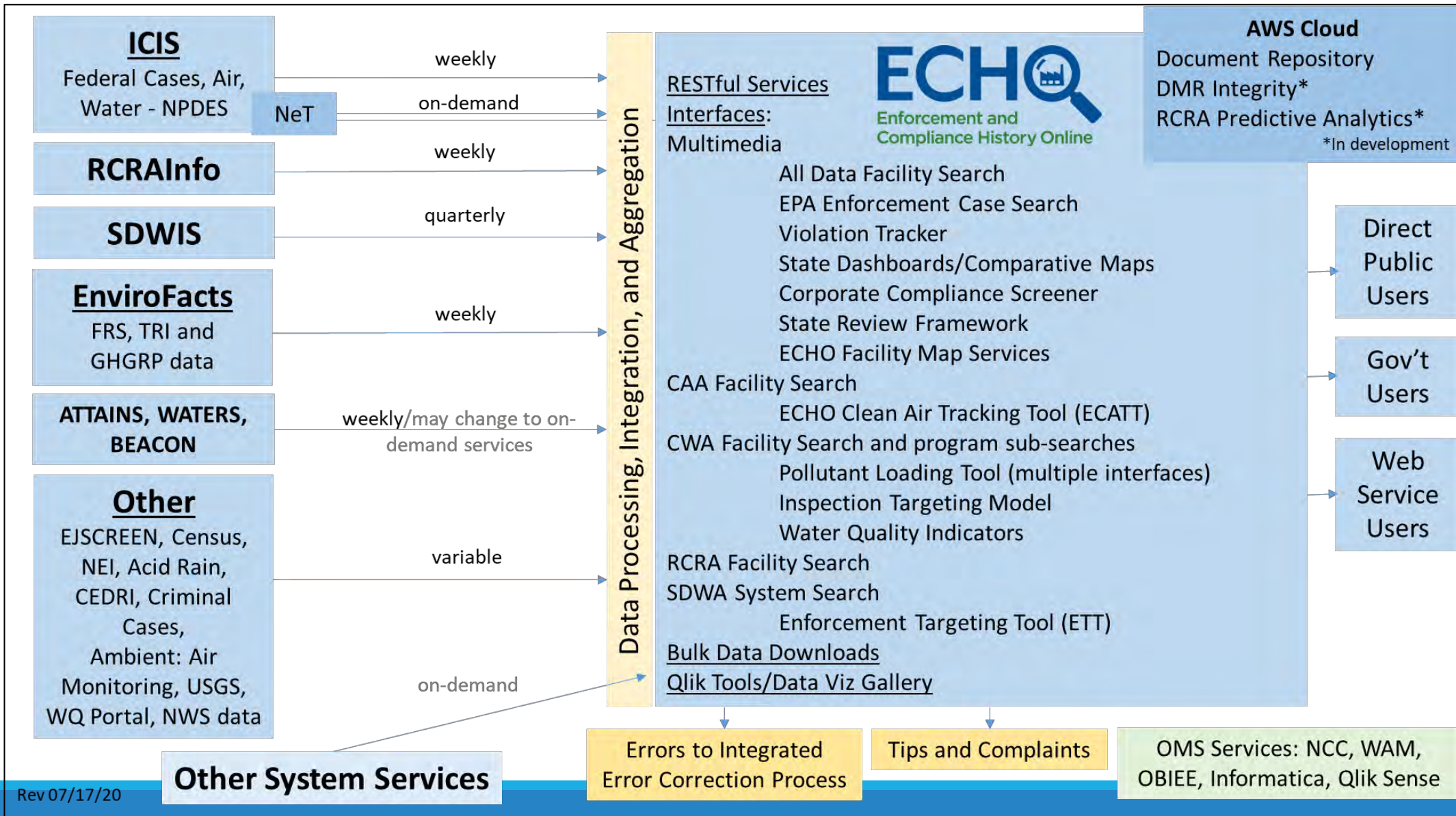
Other

- Facility Registry System (links US EPA-regulated facilities and permits under one ID number)
- Pollutant Reporting Databases (Toxics Release Inventory (TRI), Greenhouse Gas (GHG), Emissions Inventory)
- Ambient Monitoring Database (air and water quality)
- US Census Bureau and Demographic Data
- Full list with refresh dates on [“About the Data”](#)

ECHO Data Flows



ECHO Integrates Data from a Wide Variety of Sources



Helpful Links

1. Detailed Facility Report Training Webinar ([March 15, 2021](#))
2. ECHO Data Sources and Flow Video Tutorials (~10 min each)
 1. [Clean Water Act \(CWA\) Data Flow](#)
 2. [Clean Air Act \(CAA\) Stationary Source Data Flow](#)
 3. [Hazardous Waste Handlers \(RCRA\) Data Flow](#)
3. [Detailed Facility Report Data Dictionary](#)
4. [Detailed Facility Report Tutorials](#)
5. Additional information on how to interpret a facility's compliance status is available on ECHO's [Frequently Asked Questions](#) page

Resources

Quick start guide: <https://echo.epa.gov/resources/general-info/learn-more-about-echo>

Video tutorials: <https://echo.epa.gov/help/tutorials>

Webinars: <https://echo.epa.gov/help/training>

FAQ: <https://echo.epa.gov/resources/general-info/echo-faq>

Contact Us: <https://echo.epa.gov/contact>

Help: <https://echo.epa.gov/help>

ECHO Mailing list: <https://echo.epa.gov/resources/general-info/listserv>

Detailed Facility Report Data Dictionary: <https://echo.epa.gov/help/reports/dfr-data-dictionary>

Search Criteria Help: <https://echo.epa.gov/help/facility-search/search-criteria-help>

The National Enforcement Priority Sites System



Kealan Reynolds
EPA Ireland
28th September 2022

Industry & Waste Permit Enforcement in the OEE

- 840 licences in place, just over 700 are operational sites
- Licensed sites range from small scale operators to very large and complex industrial sites.
- Sectors include Chemical, Solvents, Energy, Cement, Landfill, Waste Transfer Stations, Compost, Incineration, Intensive Agriculture, Food & Drink, Timber Treatment, Metals etc



OEE Enforcement Systems

- LEMA - **L**icensing, **E**nforcement, **M**onitoring and **A**ssessment System
- CRM based system launched in January 2013
- All correspondence with licensees is via web portals
- EDEN – **E**nvironmental **D**ata **E**xchange **N**etwork (LEMA ↔ EDEN)
- Approx. 10,000 items of incoming correspondence in relation to industrial and waste licensed per annum
- EPA issue site visit reports, approval notices, requests for information, action requests, non-compliance notices, investigations etc via LEMA



Paperless



The OEE Standards Unit

“To ensure quality data in LEMA and adherence to procedures across OEE to ensure consistency and good governance”

- Established the LEMA Standards Unit in 2016.
- The Vision for the Standards Unit is that OEE becomes a leader in data governance and application of standards within the Agency.
- Mission is to provide high quality, targeted and timely data, assessments and evidence to inform decision making by the OEE.

Role of the OEE Standards Unit

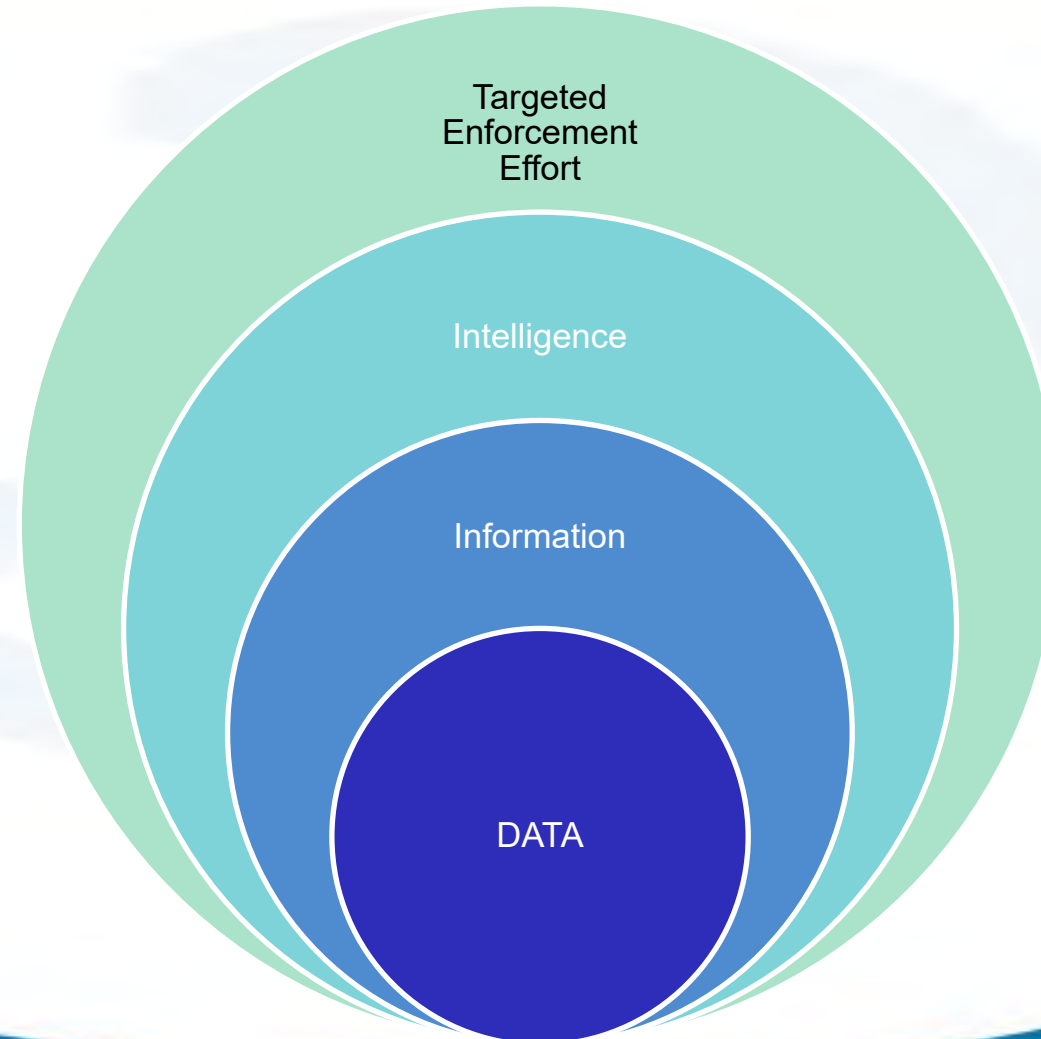
- **Governance:** Reviewing data for consistency, adherence to procedures, quality of data. Use data to monitor OEE performance in relation to key work areas.
- **Procedures:** Establishing, reviewing and updating LEMA guidance documents and procedures.
- **Communications:** Liaising with OEE Regions in relation to the adherence to procedures, the consistency and quality of data for each Region.
- **Reporting:** The use of a single unit to produce data for enforcement reports to ensure consistency of approach and the generation of accurate and timely data.



Use of LEMA Data

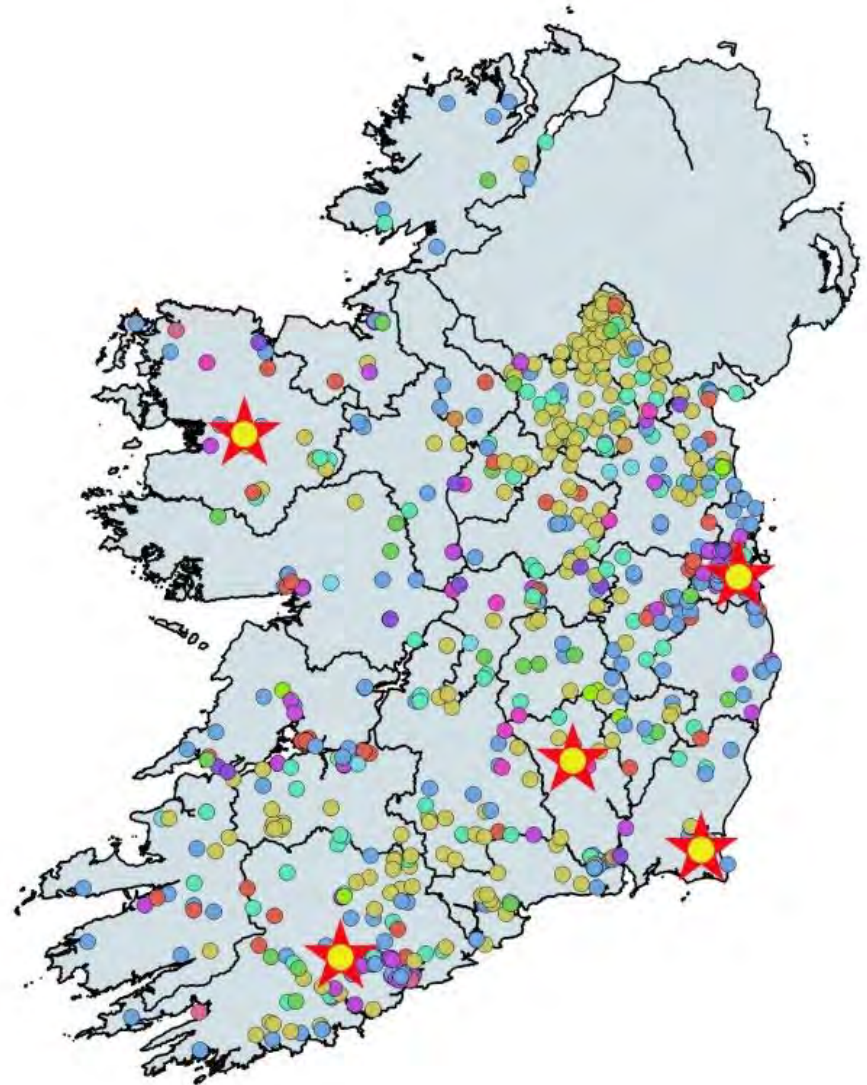
*“The EPA has developed a...system (LEMA) which allows **effective data collection and analysis, risk assessment and targeting** of compliance assurance work for industrial installations.”*

EU Commission, Feb 2017



OEEs National Priority Sites List

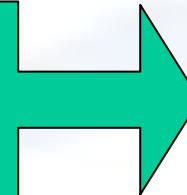
- Large number of licensed sites (>800)
- Limited resources
- Enforcement must be based on risk to environment and led by intelligence
- Target high risk areas
- Detect trends and patterns within sectors
- Improve compliance and environmental performance



National Priority Sites List

- A methodology based on the performance of a permitted facility in terms of **licence compliance**
- The data (from the LEMA System) for the **previous 6 months** is assessed
- **Ranks all** EPA permitted Sites based on enforcement/compliance status
- **Identifies sites** considered a 'National Enforcement Priority'
- **Publish** the 'Priority Site List' on a quarterly basis (commenced in 2017)
- There have been 44 sites identified as NPS since end of Q2 2017

Transparent policies and procedures.
Accurate, consistent & proportionate data.



**OEE Standards
Unit**

Enforcement Modules in LEMA



Site Visits



Compliance Investigations



Licensee Returns

What is a Compliance Investigation?

- The compliance investigations module of LEMA is a management system to allow inspectors to define, plan and implement **investigations into environmental issues** and non-compliances.
- A compliance investigation is created when an issue exists that **is causing or has potential to cause an environmental effect** and merits further investigation by the EPA.
- Assigned a **Response Level** (of High, Medium or Low) based on the severity of the effect on the environment and the likelihood of the effect occurring.
- All enforcement actions and communications relating to the investigation will be managed from within the Compliance Investigation management system.

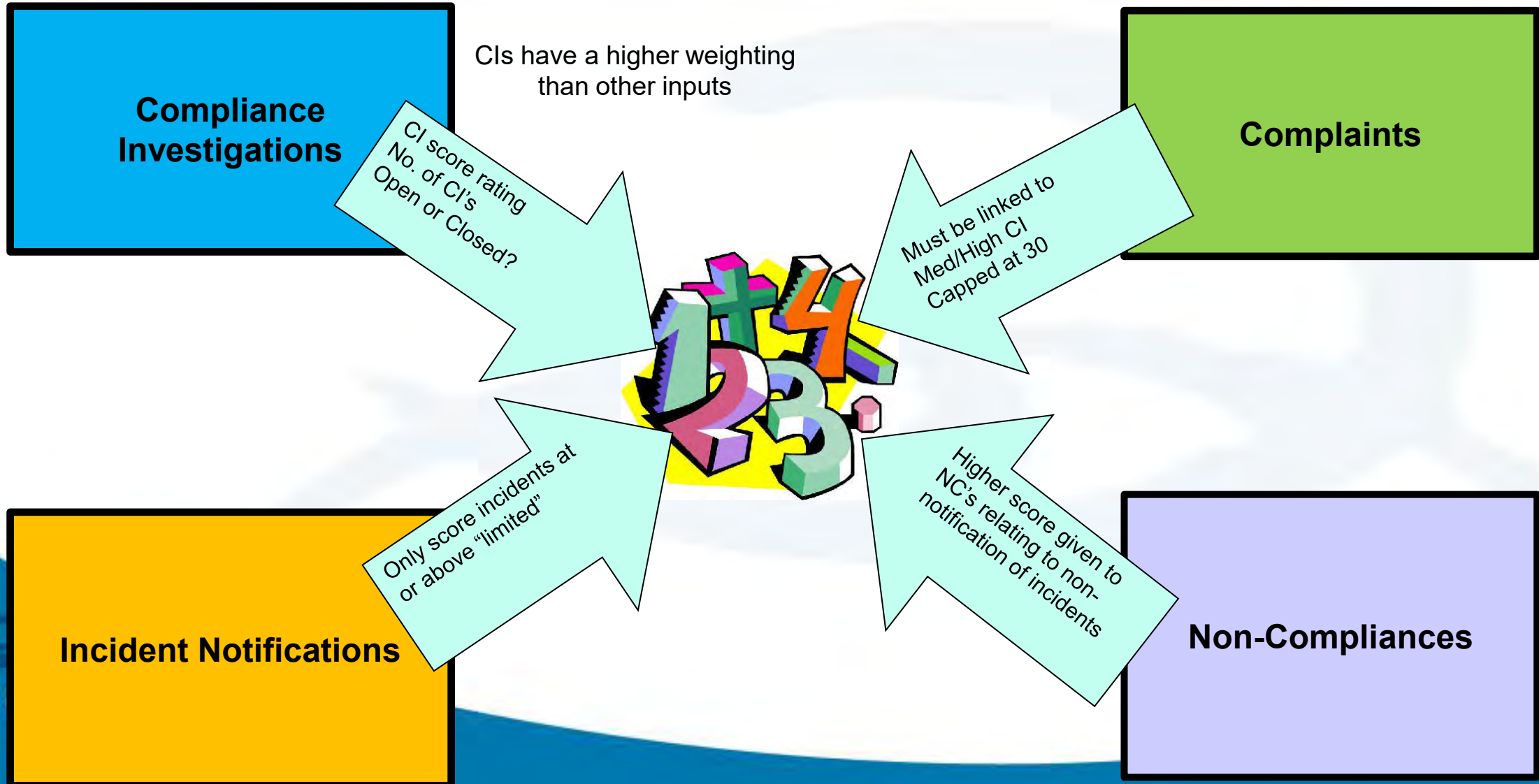


What are Non-Compliances, Incidents & Complaints?

- The recording of a **non-compliance** against a licence condition is a means of letting the licensee know that they are in breach of a licence condition and is a formal **record of the compliance** history of the site.
- **Incidents are notified to the OEE by licensees.**
 - Incidents categorised on a scale of 1 - 5: 1(minor) – 5 (catastrophic)
- **Complaints:** Only complaints **linked to a Medium or High Compliance Investigation** are counted in the NPS.



Foundation stones of the NPA 'scoring' system



National Priority Sites List - Scoring

Scoring Component	Score Allocation		
Complaints	1 Point per Complaint		
	* Note: Complaint must be linked to a Medium or High (Open) CI to score and is limited to a max of 30 complaints		
Incidents	<u>Category</u>		
	5. Catastrophic	30 Points	
	4. Very Serious	20 Points	
	3. Serious	10 Points	
	2. Limited	2 Points	
	1. Minor	No Score	
Compliance Investigations	<u>CI Response Level</u>	<u>Status Open</u>	<u>Status Closed</u>
	High	20 Points	4 Points
	Medium	10 Points	2 Points
	Low	3 Points	1 Point
	* Note: Only the top 3 scoring CIs are counted		
Non-Compliances	<u>NC Type</u>		
	Basic NC	1 Point	
	For Non-Notification of an Incident	5 Points	

Communications from OEE

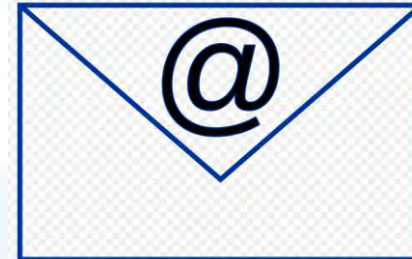
Priority Site

- Total Score > 30 Points with CI score \geq 10 Points
- Letter issued to OEE Contacts and Director of Company
- Licensees name published on EPA website



Candidate Priority Site

- Total Score 20-30 Points or Total Score >30 Points with CI score \leq 9 Points
- Letters issued to OEE Contacts




Informing the site operator

Licensed Company XX Ltd. (P02345-01) [View Transfer](#)

Dashboard Notifications Returns Incidents Compliance Site Visits Complaints EPA Reports Environmental Performance Reporting Meetings More... -


Authorisation Notifications

Active Authorisation: P02345-02 (Licensed)



Score	48
Last Updated	23/03/2011
Complaints	29
Incidents	0
Compliance Investigations	29
Non-Compliances	0

National Priority Site (>30 points)




Score	25
Last Updated	23/03/2011
Complaints	5
Incidents	0
Compliance Investigations	10
Non-Compliances	0

Candidate National Priority Site (20-30 points)



Score	15
Last Updated	23/03/2011
Complaints	10
Incidents	0
Compliance Investigations	1
Non-Compliances	4

< 20 points



Incidents	0
Compliance Investigations	10
Non-Compliances	0

National Priority Sites calculation method

FARMERS JOURNAL

FARM IRELAND

Four agri-food 'priority sites' for enforcement

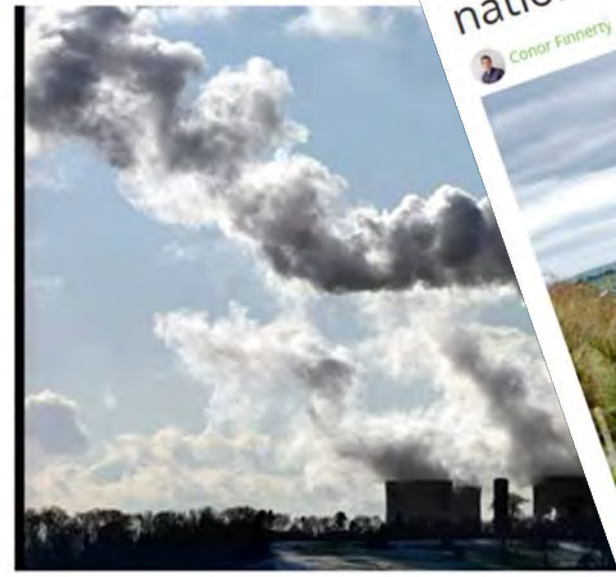
AgriLand THE IRELAND'S LARGEST FARMING NEWS PORTAL

Merchandise Advertising The Team Contact

Dairy giants feature on latest EPA national priority list

Conor Finnelly Apr 20, 2018, 1:29pm

Facebook Twitter Email



Two major players in the dairy processing industry on the island of Ireland feature on the Environmental Protection Agency's (EPA's) latest National Priority Sites List for Enforcement. Some seven industrial sites have been named on the list, with four of the sites based in the

Guinness...
The EPA said it...
from tanker filling...
at the St James's Ga...

EPA Ireland @EPAIreland · Jul

We have published the EPA National Priority Sites List for Enforcement. It includes @DiageoIreland (St. James's Gate Distillery) and @CorkCountyCoCo (Cork County Council). See the full list on our website.

EPA Ireland @EPAIreland

Our National Priority Sites List for Enforcement has been published. One of the sites is the St. James's Gate Distillery, which produces James Watson & Co. Scotch Whisky. The site is a major source of air pollution from gas & leachate management.

Environment & You

Environmental Topics Our Services Publications Who we are

Search for a licence or permit

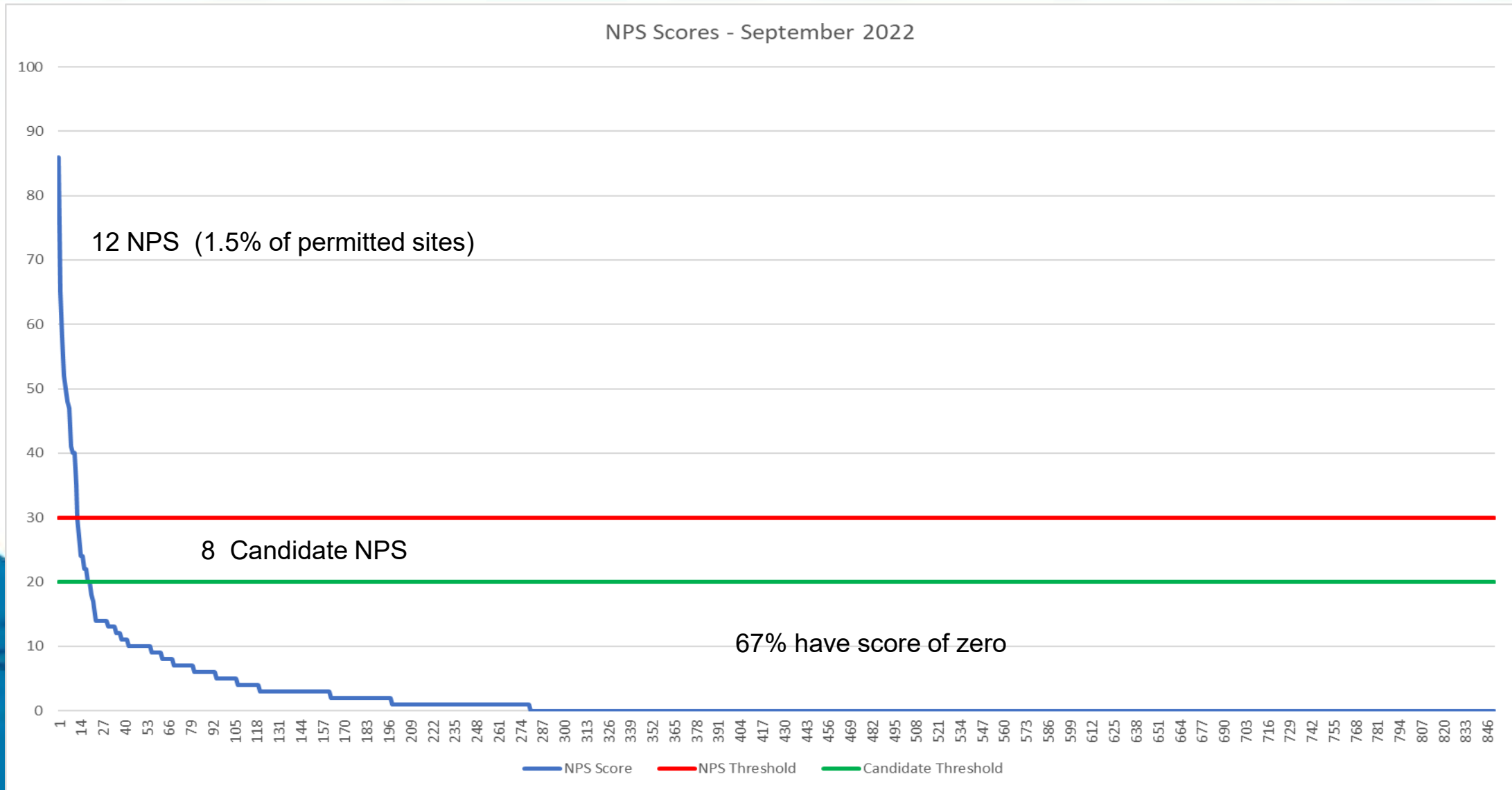
of priority for enforcement. We use the National Priority Sites List to target our enforcement effort at the licensed operators with key indicators of environmental performance and licence compliance:

- NPS as an enforcement tool

- Very useful enforcement tool, Industry does not want to appear on the list
- Examples of NPS impact
 - National food producer scheme amended
 - Finance bank placed agent on-site
 - The quarterly publication gives industry time to rectify the issue and reduce their score
 - Corporate reporting of scores
- Impact on the Office of Environmental Enforcement
 - The spotlight is on inspectors to ensure the score is an accurate reflection of environmental issues at the facility
 - Quality assurance of inspectors work – Standards unit
 - Influence on inspector behaviour ?.....
 - Repeat offenders on the list ?
- 2019 Review of the NPS System



Effect of the PS System - Drive Compliance!



Thank You for Listening!

www.epa.ie/our-services/compliance--enforcement/whats-happening/national-priority-sites-list/



Any questions?

k.reynolds@epa.ie

Compliance promotion in the Drilling Industry

Bart Pannemans

Subsurface Database of Flanders (DOV)

DEPARTEMENT
OMGEVING

VLAAMSE
MILIEUMAATSCHAPPIJ

DEPARTEMENT
MOBILITEIT &
OPENBARE
WERKEN

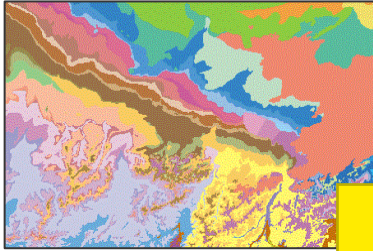


Agenda

- ▶ the Subsurface Database of Flanders (DOV)
- ▶ drilling in Flanders
- ▶ individual evaluation reports
- ▶ reactions & feedback
- ▶ next steps

Subsurface Database of Flanders

Geology



Groundwater



Soil



Geotechnical



Polluted sites



- ▶ 5000+ data layers on subsurface objects
- ▶ <http://dov.vlaanderen.be>

Vul hier een zoekterm of adres in...

Zoekregels

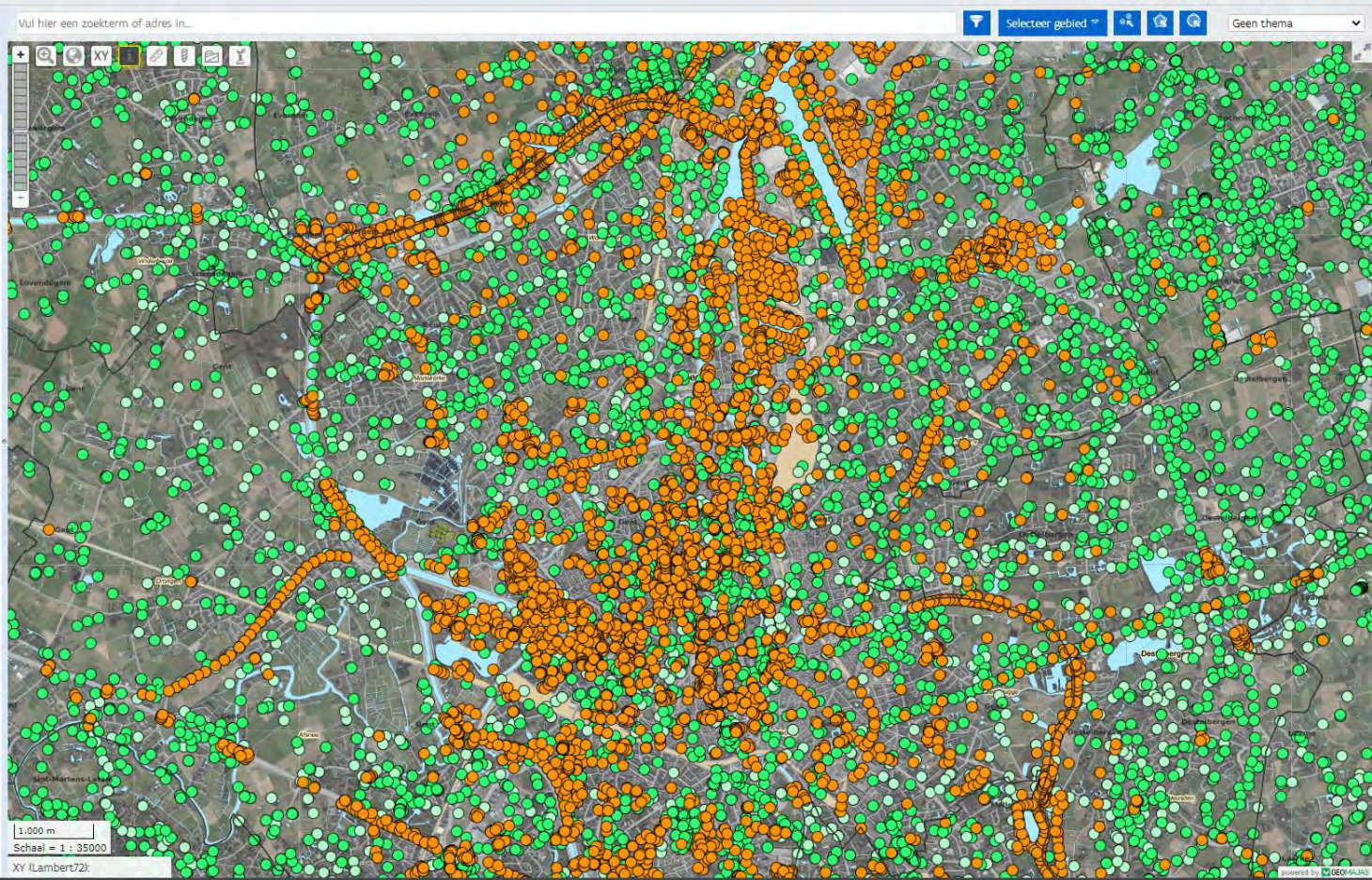
Kaartbeeld instellen

Kaartlagen kiezen

Ga naar kaartbeeld instellen om de weergave van de aangevinkte kaartlagen te personaliseren.

DOV **Andere** Extern

- Geologie
- Administratieve informatie
- Geotechniek
- Geothermie
- Grondonderzoek
 - Boringen
 - Sonderingen
 - Boogatmetingen
 - Grondmonsters
 - Grondmonsters met labproeven
 - aquafin boringen
 - aquafin sonderingen
 - ovam boringen
 - ovam gecodeerde lithologie
 - ovam stijghoogtes
 - ovam staalnames
- Gravimetrie
- Interpretatie
- Gezondheid
- Grondverschuivingen
- Lucht
- Grondwater
- Oprachten
- Sediment
- Waterbeheer

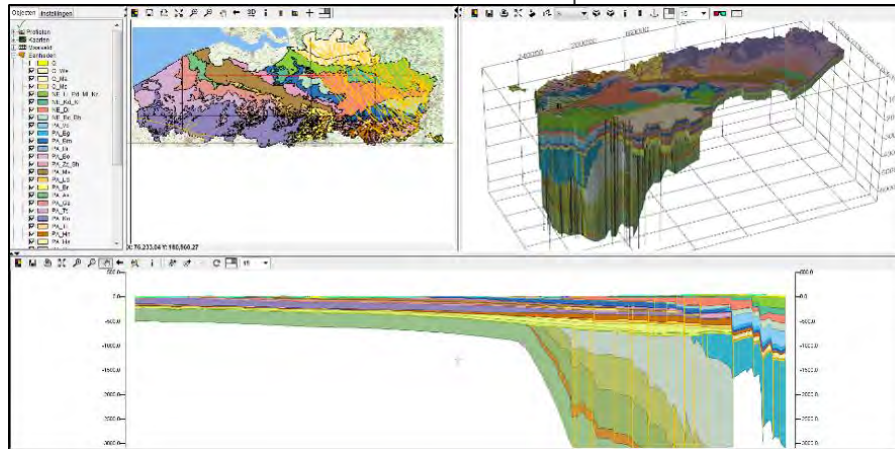
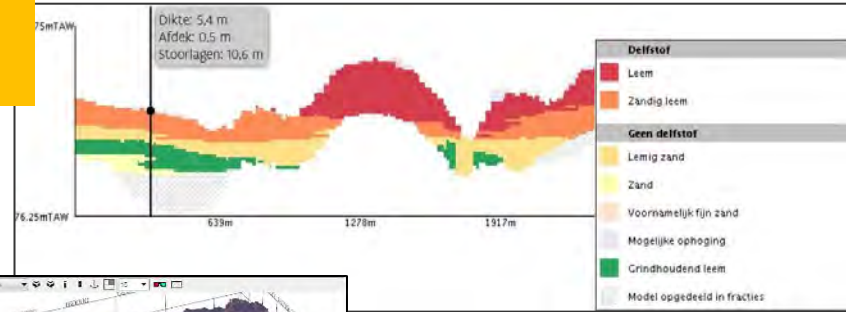


Subsurface Database of Flanders

All data is published “as is” within the **INSPIRE** deadlines

All data is available as **open data**.

Re-use is allowed (“open data licentie Vlaanderen V1.2”)



Subsurface Database of Flanders

- ▶ Data is added by approved data providers:
 - government agencies,
 - drilling companies,
 - soil specialists,
 - laboratories,
 - archeologists,
- ▶ eDOV: domain-specific data entry pages (with login)
 - automation possible via webservice
 - GDPR and confidentiality are considered

Drilling in Flanders

Drilling – typical activities

- ▶ Boreholes for geotechnical/environmental surveys,
- ▶ Dewatering of construction sites,
- ▶ Geothermal boreholes,
- ▶ Groundwater wells,



Drilling - risks

- ▶ Risks while drilling: pollution,
- ▶ Faulty installation of wells (casing, well heads, grouting, ...)
- ▶ Illegal abstractions, overabstractions
- ▶ Impact on SPZ's (ecological zones, drinking water,...)



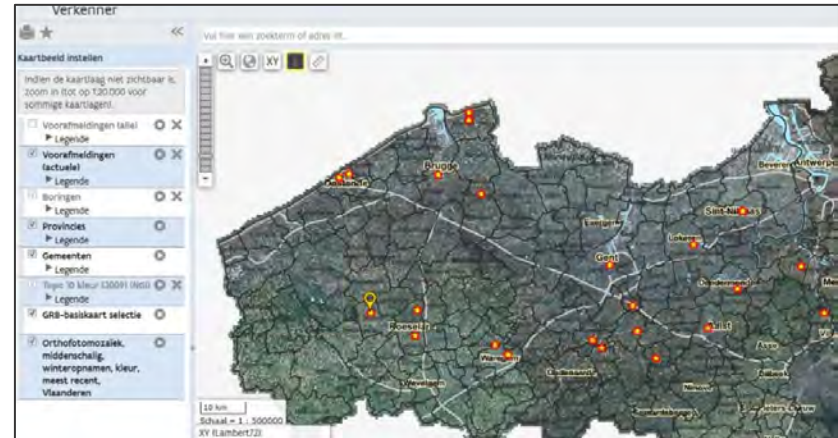
Drilling – legal framework

- ▶ Environmental law (VLAREM): sectorial requirements
- ▶ Permitting before drilling or groundwater abstraction
- ▶ Only certified drilling companies:
 - drilling according to Code of Best Practices,
 - trained staff: drilling master,
 - reporting of activities into Subsurface Database

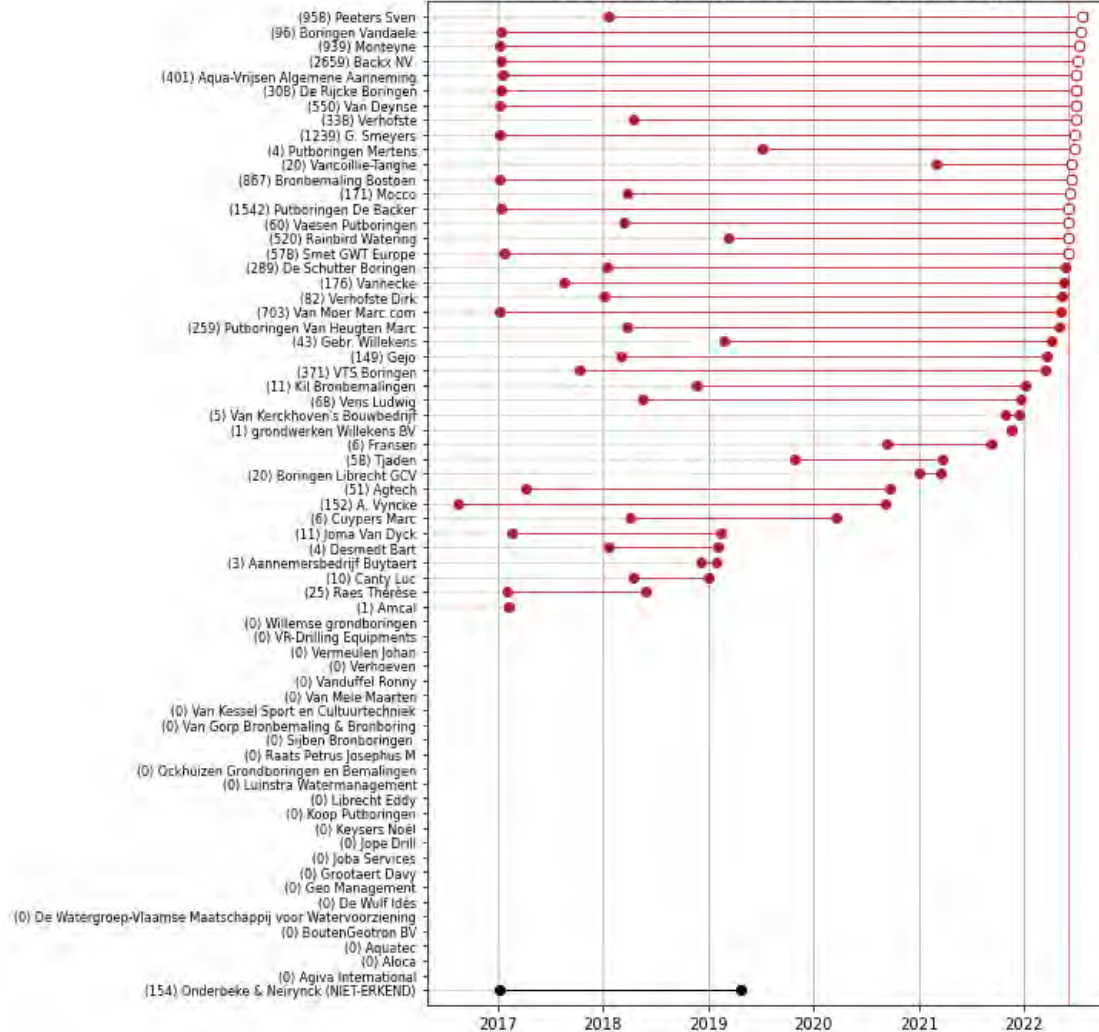
Drilling – reporting to DOV

- ▶ Announce drilling activities (2 days in advance),
- ▶ report on the executed drilling (within 2 months after)
 - geological description,
 - well construction,

- ▶ Objectives:
 - to facilitate inspections,
 - data for research and policy,
 - prepare future drilling activities



eerste en laatste gerapporteerde bemaling (67 bedrijven)



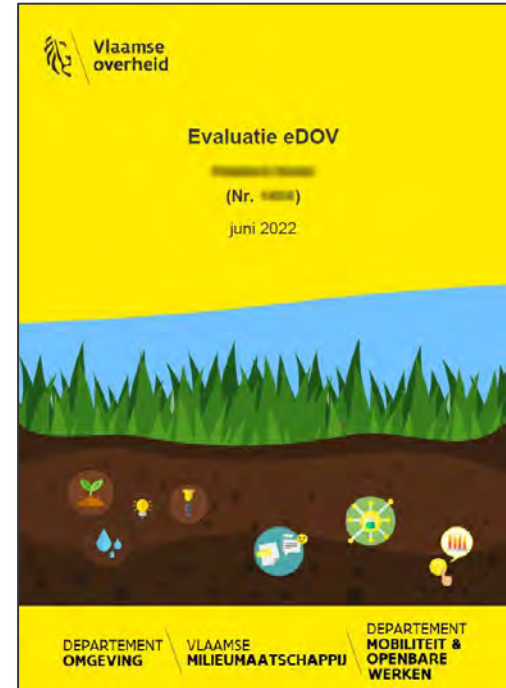
Compliance Promotion

- ▶ Together with industry representatives and individual drilling contractors
- ▶ Actions:
 - Review of legislation
 - training and technical assistance,
 - improve digital tools,
 - hotline for illegal drilling,
 - communication on control outcomes,
 - evaluation reports on quality of reporting,
 - Incentives for good/bad track-records,

Individual evaluation reports

Individual evaluation reports

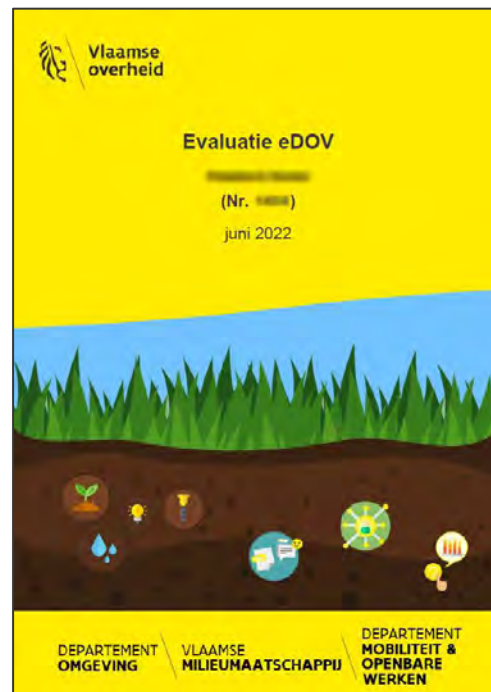
- ▶ Using data in DOV
- ▶ For 160 drilling companies
- ▶ Includes checks on :
 - legal requirements,
 - directives eDOV,
 - good practices,
- ▶ Activities of 2021 (+2022)
 - evolution against previous years
- ▶ Automated script



Individual evaluation reports

► Objectives:

- support companies with (obligatory) reporting,
- simplify the data flows,
- improve data quality in DOV,
- background info for supervisors,
- quality label



Individual evaluation reports

STEP 1
What do we
want?

A rule

STEP 2
How does **this**
company perform?

Data-based figures

STEP 3
How can they
improve their score?

Tips & Guidance

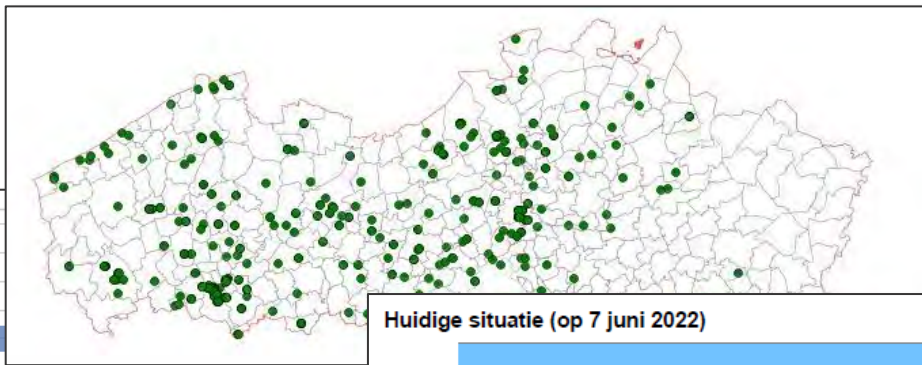
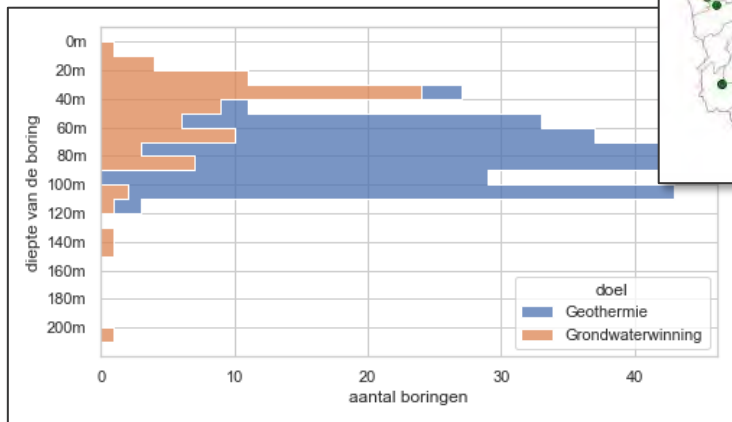
School reports – some examples



General info

- ▶ Number of drillings and pre-announcements
- ▶ where?
- ▶ depth?

locaties



Huidige situatie (op 7 juni 2022)

	aantal boringen
voorafmeldingen	1001
boorfiches - aangeleverd	921
boorfiches - aangeleverd (laatste 2 maand)	54
boorfiches - nog niet aangeleverd (totaal)	2
boorfiches - nog niet aangeleverd (boring < 2 maand geleden)	1
boorfiches - nog niet aangeleverd (te laat)	1

ⓘ Er zijn boringen die nog niet werden aangeleverd, maar wel al over tijd zijn. Vergeet deze boringen niet aan te leveren.

diepte

aantallen

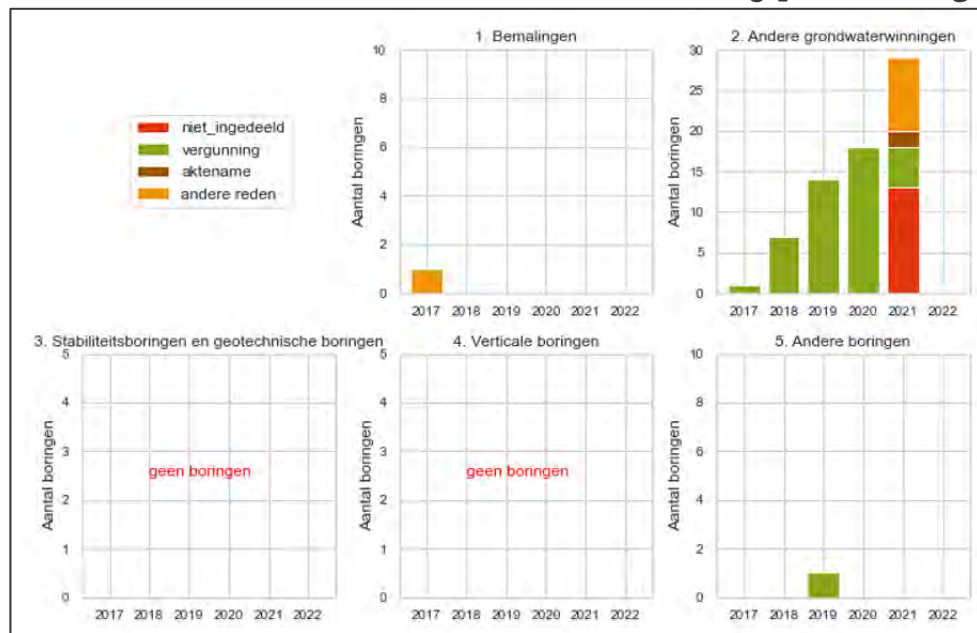
General info

- ▶ Certifications
- ▶ Permitted wells

	Erkenning	Erkend
1. Bemalingen		ja
2. Andere grondwaterwinningen		ja
3. Stabiliteitsboringen en geotechnische boringen		neen
4. Verticale boringen		ja
5. Andere boringen		ja

erkenningen

type boring



Staff members

▶ accounts eDOV

Inloggegevens eDOV

Het voorafmelden en rapporteren van boringen gebeurt via het eDOV-platform (een website van de Vlaamse Overheid). Om het eDOV-platform te kunnen gebruiken binnen uw bedrijf, moeten de gebruikers zich eerst registreren en inloggen.

Onderstaande tabel toont de eDOV-logins voor uw bedrijf.

Naam	Begindatum	Einddatum	Status	E-mailadres
[REDACTED]	25/03/2017	16/04/2024	ACTIVE	[REDACTED]
[REDACTED]	27/03/2018	27/03/2022	EXPIRED	[REDACTED]

i Heeft u nog geen login, of wenst u bijkomende logins voor uw medewerkers, dat kan. Lees [in deze handleiding](#) hoe u de logins van uw boorbedrijf kan beheren. Is uw login vervallen, lees dan [hier](#) hoe u de rechten kan verlengen.

▶ Drill masters

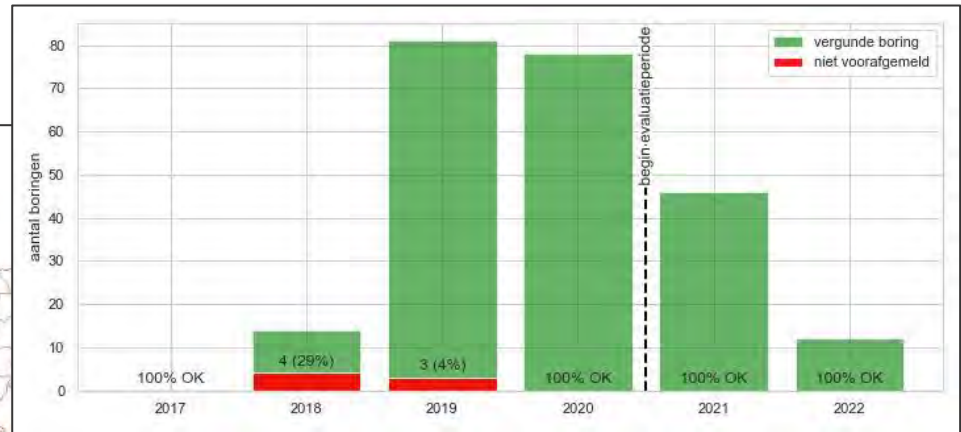
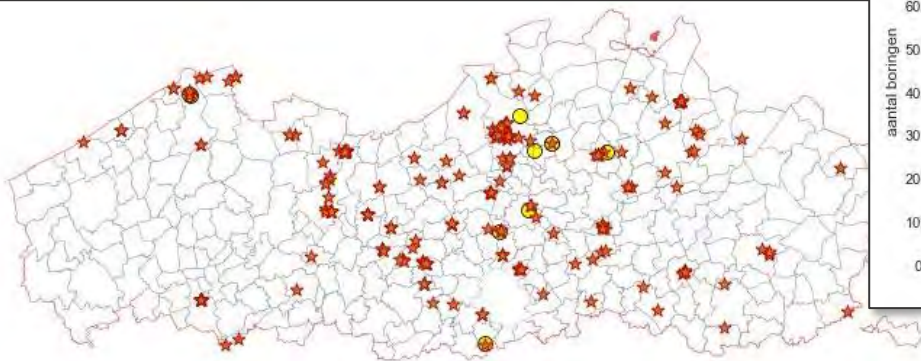
→ No first name,

→ Name is “Drill master”, “Unknown”, “To be supplied”

Pre-announcements

- ▶ It's compulsory for drilling and groundwater wells, which require a permit.

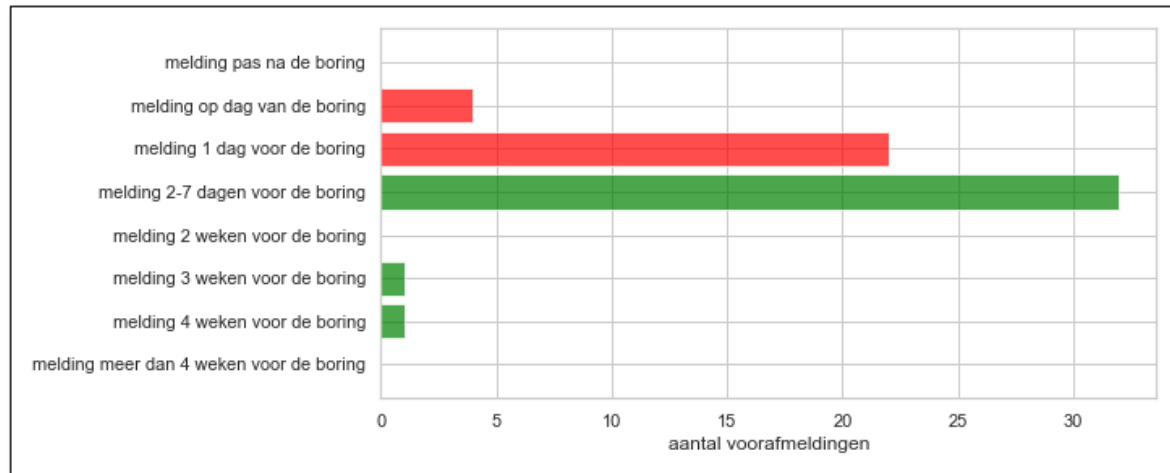
locations



Permitted wells

Pre-announcements

- ▶ It's compulsory for drilling and groundwater wells, which require a permit.
- ▶ Minimal 2 days before start of drilling

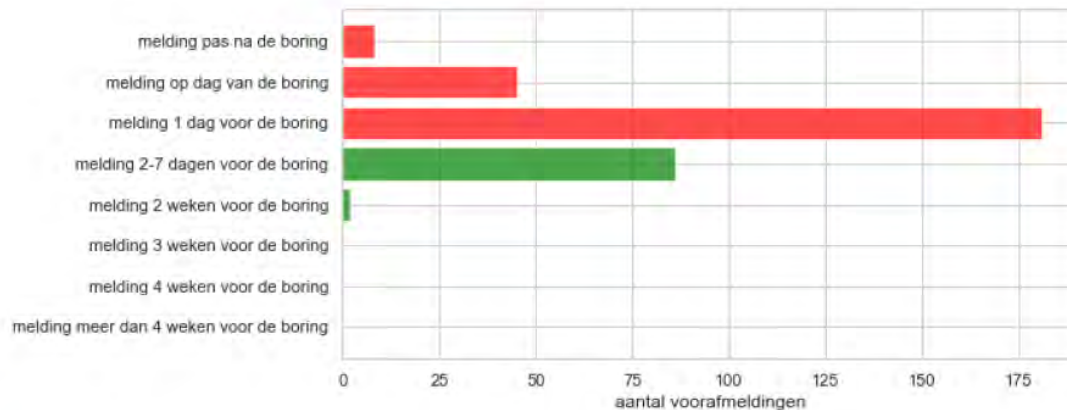


timeliness

Tijdigheid voorafmeldingen

Verplichte voorafmeldingen moeten minimaal twee dagen voor de start van de werken gebeuren. Deze verplichte voorafmeldingen kunnen via het [eDOV-meldpunt 'Boringen'](#) gebeuren.

! 73% van de voorafmeldingen gebeurden te laat. 8 voorafmeldingen gebeurden zelfs pas na de uitvoering van de boring.

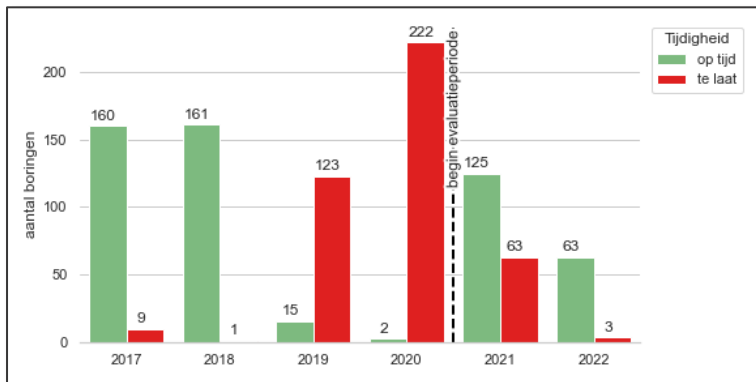


i Onderstaande balk toont hoe uw bedrijf zich verhoudt tot de rest van de sector (ter info: er werd enkel vergeleken met boorbedrijven met minstens vijf voorafmeldingen)

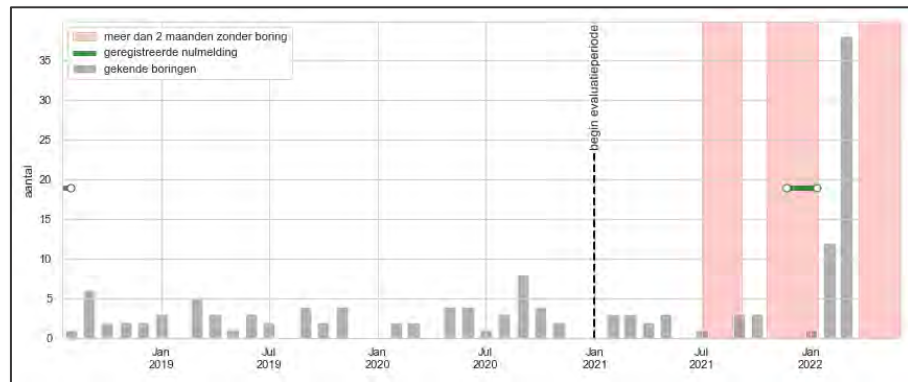


Well reporting

- ▶ Reporting: within 2 months after drilling
- ▶ 2 months without activity > no-drill period



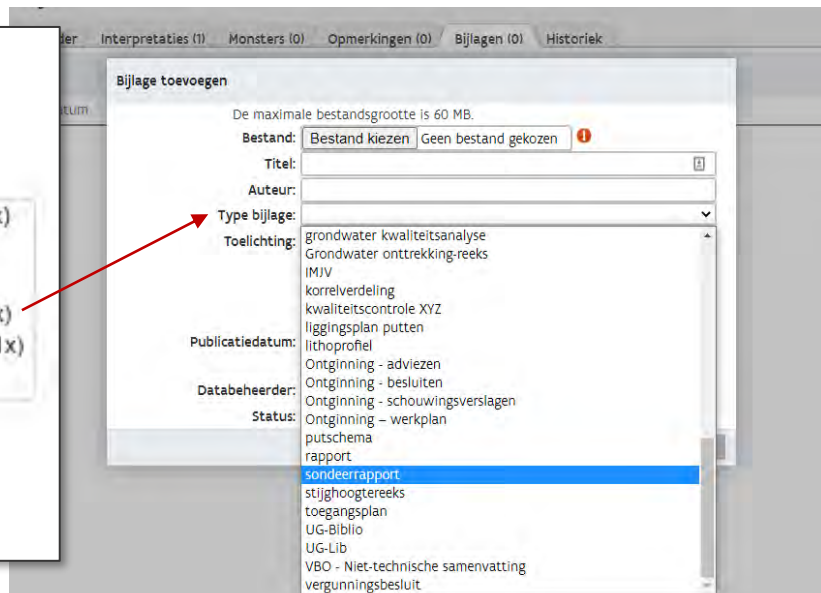
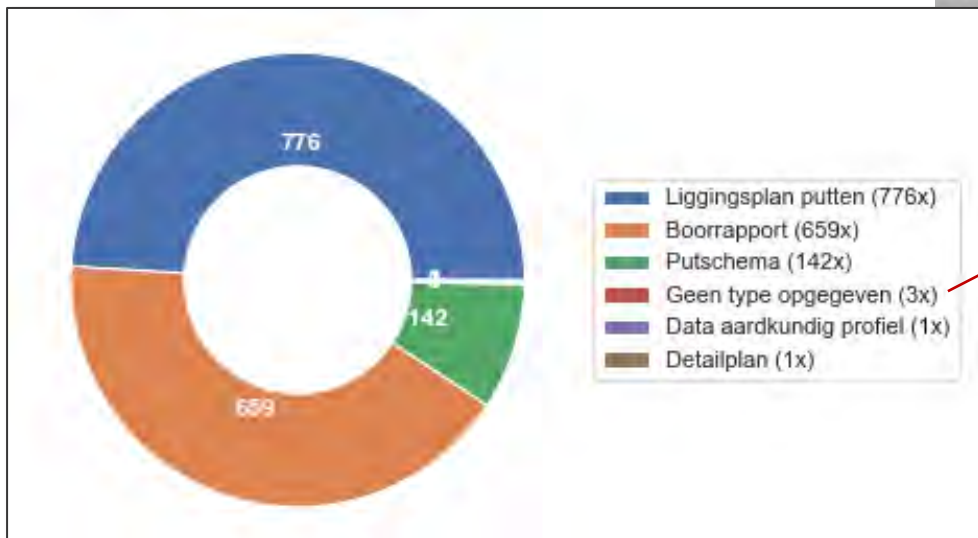
timeliness



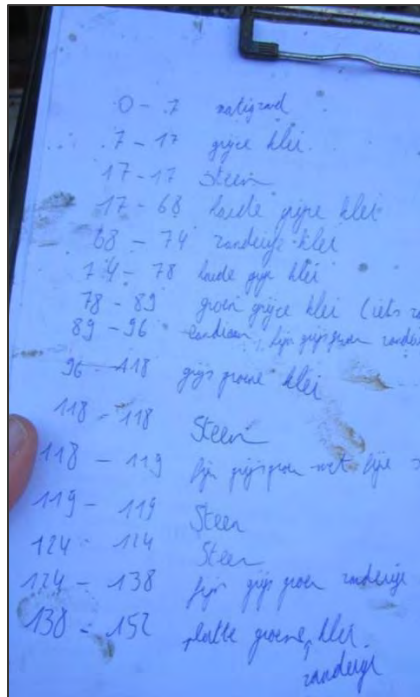
no-drill periods

Well reporting

- ▶ Some attachments are mandatory
- ▶ hint: specify the type of attachment




Lithological descriptions



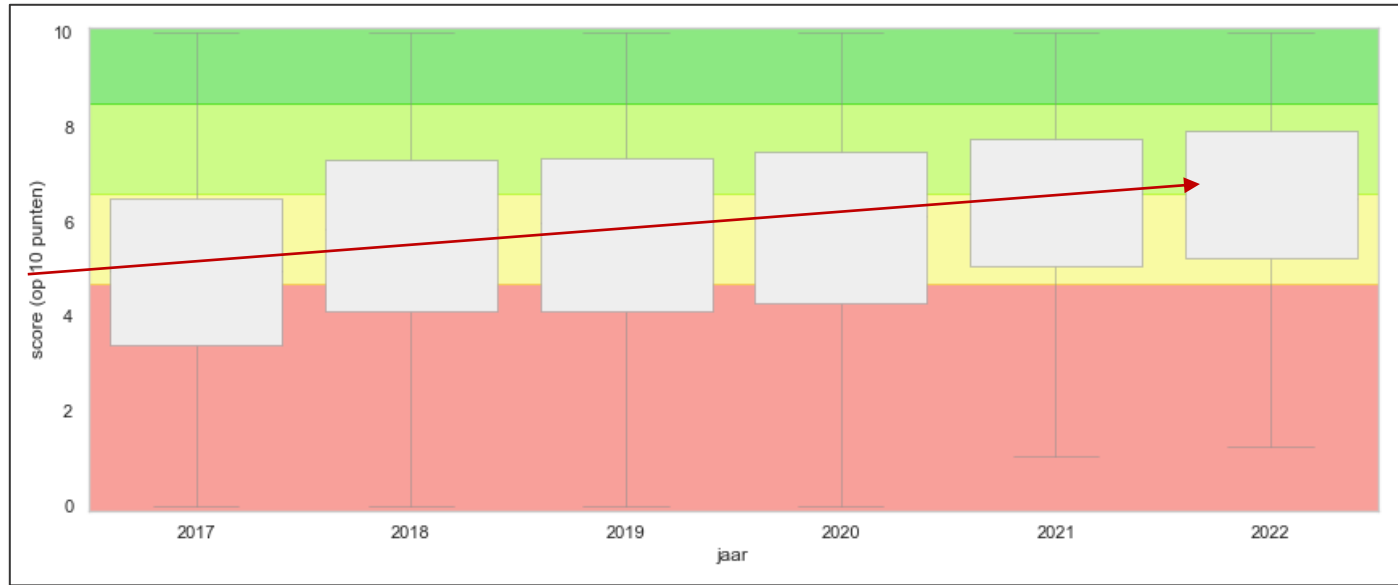
Viaanderen		DOV Boorrapport	
Boring			
Proefnummer:	462881e-B7	Aanvraagdatum:	01/01/1994
X (mLambert):	42644.0 (XY_gedigitaliseerd op topokaart)	Uitvoeringsmethode:	droge boring
Y (mLambert):	169444.0 (XY_gedigitaliseerd op topokaart)	Diepte (m):	0.00 - 7.00
Z (mTAW):	22.24 (Z uit dossier)	Water op (m):	
Gemeente:	Ieper (Vlaamse regio)		
Uitvoerder:	Van Vooen		
Opmerking:	opdrachtgever: Aquafin		
Lithologische beschrijving			
Auteur(s):	Onbekend (bedrijf-dienst onbekend)	Betroikbaarheid:	goed
Kwaliteit:		Boormethode score:	Hoog
Score:	zeer goed		
Van(m) Tot(m) M Beschrijving			
0.00	1.00		grof zand, grijs, sterk vochtig
1.00	1.50		leem, plastisch, groen/grijs, verzadigd
1.50	2.50		leem, zeer fijn zandhoudend, grijs/groen, verzadigd
2.50	3.60		fijn zand, leemhoudend, grijs/groen, verzadigd
3.60	7.00		leem, zeer fijn zandhoudend, plastisch, grijs, verzadigd
Formele stratigrafie - 08/11/1996			
Auteur(s):	De Cecklaere, Marleen (Universiteit Gent)	Betroikbaarheid:	goed
Van(m) Tot(m) Beschrijving		Betroikbaarheid	
0.00	7.00	Q - Groep van Quaternaire afzetting	onbekend
Informele stratigrafie			
Auteur(s):	Onbekend (bedrijf-dienst onbekend)	Betroikbaarheid:	goed
Van(m) Tot(m) Beschrijving			
0.00	7.00	kwartair	

Lithological descriptions

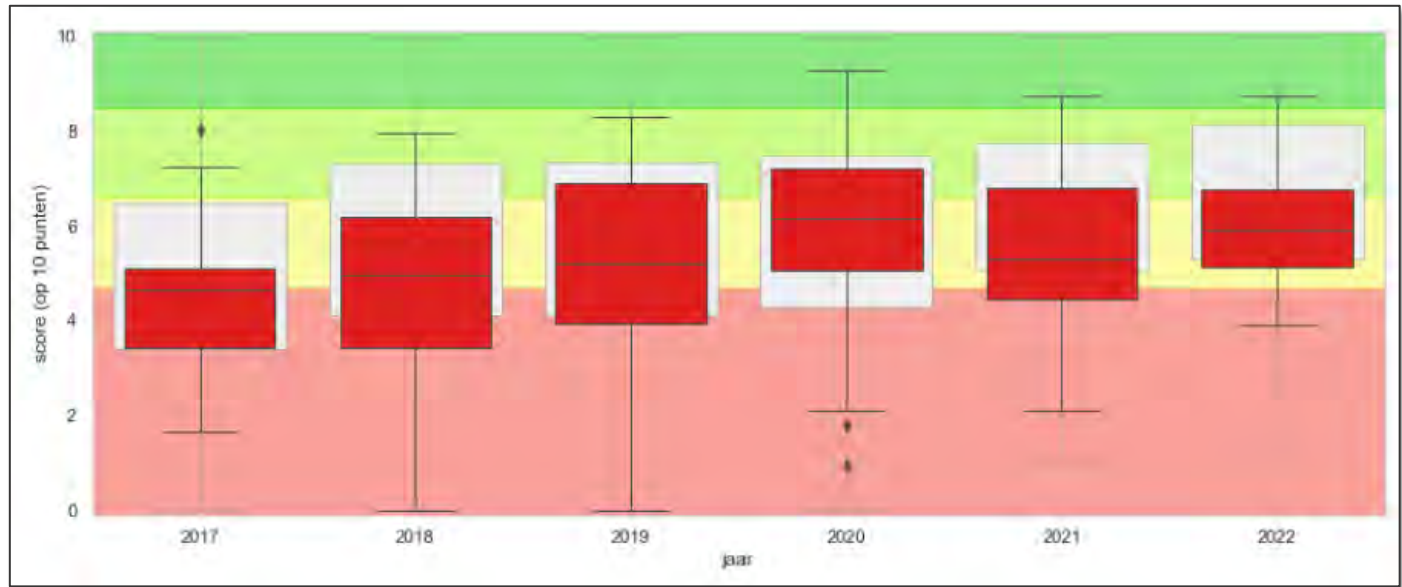
- ▶ 3 subscores:
 - Core elements: lithology, color, grain sizes
 - Sufficient detail
 - Number of described intervals
- ▶ 1 combined score

 De gemiddelde kwaliteitsscore voor uw lithologische beschrijvingen sinds 2021 is **9.0** (zeer goed)

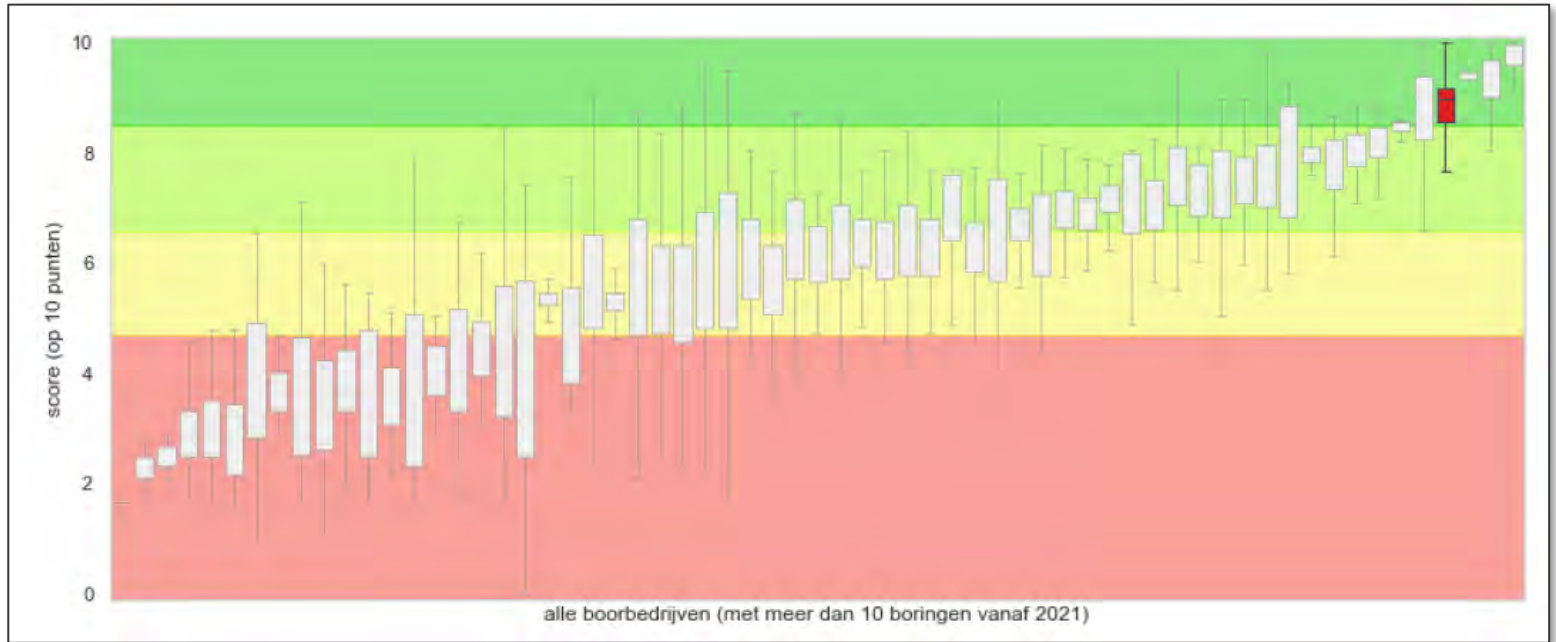
Lithological descriptions



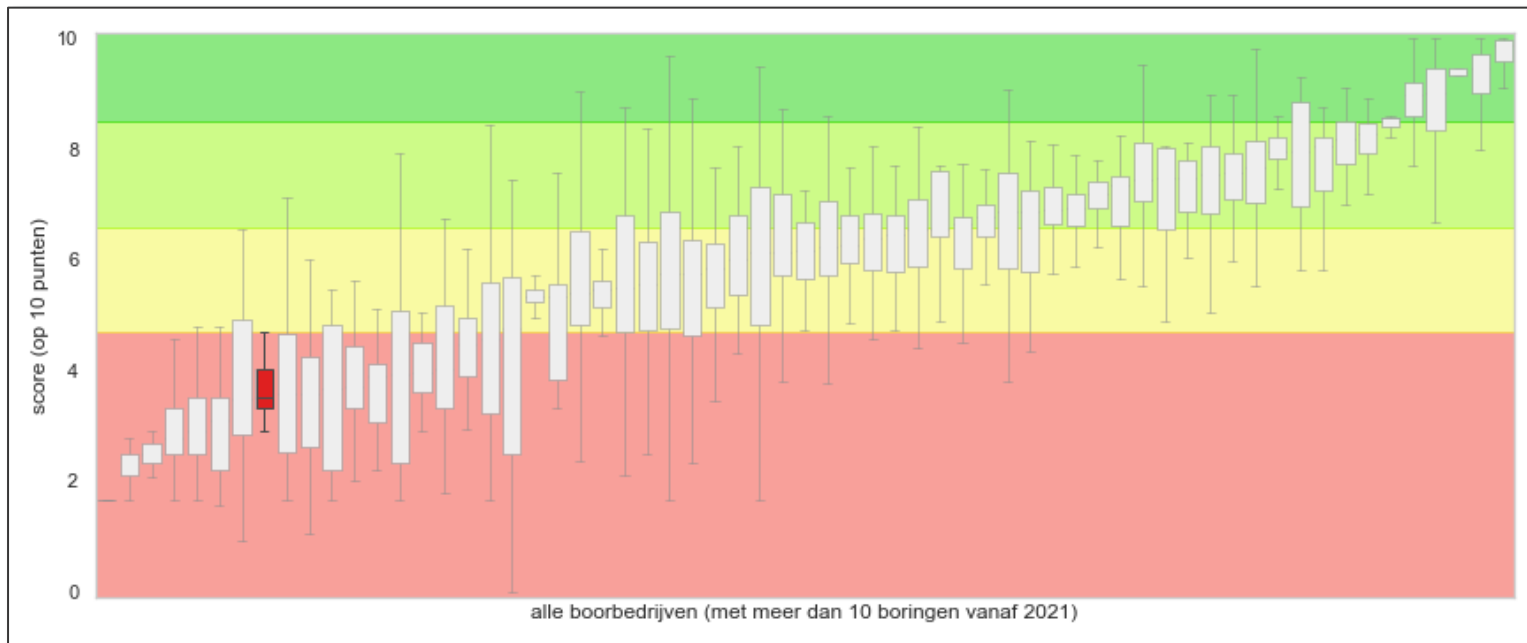
Lithological descriptions



Lithological descriptions



Lithological descriptions



Samenvatting



Only drilling activities in certified disciplines



All permit-requiring drilling activities were pre-announced



Many pre-announcements were too late



The lithological description is often missing

Appendixes

- ▶ Boreholes outside of Flanders,
- ▶ Boreholes with wrong XY,
- ▶ Reporting before drilling date
- ▶ Boreholes without depth,

Boringen met een foute XY

Onderstaande boringen hebben een X,Y die niet in de aangegeven gemeente ligt. Controleer of de opgegeven XY-locatie of de naam van de gemeente correct is. (Opgelet, voor sommige gemeenten die bij de laatste ronde van gemeentefusies van naam veranderden, kan de oude naam niet altijd juist herkend worden. Ook boringen op zee zullen in deze tabel terug te vinden zijn. Deze beide gevallen van boringen mag u negeren.)

permkey_boring	boomnummer	datum boring	x	y	gemeente
2017-149307	17074	03-02-2017	69333.0	211524.0	Bredene
2019-172508	190647	05-12-2019	142451.58	172308.6	Knokke-Heist
2020-173055	200474	15-06-2020	25803.0	196270.0	Veurne
2022-192683	210598	10-05-2022	54350.46	211849.07	Oudenburg
2020-172907	190849	13-01-2020	60217.48	166744.08	Menen
2020-175208	200414	18-08-2020	52080.22	208955.85	Gistel
2021-179443	200550	03-03-2021	67298.87	219108.98	Zuienkerke

Voorafmelding na de boring

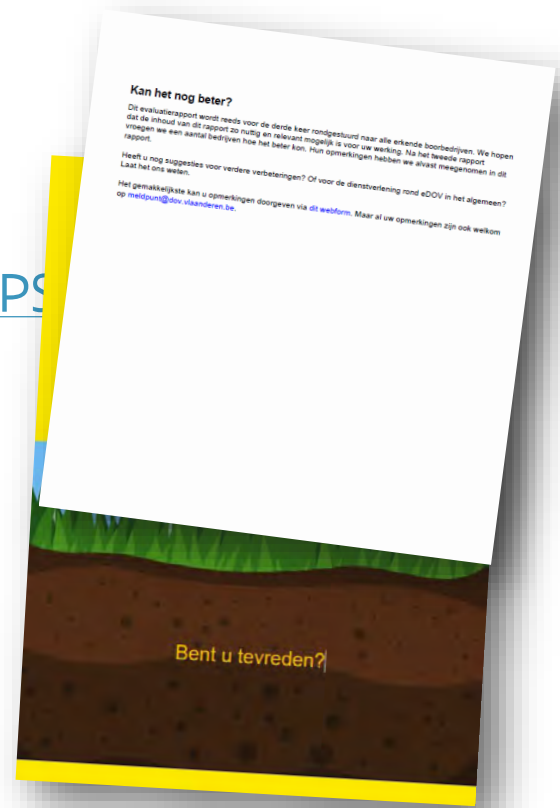
In onderstaande voorafmeldingen ligt de startdatum van de boring voor de datum van voorafmelding. De voorafmelding zou minstens twee dagen voor de start van de boring moeten zijn gebeurd.

permkey	voorafmeldingsnummer	datum voorafmelding	datum boring	opdrachtgever
2022-012936	210110	19-05-2022	18-05-2022	Claeys Bouwonderneming bvba
2022-011816	210755	09-02-2022	03-02-2022	Klaas Minne
2022-011959	210742	23-02-2022	13-01-2022	Tuinen Mol
2022-011848	210169	10-02-2022	17-09-2021	Rabaut Dirk
2021-009244	210080	25-05-2021	30-03-2021	Marechal Samuel
2021-008506	210159	01-04-2021	23-03-2021	Gemeente Jabbeke
2021-008485	190426	29-03-2021	19-02-2021	theys anthony
2021-008819	200757	22-04-2021	11-12-2020	Bouwmeester De Clercq

Feedback

- ▶ Via mail: dov@vlaanderen.be
- ▶ Via online form: <https://forms.gle/YdUgPS>

- ▶ 1 webinar (35 participants)
- ▶ 1 feedback session Q&A (5 participants)
- ▶ 11 reactions and questions via mail
- ▶ 1 reaction via online form
- ▶ 1 interview
- ▶ 1 registered complaint in ISO-system



Feedback

- ▶ 4 companies corrected their data
- ▶ SPAM-filters are probably blocking our initial mail
- ▶ Contact addresses of some companies were corrected

Next steps

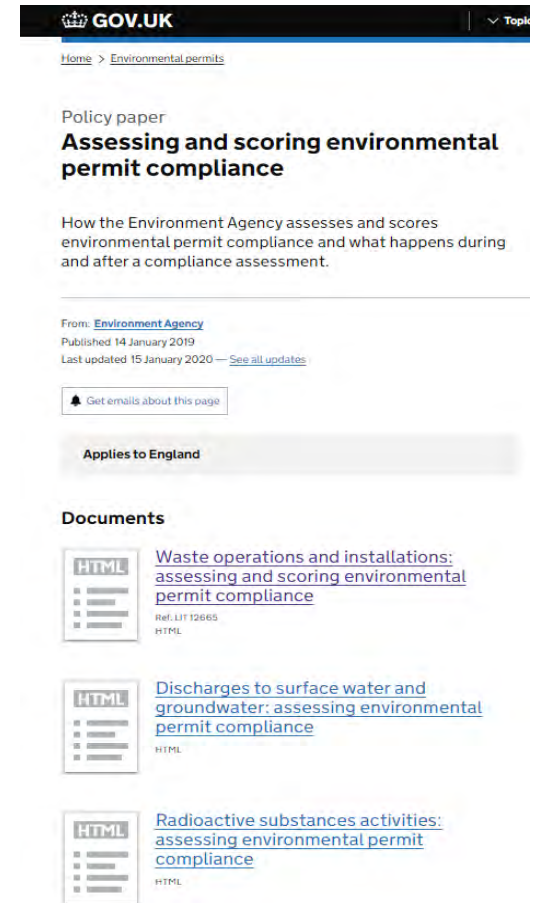
- ▶ From yearly to real-time:
 - Integrate scores and graphs on the company's login page,
- ▶ Publish the scores of companies,
 - Make suggestions to customers,
- ▶ Reduce the yearly fee of well-performing companies,
- ▶ Make reports accessible for inspectors,

Assessing and scoring environmental permit compliance

David Pugh
Future Regulation
September 2022

Assessing and scoring environmental permit compliance

- Applies to those within Environmental Permitting Regulations within England
- Parallel guidance for Waste and Installations, Discharges to Surface and Groundwater, and Radioactive substance.
- This presentation focusses on the scheme within Waste and Installations.
- The compliance classification scheme has existed since mid 2000's. The current guidance was published in 2019.
- The scheme helps us to be a consistent, transparent and proportionate regulator



The screenshot shows the GOV.UK website page for the policy paper 'Assessing and scoring environmental permit compliance'. The page includes a breadcrumb trail (Home > Environmental permits), a 'Policy paper' label, and the title of the document. A summary paragraph states: 'How the Environment Agency assesses and scores environmental permit compliance and what happens during and after a compliance assessment.' Below this, it lists the source as 'Environment Agency', published on 14 January 2019, and last updated on 15 January 2020, with a link to 'See all updates'. There is a button to 'Get emails about this page' and a section titled 'Applies to England'. A 'Documents' section lists three related HTML documents: 'Waste operations and installations: assessing and scoring environmental permit compliance', 'Discharges to surface water and groundwater: assessing environmental permit compliance', and 'Radioactive substances activities: assessing environmental permit compliance'.

Transparency

how we ensure our scoring is transparent and fair



Guidance and principles

- One set of guidance for both internal and external use
- Six principles for scoring, which are mirrored across the regime specific guidance documents



Public register and data

- Compliance assessments including scores are placed on our public register
- CCS database is published each year on open licence
- Regulating for People Environment and Growth



Communication

- Standardised reporting forms
- Includes explanation of reasons for non-compliance scores
- Details of how scores are used to calculate to fees

The principles

A photograph of a recycling facility. In the foreground, there is a large, dark pile of waste, including plastic bottles and other debris. In the background, a worker wearing a blue hard hat and a high-visibility yellow vest is standing next to a blue machine, holding a clipboard and looking at it. The facility has a corrugated metal roof and walls.

1. Record all non-compliances

2. Consolidation

3. Assess the reasonably foreseeable impact

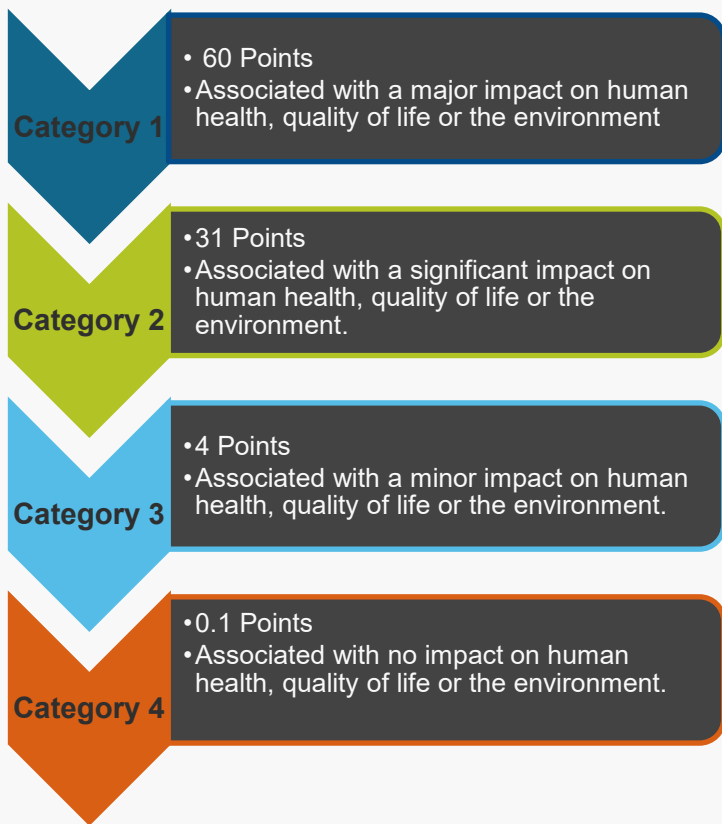
4. Assess the root cause of the original non-compliance

5. Suspend scores

6. Assess the category of non-compliance

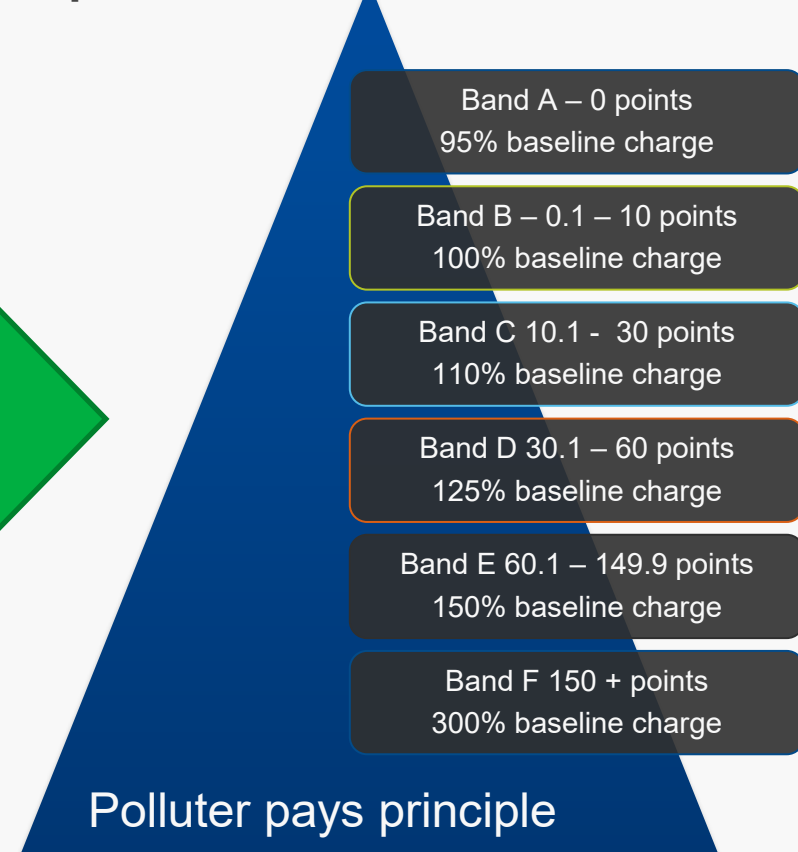
Scores, Compliance bands & Subsistence fees

Scoring




CCS points
totalled over
calendar
year

Compliance Bands



Recording and reporting non-compliance

- National Compliance Assessment Database (NCAD)
- Permit breaches are recorded against relevant criteria and permit conditions, the scores are indicative of their environmental impact and foreseeability of the breach.
- This creates a Compliance Assessment Report (CAR) form, which provides the operator with a clear indication of their performance, any scores against their permit and the action we expect them to take.
- Cat 1&2 breaches are automatically uploaded into our case management system for enforcement action and response

 Environment Agency		EPR Compliance Assessment Report		Report ID: [REDACTED]
This form will report compliance with your permit as determined by an Environment Agency officer				
Site	[REDACTED]	Permit Ref	[REDACTED]	
Operator/ Permit holder	[REDACTED]			
Date		Time in	15:49	Out 16:40
What parts of the permit were assessed	Permitted Area			
Assessment	Site Inspection	EPR Activity:	Installation: X	Waste Dp: Water Discharge:
Recipient's name/position	Site Owners			
Officer's name	[REDACTED]	Date issued	21/10/2011	
Section 1 - Compliance Assessment Summary				
This is based on the requirements of the permit under the Environmental Permitting Regulations (EPR). A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.				
Permit Conditions and Compliance Summary				Condition(s) breached
a) Permitted activities	1. Specified by permit:	C2		1.1:
b) Infrastructure	1. Engineering for prevention & control of pollution	N		
	2. Closure & decommissioning	N		
	3. Site drainage engineering (clean & foul)	C3		3.3.1:
	4. Containment of stored materials	N		
	5. Plant and equipment	N		
c) General management	1. Staff competency/ training	C3		1.1.3:
	2. Management system & operating procedures	C3		1.1.2:
	3. Materials acceptance	N		
	4. Storage handling, labelling, segregation	C3		3.3.1:
d) Incident management	1. Site security	N		
	2. Accident, emergency & incident planning	C3		1.2.1:
e) Emissions	1. Air	N		
	2. Land & groundwater	N		
	3. Surface water	N		
	4. Sewer	N		
	5. Waste	N		
f) Amenity	1. Odour	C3		3.4.1:
	2. Noise	N		
	3. Dust/fibres/particulates & litter	N		
	4. Pests, birds & scavengers	N		
	5. Deposits on road	N		
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	N		
	2. Records of activity, site diary, journal & events	N		
	3. Maintenance records	N		
	4. Reporting & notification	N		
h) Resource efficiency	1. Efficient use of raw materials	N		
	2. Energy	N		
KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk), A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance - not scored MSA, MSB, TCM = Management System condition A, Management System Condition B and Technically Competent Manager condition which are environmental permit conditions from Part B of scheduled EPR (see notes in Section 3/6).				
Number of breaches recorded		7	Total compliance score (see section 3 for scoring scheme)	55
If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response				

Assurance

how we make sure our scheme is being followed



Training

- Mandatory e-learning course for all regulatory officers



Reporting

- NCAD allows reporting to compare scoring across geographical areas, sectors and officers
- CAR forms are published on the public register.

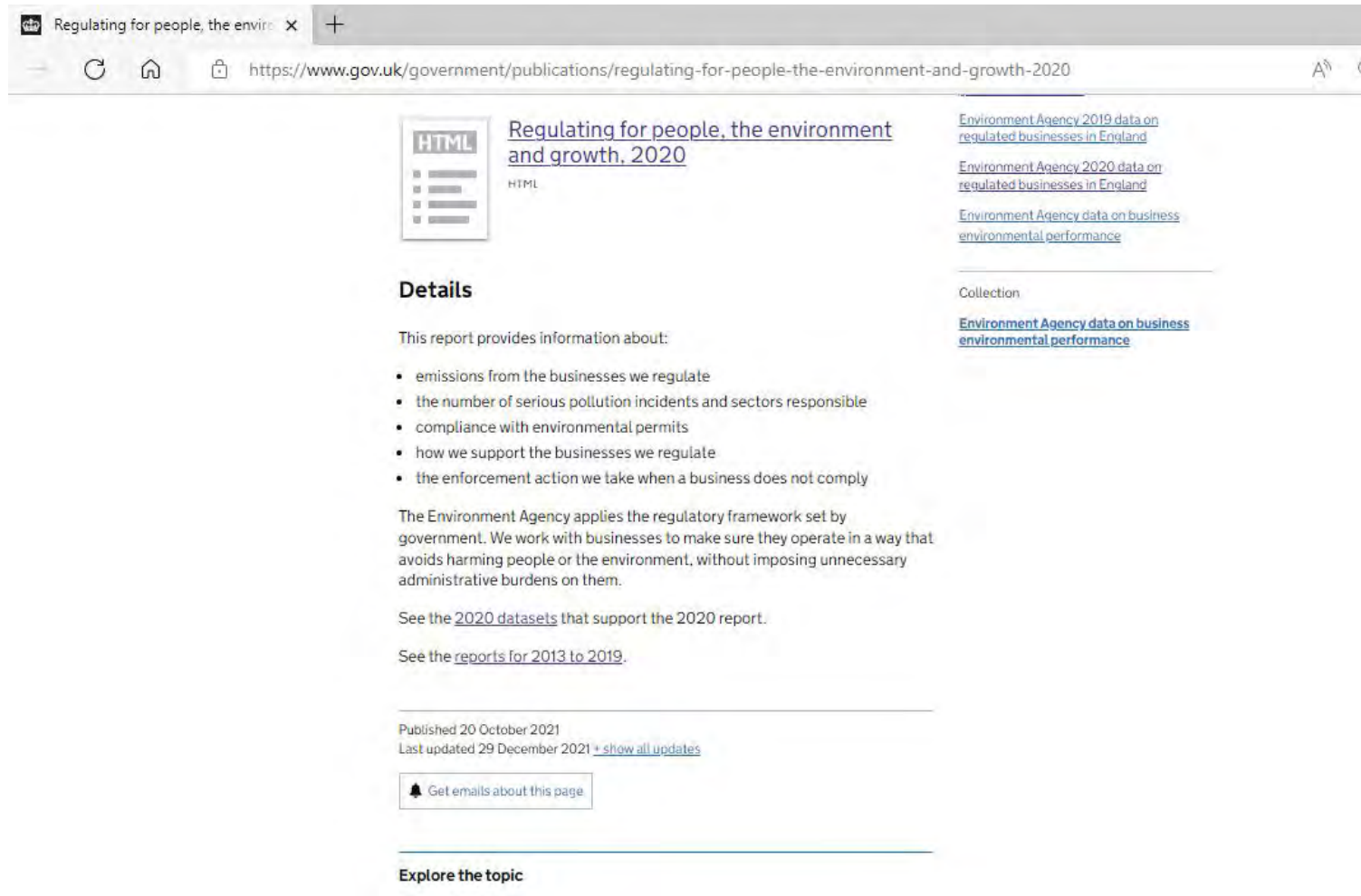


Open to challenge

- Our procedures enable operators to challenge our scoring and review our consistency
- Data is published to the public

Reporting

Regulating for people the environment and growth



Regulating for people, the environment and growth, 2020

HTML

Details

This report provides information about:


- emissions from the businesses we regulate
- the number of serious pollution incidents and sectors responsible
- compliance with environmental permits
- how we support the businesses we regulate
- the enforcement action we take when a business does not comply

The Environment Agency applies the regulatory framework set by government. We work with businesses to make sure they operate in a way that avoids harming people or the environment, without imposing unnecessary administrative burdens on them.

See the [2020 datasets](#) that support the 2020 report.

See the [reports for 2013 to 2019](#).

Published 20 October 2021
Last updated 29 December 2021 [+ show all updates](#)

 Get emails about this page

[Explore the topic](#)

[Environment Agency 2019 data on regulated businesses in England](#)

[Environment Agency 2020 data on regulated businesses in England](#)

[Environment Agency data on business environmental performance](#)

Collection

[Environment Agency data on business environmental performance](#)

Reporting:

Regulating for people the environment and growth



Well run sites

- 97% permit compliance rate at industrial sites with permits since 2013 (5 year moving average)

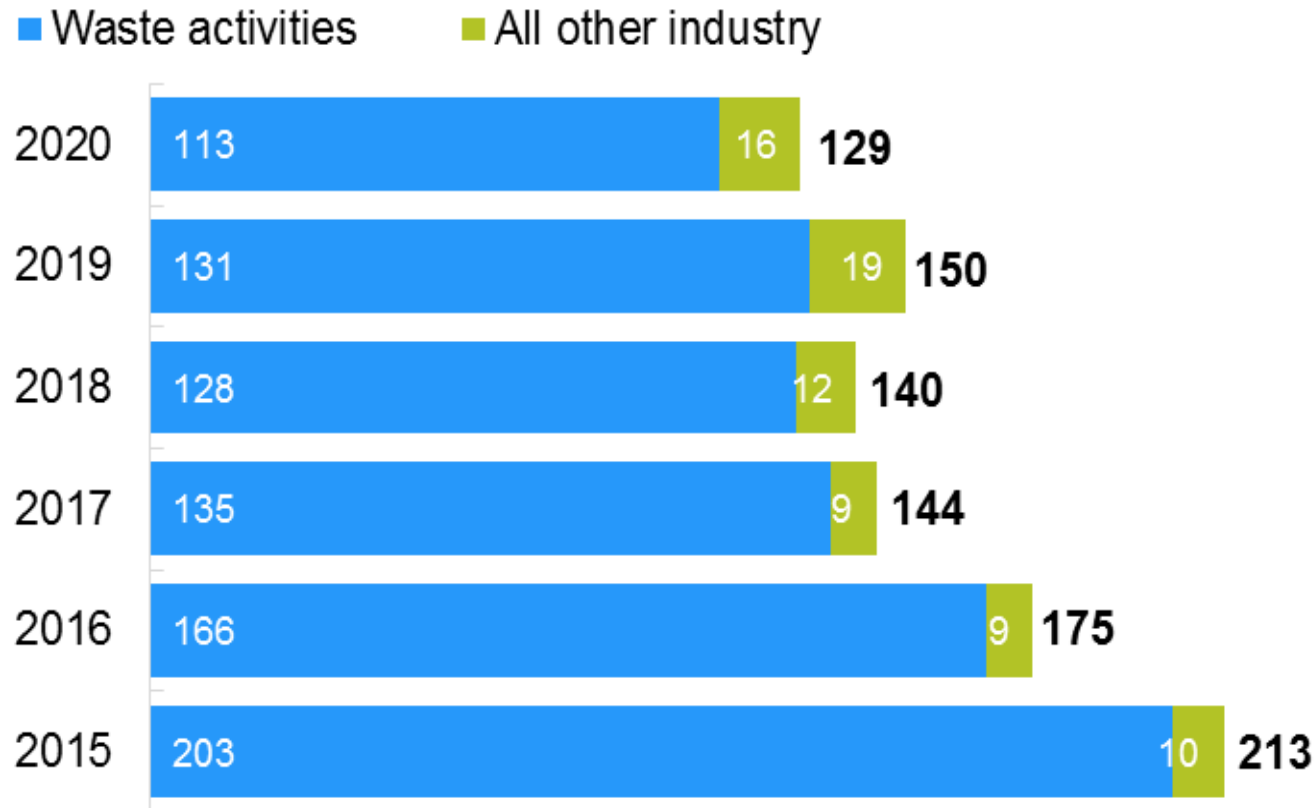
Poor performance



- Average 400 sites non-compliant over past 5 years
- In 2020 there were 129 persistent poor performers
- These sites can have a significant negative impact on communities and the environment

Reporting:

Persistent poor performers (band D,E,F more than 2yrs)



Questions





Flanders
State of
the Art

Compliance check by the private sector on the flemish waste regulations

WE MAKE
TOMORROW
BEAUTIFUL

OVAM

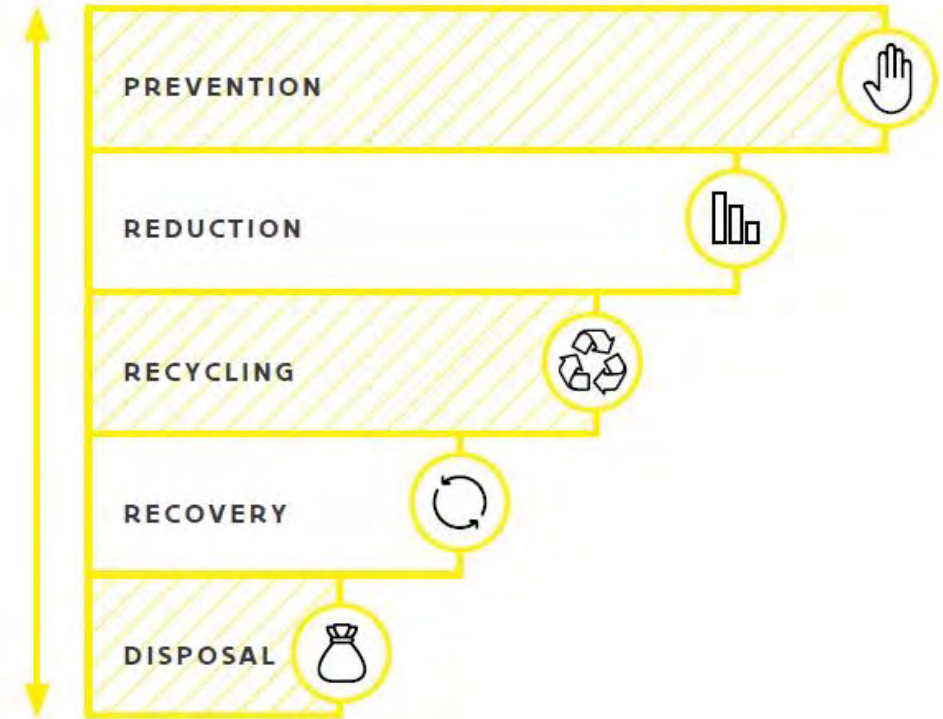
Compliance check by the private sector on the waste regulations

- ▶ Intro
- ▶ Sorting obligations of companies
- ▶ Extended producer responsibility under the WEEE directive and the battery directive

OVAM – Flemish waste agency

- ▶ OVAM is the Public Waste Agency in the region of Flanders (Belgium).
- ▶ Since 1981, OVAM has developed Flanders' policies on waste management, sustainable materials management and the remediation and prevention of soil pollution.
 - sustainable materials management is based on the the materials hierarchy
- ▶ Legislation:
 - The Materials Decree is the basis for the sustainable materials management (implements the European Waste Framework Directive (EC) 2008/98).
 - The Flemish Regulation on the sustainable management of material cycles and waste (Vlarema) contains more detailed regulations.

MOST PREFERRED



LEAST PREFERRED

Compliance check by the private sector on the Flemish waste regulations

- ▶ Intro
- ▶ Sorting obligations of companies
- ▶ Extended producer responsibility under the WEEE directive and the battery directive

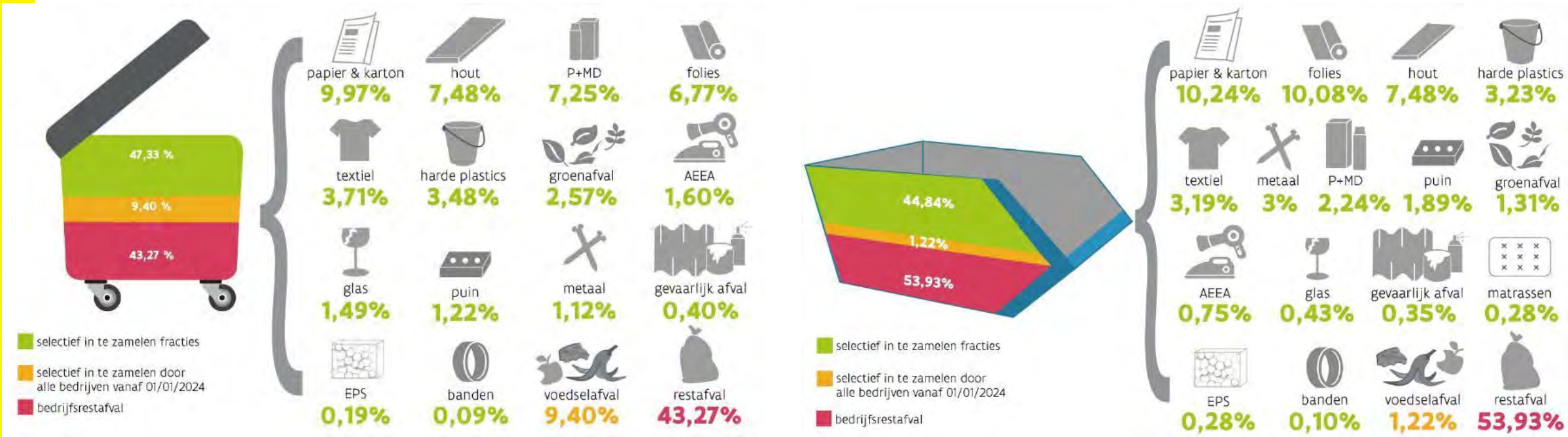
Waste regulations in Flanders

- ▶ Flemish waste regulations (Vlarema) state that:
 - Companies are required to sort certain waste streams at the source
→ These streams are not allowed in the residual waste
 - Companies must call upon private waste collectors to pick up their waste
 - If the residual waste contains too many recyclable materials, it is prohibited to incinerate it



Waste regulations in Flanders

► Despite many communication and sensibilization campaigns, sorting analysis shows that companies still do not comply with their sorting obligations.



Obligations for private waste collectors in Flanders

- ▶ Private waste collectors have an important position in the chain.
 - They are in direct contact with the waste producer (companies) and determine what happens to the waste after collection.
- ▶ Therefore, it was legislated in the Flemish waste regulations (Vlarema 8; September 2021) that private collectors must adopt a 'code of good practice' when collecting residual waste from companies. This code consists of three main aspects, namely:
 - 1) They must inform their customers correctly about the sorting obligations
 - 2) During the collection of residual waste, the collector must visually inspect the waste for sorting errors
 - 3) The residual waste must meet certain results requirements before it may be incinerated



Obligations for private waste collectors

1) inform customer

- ▶ Inform their customers correctly about the sorting obligations
 - Private collectors must have a contract with customers where they collect residual waste, in which they state the sorting obligation.
- In this way one company (private collectors) is obliged to inform another company (waste producer) about their legal obligations



Obligations for private waste collectors

1) inform customer



► Pros

- We are sure that the customer has been correctly informed at least once.
- The OVAM or environmental inspection can easily request this contract at any time
 - e.g. during the preparation of an advice for an environmental permit
 - not being in possession of this contract may mean that:
 - the private collector did not correctly inform their customer;
 - the company does not properly collect its waste separately

► Cons

- Does not guarantee that the company will properly sort its waste

Obligations for private waste collectors

2) visual inspections



Collection of residual waste at a company



Visual inspection of the container on sorting errors



✓ Compliant with sorting obligation



X Non-compliant with sorting obligation

hazardous waste?

yes

no



Refuse waste



+



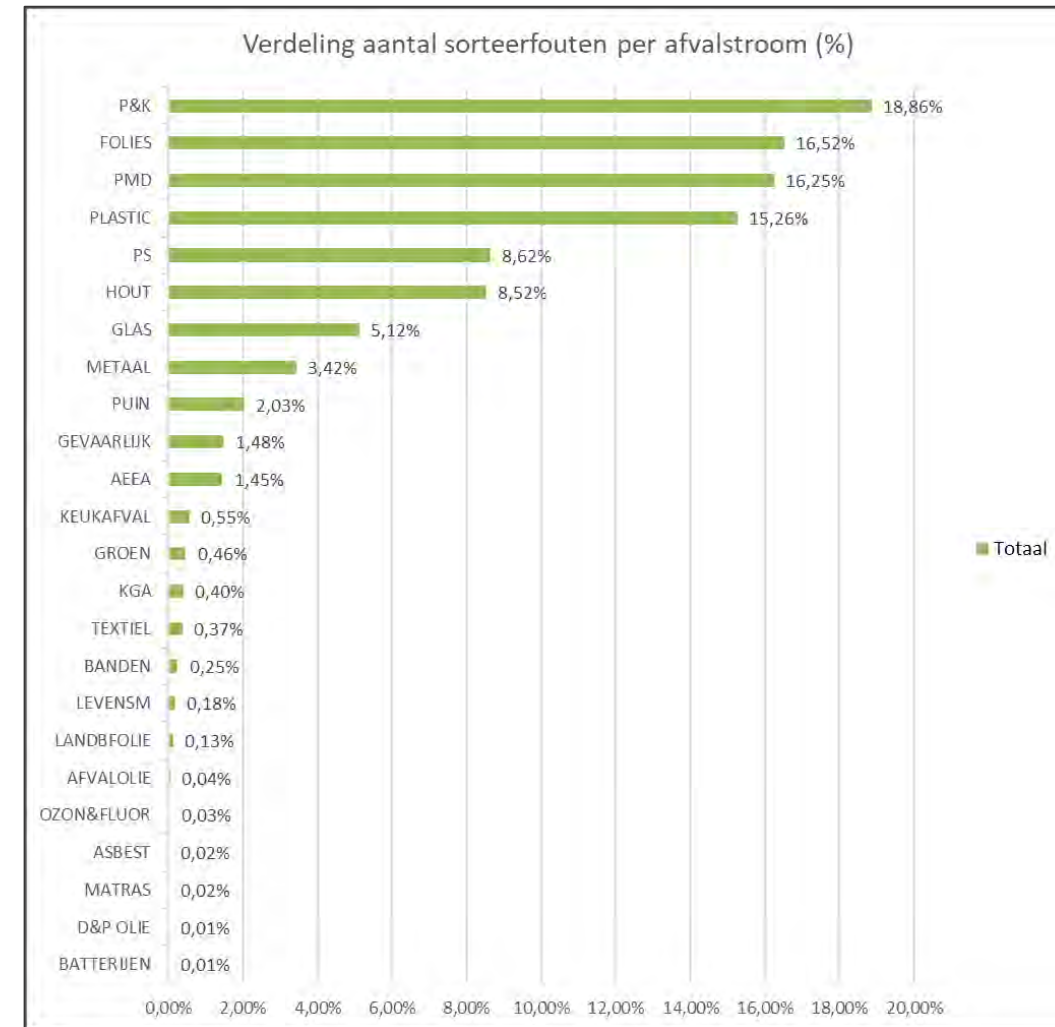
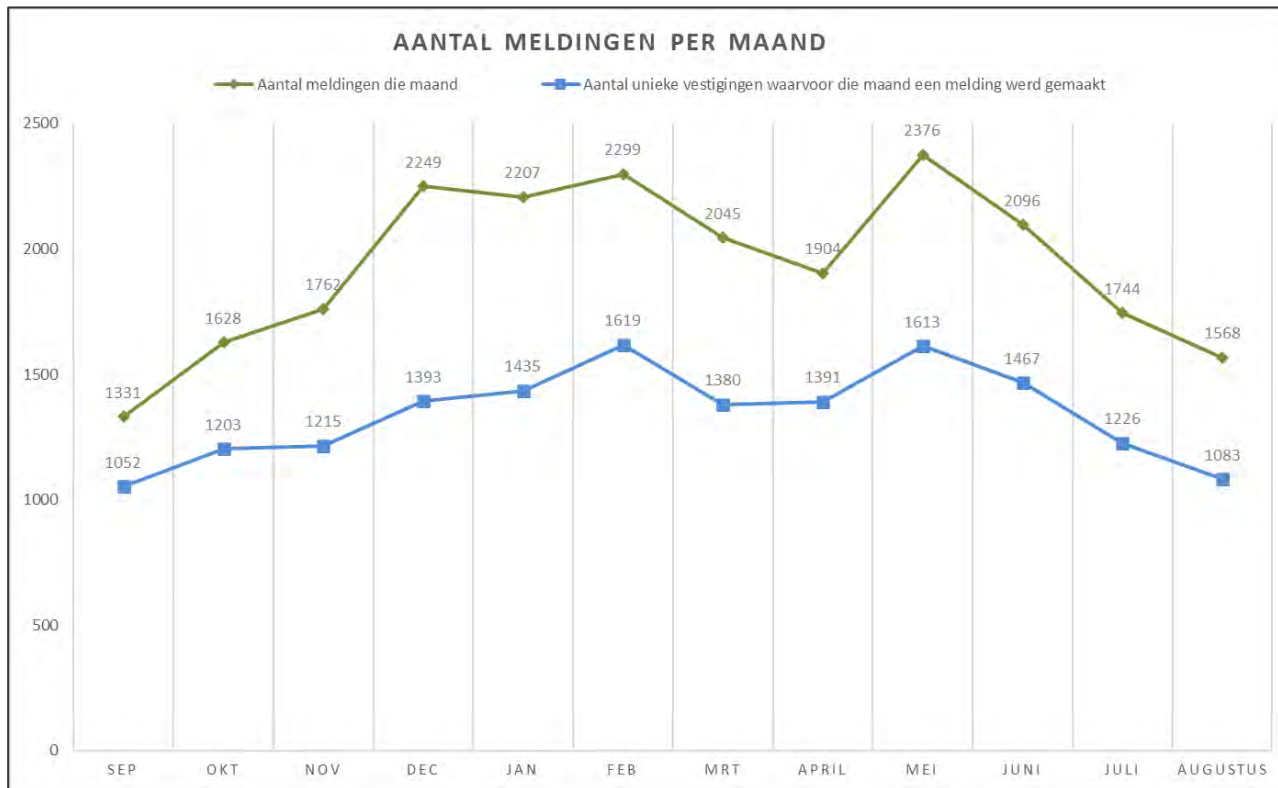
Register error* and inform customer

*private collectors can choose to do this via their own register OR via an online platform managed by OVAM

Obligations for private waste collectors

2) visual inspections

- ▶ Already 23.209 non-conformities registered in the online OVAM platform (by 13 private collectors)
 - 7,204 unique company locations



Obligations for private waste collectors

2) visual inspections



► Pros

- More inspections at companies on sorting obligation
- Based on non-conformities, law enforcers can conduct targeted inspections at companies
- OVAM can use information to direct policy
 - identify which sorting errors are most common
 - identify the sectors in which most sorting errors are made
- Private collectors can follow up customers who made many sorting errors within a certain timeframe
 - By tracking which sorting errors are made, this offers opportunities (f.e. rental of additional containers)

► Cons

- Private collectors report that they sometimes lose customers to collectors that do not follow this code of good practice.
 - This is why OVAM conducts administrative checks on collectors. Based on this check, enforcers can conduct targeted checks of private collectors
- Takes time and money to implement in business operations of the private collectors
 - Requires training and follow-up on the drivers that collect the waste
 - => private sector of collectors created photo book to train drivers
- The result of the visual inspection is highly dependent on the driver (highly subjectif)
 - => industry conducts research on AI systems which are less subjectif

Obligations for private waste collectors

3) residual waste must meet results requirements

- ▶ Residual waste must meet certain result requirements before it may be incinerated
 - result requirements consist of a list of waste streams. For each stream a maximum quantity is defined that may remain in the residual waste
 - the result requirements are achieved by:
 - correct sorting at the source (compliant)
 - if this was not the case (non-compliant), the waste must be post-sorted



Obligations for private waste collectors

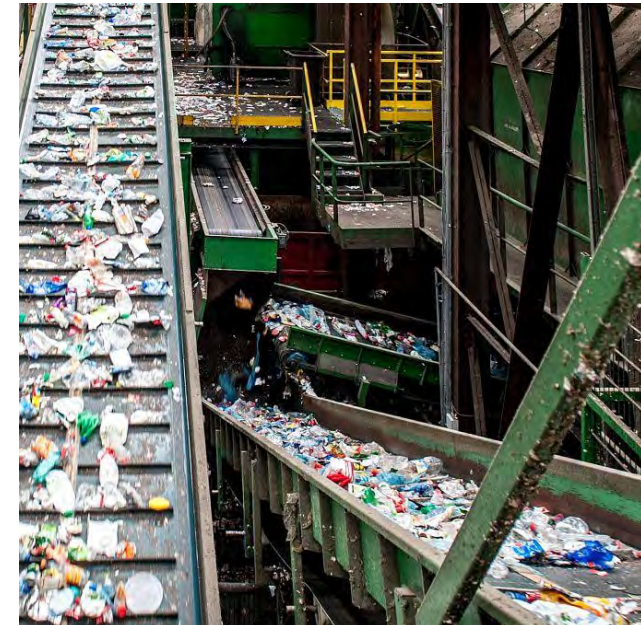
3) residual waste must meet results requirements

► Pros

- We avoid the incineration of recyclable materials
- Post-sorting of waste costs extra money
 - Must encourage collector to ensure its customers sort correctly at source

► Cons

- We have to ensure that the focus remains on sorting waste at the source
 - Private collectors started investing in extra sorting lines for residual waste
 - Sorting waste at the source provides higher quality materials than post-sorting



Obligations for private waste collectors

Conclusions

- ▶ Greatest benefit is:
 - increased monitoring of sorting obligations at companies, due to the compliance check by the private collectors
 - Law enforcers can perform more targeted checks by using the non-conformities that have to be registered by the private collectors
- ▶ It will be a challenge to ensure that all private collectors follow these new rules.
- ▶ Currently too early to estimate the impact of these additional obligations for private collectors of residual waste. We hope that over time the effect will become visible
 - by a decrease in the amount of industrial residual waste and
 - less recyclable materials in the residual waste

Compliance check by the private sector on the waste regulations

- ▶ Intro
- ▶ Sorting obligations of companies
- ▶ Extended producer responsibility under the WEEE directive and the battery directive

Extended producer responsibility under the WEEE directive and the battery directive



Waste stream followers for waste batteries and WEEE (Waste from electrical and electronic equipment)

OVAM – Flemish waste agency

- ▶ TEAM TERREINCONTROLE (FIELD CONTROL)

- 3 subdivisions

- × Litter enforcers

- × Contol team (8 Supervisors)

- UPV waste streams (WEEE, batteries, car wrecks, waste oil, car tyres) and earthworks (excavated soil)

- × 2 waste stream followers for waste batteries and WEEE

How it started

Need for more enforcement of the Vlarema on certain waste streams:

1. Problem of free riders
2. Collection target of 65% for electronic equipment not reached
3. Still a lot of illegal or unreported WEEE streams
4. Batteries and WEEE still end up in other waste
5. Shortage in materials ask for better recycling

How it started



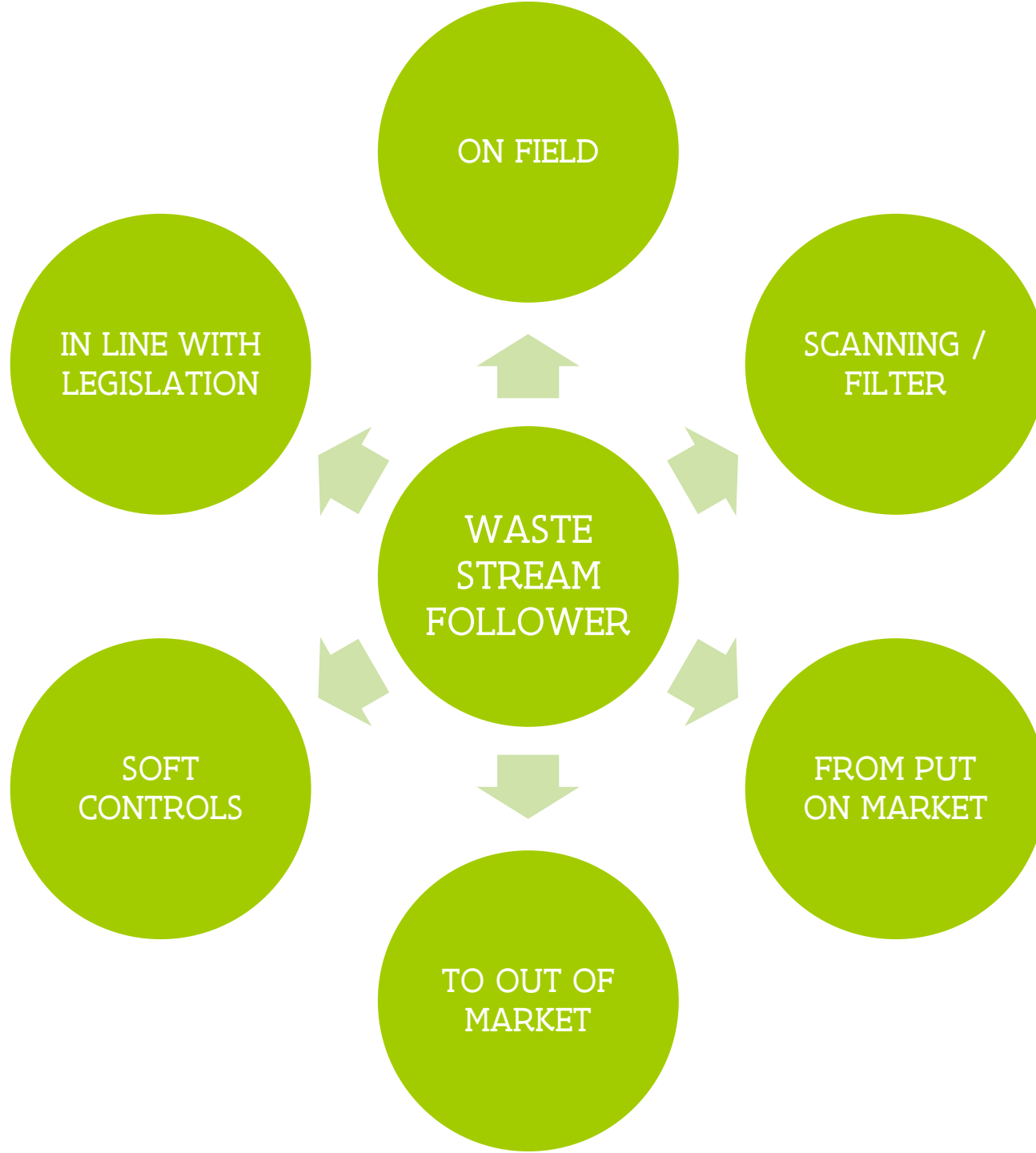
Collaboration between OVAM and Recupel (WEEE) / Bebat (batteries)

Recupel and Bebat are both collective scheme

Creation of new type of 'control agent' for both waste streams



WASTE STREAM FOLLOWER



Extended Producer Responsibility

Belgium has been an early adopter of **Extended Producer Responsibility (EPR)** policies. Belgian EPR policies are based on **2 obligations**:

- **duty of acceptance**

Producer must take back the end-of-life products it has put on the market.
from consumers
free of charge,

- **take-back duty**

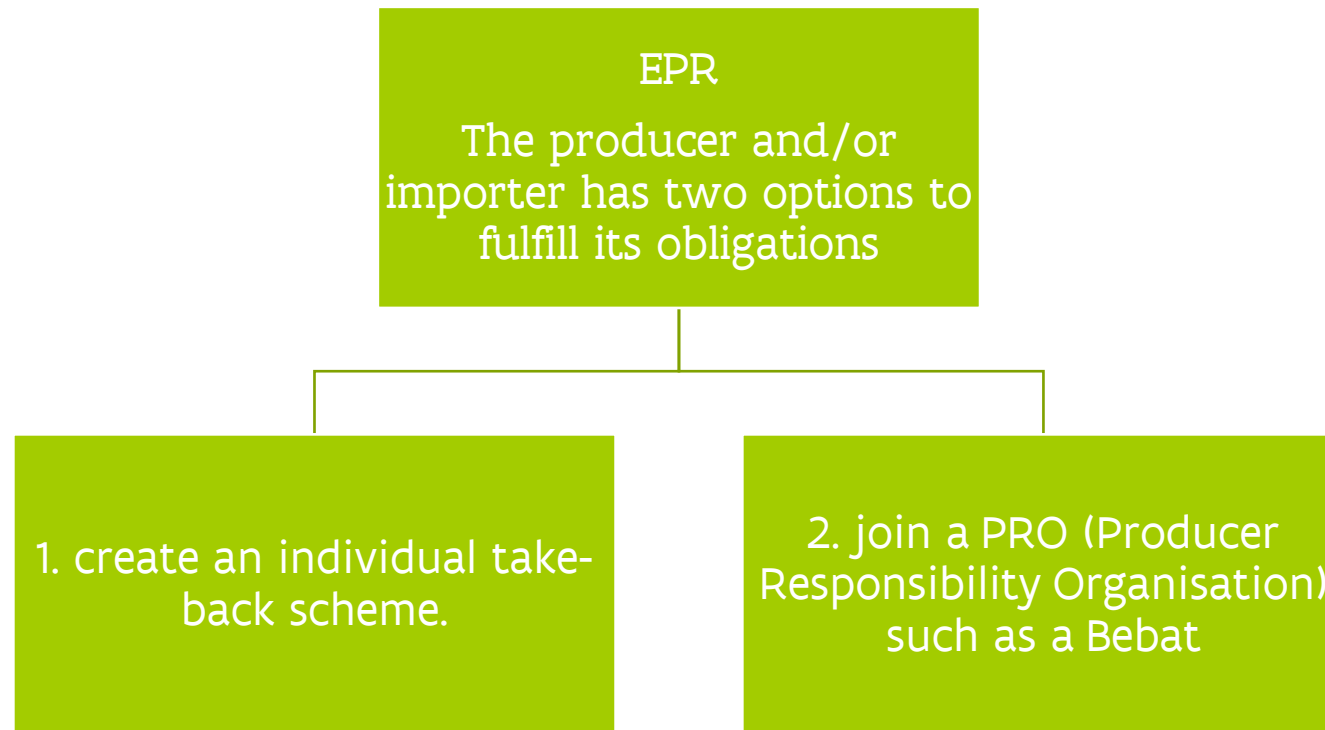
packaging waste.
producer must achieve recycling targets.

EPR for waste batteries

- ▶ Waste batteries and accumulators are subject to **duty of acceptance** .
- ▶ the duty of acceptance means that the producer and/or importer of batteries or accumulators is obliged to accept waste batteries and accumulators free of charge and provide for their recycling. The producer is responsible for financing sensitization, collection, treatment and recycling.
- ▶ The duty of acceptance is based on **European regulations**.

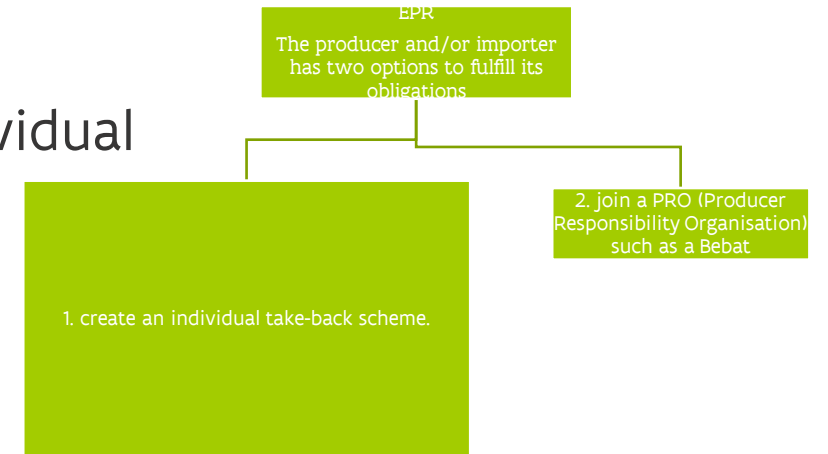


EPR for waste batteries



1. create an individual take-back scheme.

- ▶ In this case the producer or importer must submit an individual take-back scheme to OVAM for approval.
- ▶ This plan should describe how the producer or importer individually meets the **duty of acceptance**.
- ▶ In real terms, this means that the producer/importer must be responsible for raising awareness, collection and recycling of batteries placed on the market by the company.
- ▶ This should be reported annually to OVAM.



2. Join a PRO, Bebat

- ▶ In this case the PRO is responsible for the practical implementation of the take-back duty.
- ▶ The PRO is financed through different types of contributions or membership fees, which are paid by the producer to the PRO, such as Bebat, when placing a battery on the market. Depending on the type of contribution, the PRO takes over certain tasks from the producer.
- ▶ Bebat was founded by the producers and importers of batteries and accumulators and is the PRO for all waste batteries and accumulators.



What a PRO does?

- ▶ The PRO is responsible for the practical implementation of the take-back duty.
- ▶ Bebat first contacts the free-riders and informs them about the duty of acceptance.
- ▶ If the companies do not comply with this legislation, Bebat will submit a list of the free-riders to OVAM.
- ▶ Important to note, Bebat does not affect the operation of the OVAM.
- ▶ As stream followers, we are paid by the PRO(Bebat and Recupel) but we work completely independently of the PRO's.

▶ (for more information please visit <https://www.bebat.be/en/b2b/take-back-obligation>)



Awareness-raising & prevention



Recycle



collection



Report to the authorities



Recycling together is better for nature

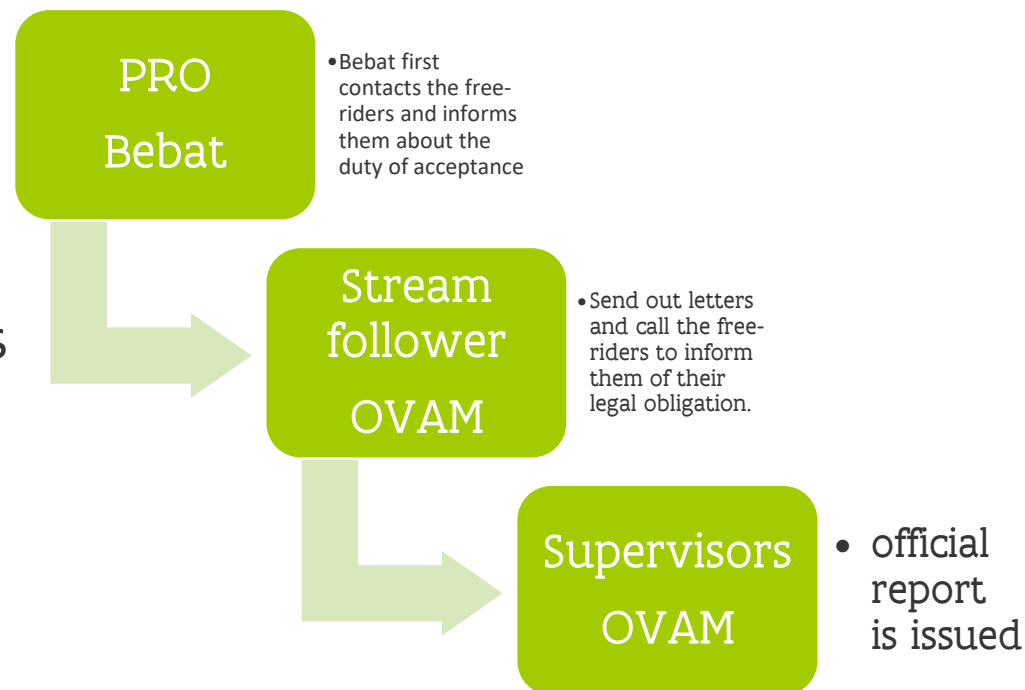
What a Stream followers does?

- ▶ We send a registered letter about the acceptance duty. This informs them of their legal obligation. They are given a deadline to comply with this legislation. If they have foreign suppliers who are not affiliated with Bebat, they must join Bebat.
- ▶ We call the free-riders to inform them of their legal obligation. We also visit Belgian companies.
- ▶ Compliance promotion is our main task as a stream follower.
- ▶ If the free-riders think that the legislation does not apply to their company, they must prove that they do not put electrical and electronic devices and/or batteries on the market. This can be done using their supplier list and invoices.



Further follow-up by supervisors

- ▶ Stream monitors pass documented files to supervisors for further follow-up.
- ▶ If the free-rider still does not comply with this legislation an official report is issued.
- ▶ Cluster sanctioning and counseling of the environment department will issue a fine to this.



Stream follower WEEE

- ▶ Mainly Out of Market
- ▶ Visit companies who are collecting, recycling, re-use waste
- ▶ Give info for better collection and recycling of e-waste
 - Proper collection
 - Registration
 - Reporting on BeWeeee









<https://www.technicopharma.com/machines/serialisation-peripherals-carton-turning-device/27>



2) DPX afzuigmachine voor lazerprinten.

<https://www.domino-printing.com/nl/products/d-series>





OX
505

RICOH
PRO C 5100S

KYOCERA
KYOCERA 1620

MEER PRODUCTEN

PRODUCTEN VAN ALLE MERKEN

Canon

Triumph-Adler



KYOCERA



Actors start to know BeWeee better

More correct reporting and more actors who are reporting

2020:

- 457 ton new reports
- 110 ton rise already reporting companies
- More then 1100 ton rise in reporting from start

re-inspection show better treatment of Weee

Registration of Weee in waste register improving

Rijlabels	IT	2019	2020	2021
E		486.400	449.940	462.180
O			383.805	238.998
V		120.237	264.436	260.324
C		25.320	54.500	74.800
G		50.369	38.350	58.990
V		7.489	28.490	3.700
JM		42.843	27.774	26.090
C		25.766	23.850	
C			23.260	28
Ex		32.448	20.922	52.663
D		13.860	18.320	
B		14.689	17.001	7.436
R		19.180	13.280	40.540
B			11.620	6.852
M			11.220	
A		1.992	8.918	2.382
Te		3.720	8.770	4.280
C		7.400	7.840	6.940
V			7.420	8.140
G		5	5.900	1
V			3.774	276.464
R		5.297	3.090	
V		1.100	1.920	4.080
va			1.730	
C		779	814	65.600
D		3.203		2.126
V		7.945		
Sa				149.388
O		4.967		
A				2.519
Lo				44.800
V		3.100		8.247
G				3.240
K				1.150
tr				840
Sp				2.490
V				3.760

Thank you for your attention!

OVAM

The Public Waste Agency in the region of Flanders (Belgium)

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- 2800 Mechelen
- T 015 284 284
- F 015 203 275
- www.ovam.be
- info@ovam.be





Annex II. Presentations of Day 2 – Compliance Promotion –
broadening the perspective



Content:

- **Presentation 10: Michael Barrette - Enforcement Targeting and Data Division, US EPA**
It was a real time demonstration of ECHO. For that reason, there is no presentation available. Here is the link to go to ECHO: <https://echo.epa.gov/>
- **Presentation 11: Amy Porter - Office of Enforcement and Compliance Assurance, US EPA**
- **1 slide:** Compliance promotion and the proposal for a new Environmental Crime Directive
- **Presentation 12: Simon Bingham - Scottish Environmental Protection Agency (SEPA), United Kingdom**

US EPA Compliance Promotion



September 29, 2022

Amy Porter, Senior International Advisor

US EPA Office of Enforcement and Compliance Assurance

Presentation Overview

Overview of US EPA enforcement and compliance promotion and enforcement activities and tools with examples

Strategic Deployment of compliance promotion tools:

- Theories of compliance behavior
- Basic principles of enforcement escalation and deterrence
- Policies, guidance and practice

Compliance Promotion Terminology

Activities or ‘Tool Categories’ below each include a number of specific tools:

Compliance Assistance – outreach, education

Compliance Incentives – policies/programs that provide concrete benefits when certain compliance objectives are met (e.g. reduce penalties if conditions are met)

Compliance Monitoring – on site, off-site, creative information gathering

Transparency – publicly available data on facility compliance increases accountability

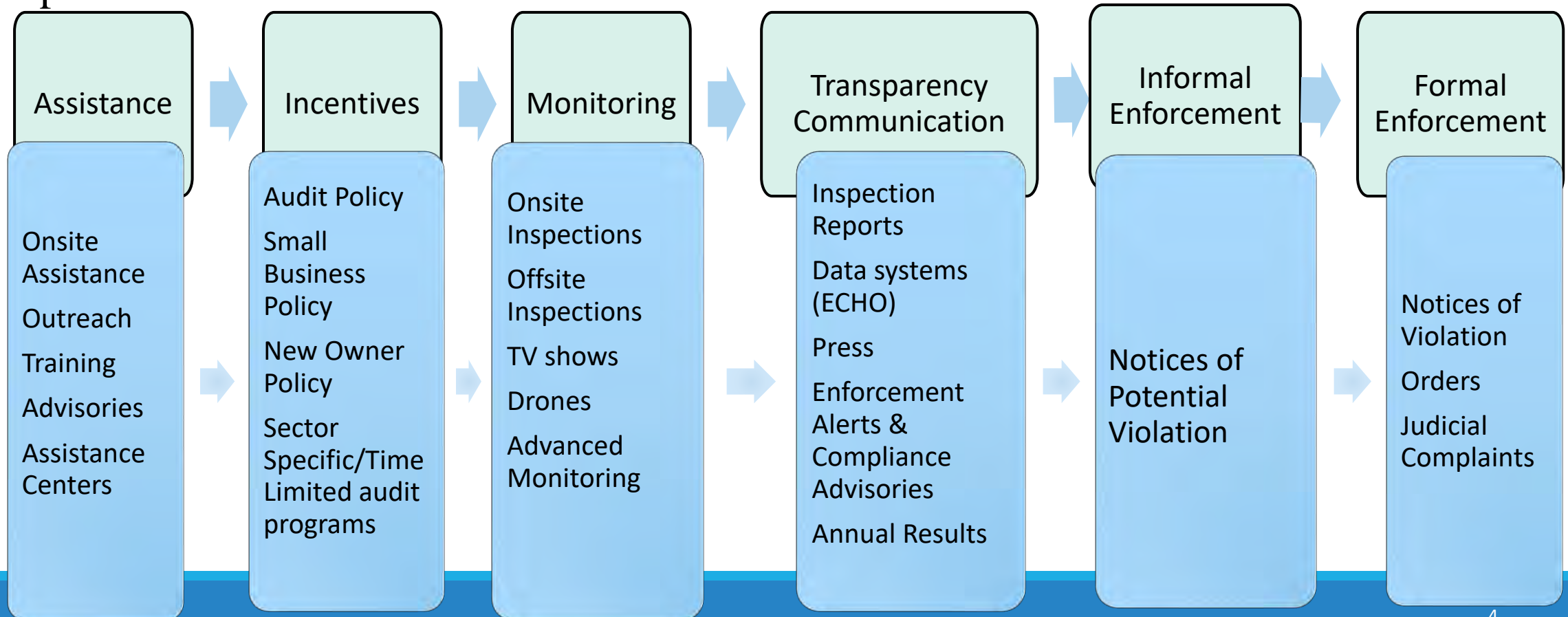
Communication – press about enforcement creates deterrence

(Related but not a tool per se - **Enforceable and Effective Rules and Requirements** – see checklist for developing effective general requirements found in the 2009 Enforcement [Principles Handbook](#))

Activities and Tools

Activities/tools types = yellow

Specific tools = blue



EPA Compliance Promotion Tools

Links to examples of specific compliance promotion tools:

Compliance Assistance – [EPA Assistance Centers](#)

Compliance Incentives - [Audit Policies](#)

Transparency– [Enforcement and Compliance History Online](#)

Communication – [Compliance Advisories and Enforcement Alerts](#)

Theories of Compliance Behavior

Rationalist Theory – regulated actors act for their own self-interest (if it is cheaper to violate, they will violate.)

- Address this through compelling compliance through deterrence – created when there is real or perceived belief there is a high probability of being caught, responses will be swift, certain and fair, and punishment will outweigh the benefit

Theories of Compliance Behavior (con't)

Normative Theory – regulated actors act in good faith if they know the rules and believe them to be fair

- Address this through encouraging compliance through compliance promotion

Theories of Compliance Behavior (con't)

Combining these approaches of compliance promotion & enforcement are referred to as the carrot and stick approach.



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Why Does the Regulated Community Comply?

- The majority of regulated entities comply when there is the expectation of some action by the government. Bell curve – smaller groups comply regardless and don't comply regardless.
- The belief that there is a credible threat of enforcement.
- Belief that if caught, the punishment will outweigh the benefit.



Regulated Community

Three groups –

1. Those most likely to comply
2. Those who are equally likely to comply or not comply
3. Those least likely to comply



- Normally follows a bell curve
- Regulated community can be divided into three groups
 - Size changes with different regulated communities
 - Size also changes temporally

Affect of Fines on Compliance

Quantitative studies show that fines:

- reduce immediate environmental harm
- improve future environmental performance at the facility (i.e. generate specific deterrence).
- spillover to improve environmental performance at other facilities in the same jurisdiction as the sanctioned facility via a regulator reputation effect (i.e. generate general deterrence).
- Sometimes induce facilities to reduce pollution below permitted levels (i.e. generate beyond compliance effects).

(Literature reviewed in Cohen 1998; Gray & Shimshack 2011; Shimshack 2014. Influential early contributions include Epple & Visscher 1984; Cohen 1987; Magat & Viscusi 1990.)

Affect of Fines on Compliance

Higher formal penalties (bigger fines) increase compliance, often at a diminishing rate.

- A. Increasing the typical fine by (say) \$2000 ↑ compliance.
- B. Further increasing the typical fine by another \$2000 ↑ compliance, but by less than the amount in (A).
- C. If there are trade-offs between the fine amounts and the number of penalties, more frequent penalties may generate more overall deterrence than a few large penalties.
- D. For many reasons, entities can be induced to comply even when penalty amounts seem low... provided fines are imposed when violations occur.

(Literatures reviewed in Cohen 1998; Gray & Shimshack 2011; Shimshack 2014. Important early work includes Epple & Visscher 1984; Cohen 1987; Magat & Viscusi 1990. See also Shimshack & Ward 2005; Gray & Shadbegian 2007; Landsberger & Meilijson '82, Harrington '88, Harford '91/93, Harford & Harrington '91, Heyes & Rickman '99, Friesen '03, Shimshack & Ward '08)

Affect of Monitoring on Compliance

Greater inspection frequencies lead to greater compliance, often at a diminishing rate.

- A. OPTIMAL** - ↑inspection frequency from once every 5 years to once every 2 years is expected to ↑ compliance.
- B.** ↑ inspection frequency from once every 2 years to once every 1 year is expected to ↑ compliance ... but the incremental change in compliance is expected to be smaller than the change in (A).
- C.** ↑ inspection frequency from once every year to once every quarter is expected to ↑ compliance ... but the incremental change in compliance is expected to be smaller than the change in (B).

(Literature reviewed in Cohen 1998; Gray & Shimshack 2011; Shimshack 2014. Early important contributions

include Epple & Visscher 1984; Cohen 1987; Magat & Viscusi 1990.)

Other Motivations

There are other motivations to comply that do not directly address costs and benefits, including:

- Regulatory complexity and knowledge about how to comply.
- Belief that enforcement is being done fairly and evenly.
- Trust, fairness, and intrinsic moral considerations.
- Social norms and social interactions.
- Awareness of enforcement in other areas.
- Behavioral / psychological considerations.

(Kagan and Scholz 1984; Tyler 1990; Ayres & Braithwaite 1992; Burby & Patterson 1993; Kagan et al. 2003, 2011; Delmas & Toffel 2008; Congdon et al. 2011; Arielly 2008; Gunningham 2004; May 2005; Thornton et al. 2005; Simpson et al. 2013. Gray & Silbey 2014; Rorie et al. 2015; Short et al. 2015, Hindin & Silberman 2016, Vandenberg 2003, 2007; Truelove et al. 2014. See Alm 2012 for the related lab and tax compliance lit.)

Escalation Principle

Escalation - for any given non-compliance situation, we generally use the least aggressive tool appropriate. If that is ineffective, we escalate to a more aggressive tool.

US EPA [Enforcement Response Policies](#) provide a range of acceptable responses to choose from for a given noncompliance scenario, by program.

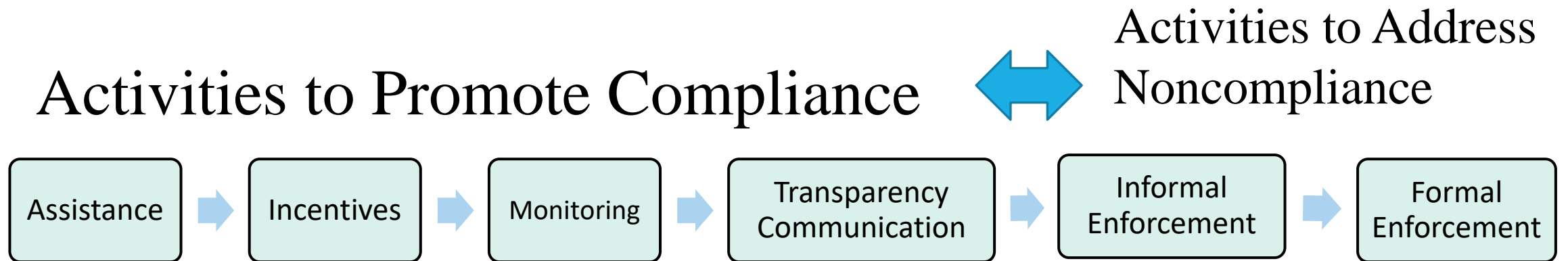
Escalation:

- conserves resources and
- promotes consistency and fairness

Escalation Principle

There is a **spectrum** of activities arranged from less aggressive and resource intensive to more aggressive and resource intensive.

Activities are deployed following escalation principle.



Compliance promotion and the proposal for a new Environmental Crime Directive

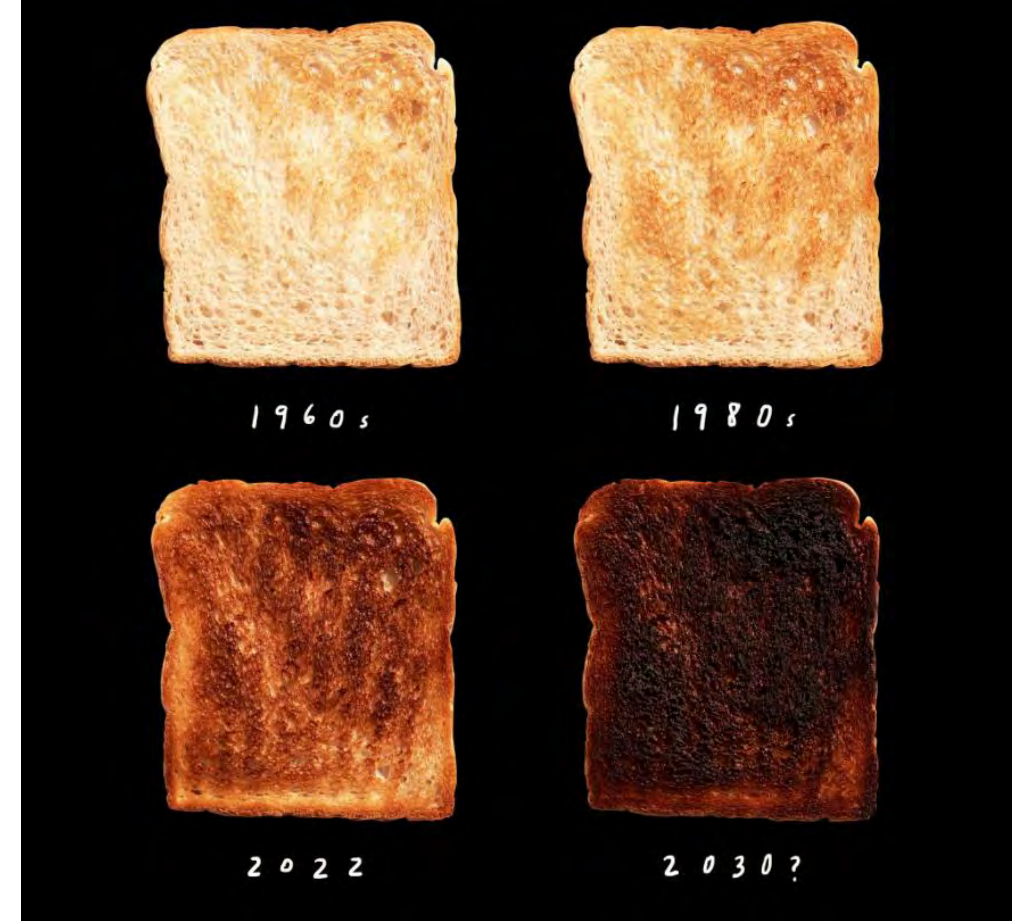
The proposal states in art 15 about prevention:

Member States shall take appropriate action, such as information and awareness-raising campaigns and research and education programmes, to reduce overall environmental criminal offences, raise public awareness and reduce the risk of population of becoming a victim of an environmental criminal offence. Where appropriate, Member States shall act in cooperation with the relevant stakeholders.

The proposal acknowledges that ***“Criminal law measures come in as a last resort when other measures have not sufficed to ensure compliance. Thus, environmental indicators on e.g. the degree of air pollution or biodiversity would measure the effectiveness of the overall strategy to improve the environment, not just the effectiveness of the new approach towards environmental crime.”***

Making a Difference

Regulation, Strategy & the Climate Emergency



Simon Bingham

29.09.22

How 'we' regulate...

- All permitted activities inspected on rotation (risk-based including mandatory targets).
- Complex compliance against all permit conditions with limited success on close out of long term non-compliance.
- ≈25% of sites inspected p.a. non-compliant.
- ≈40% of all sites inspected non-compliant at least once in 5 years.
- <10% of all non-compliant sites inspected p.a. have a significant negative impact on the environment.
- Limited if any focus.



What the science says...



What the science says...

Key messages

- **Atmospheric greenhouse gas (GHG) concentrations continue** to rise and fossil fuel emissions are now above pre-pandemic levels after a temporary drop due to lockdowns associated with the COVID-19 pandemic in 2020 and 2021
- **Recent years saw record high temperatures and ocean heat.** Looking forward, there is a 48% chance that, during at least one year in the next five years, annual mean temperature will temporarily be 1.5 °C higher than in 1850-1900
- **Mitigation pledges are insufficient to achieve the Paris Agreement.** Enhanced action is needed to prevent the continued warming that is increasing the likelihood of irreversible changes in the climate system, known as tipping points
- **Billions of people around the world are exposed to climate change impacts.** Cities – responsible for up to 70% of human-caused emissions – will face increasing socioeconomic impacts and the world's most vulnerable populations will suffer most, as seen in recent extreme weather events
- **Adaptation is crucial to lower the risks to climate impacts.** Early warning systems can save lives, reduce losses and damages, contribute to disaster risk reduction and support climate change adaptation.

Stronger mandate to change to achieve successful outcomes



Can we change the outcome by doing the same thing?

Can't change outcome unless we change what we do, how we do it & importantly actively choose what we will not do.



Climate Emergency Umbrella Programme 2022/24

Knowledge Exchange	Regulatory Framework	Just Transition	Regulators as Exemplars	Technology	Complimentary Approaches
<p>Project 1 2022</p> <p>Developing a regulators forum</p>	<p>Project 2 2022</p> <p>Developing regulatory strategy to include strategic alignment</p>	<p>Project 4 2024</p> <p>Managing end-of-life activities, sites and sectors towards a satisfactory transition or closure</p>	<p>Project 5 2023</p> <p>How green can an environmental regulator be?</p>	<p>Project 6 2024</p> <p>Developing best practice – How to create a remote regulatory monitoring programme to compliment a traditional reg approach</p>	<p>Project 7 2023</p> <p>Developing knowledge – How best to employ behavioural design to achieve satisfactory regulatory outcomes</p>
	<p>Project 3 2024</p> <p>Re-thinking the regulatory framework to meet the challenges of the climate emergency</p>				<p>Project 8 2023</p> <p>How to engender partnership working between environmental regulators and third parties to drive change</p>

Joined up thinking...



1st Duck – It starts with intent...

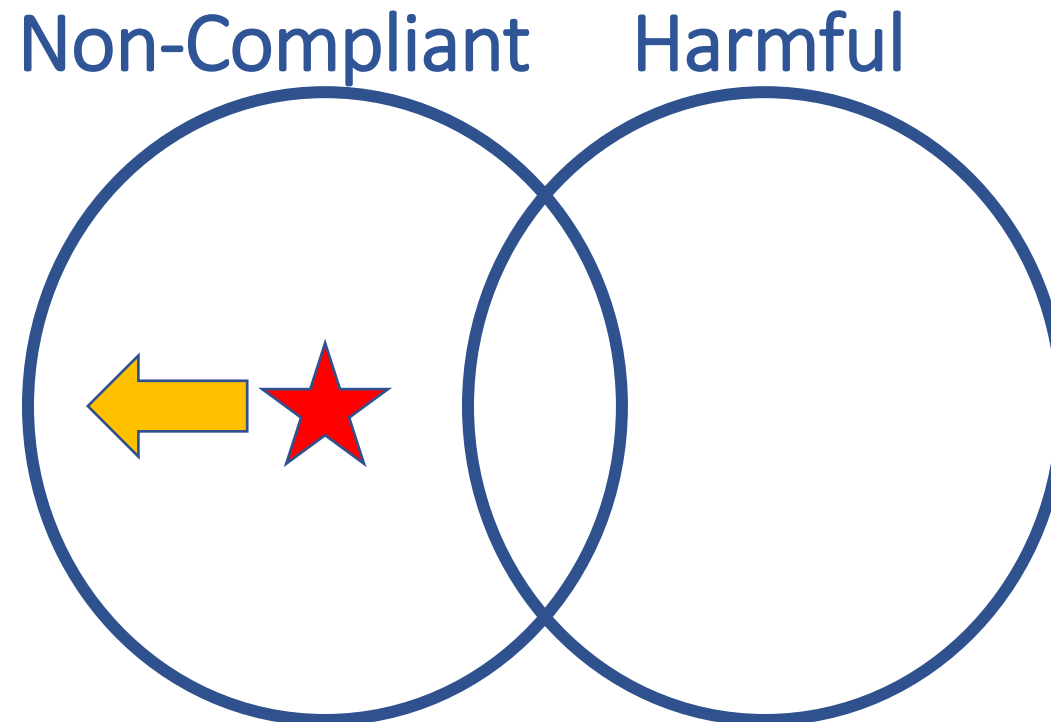
Regulatory
Framework

Project 2 2022

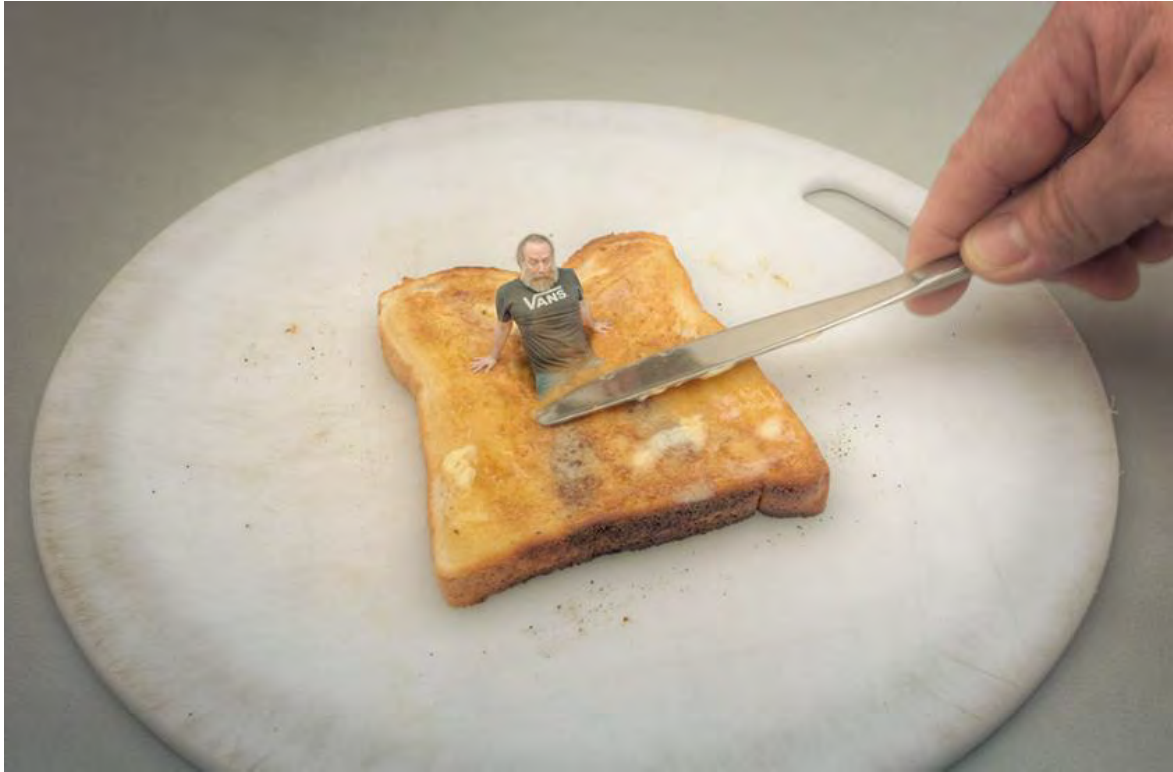
Developing
regulatory strategy
to include strategic
alignment



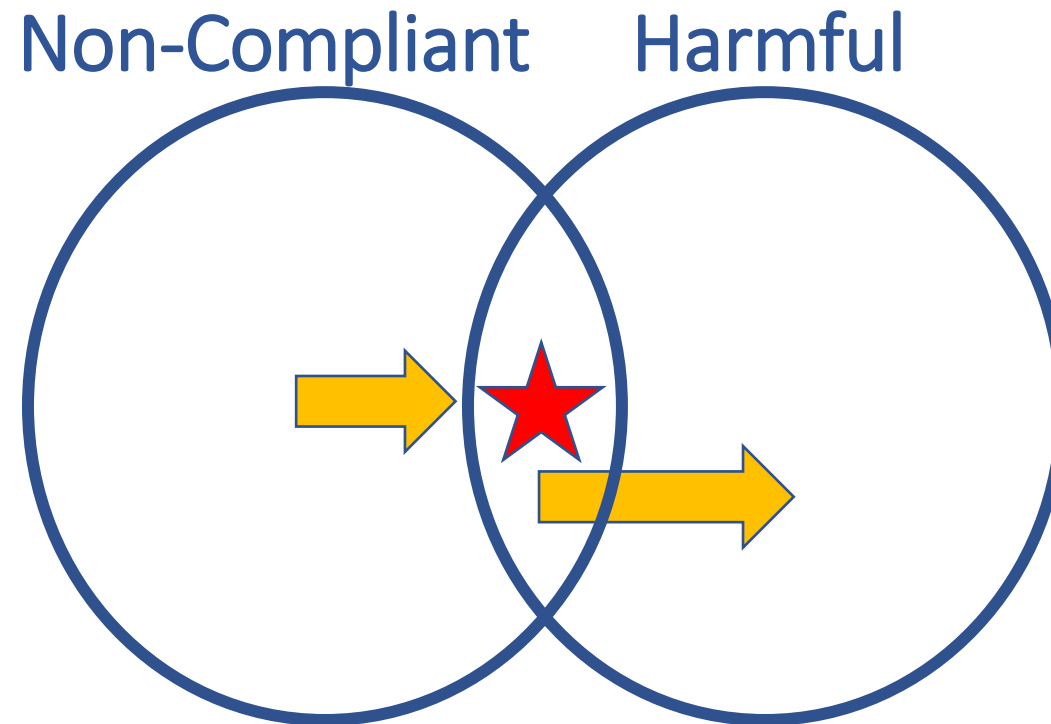
Taken Hostage By Non-Compliance



Chasing non-compliance



Positive Change



We can't afford to apply a standard regulatory approach across all the things we regulate or outcomes we seek to achieve. We need to take a flexible approach!

Caveat: A change in strategy does not guarantee a change in outcome!

2nd Duck – Operating Framework

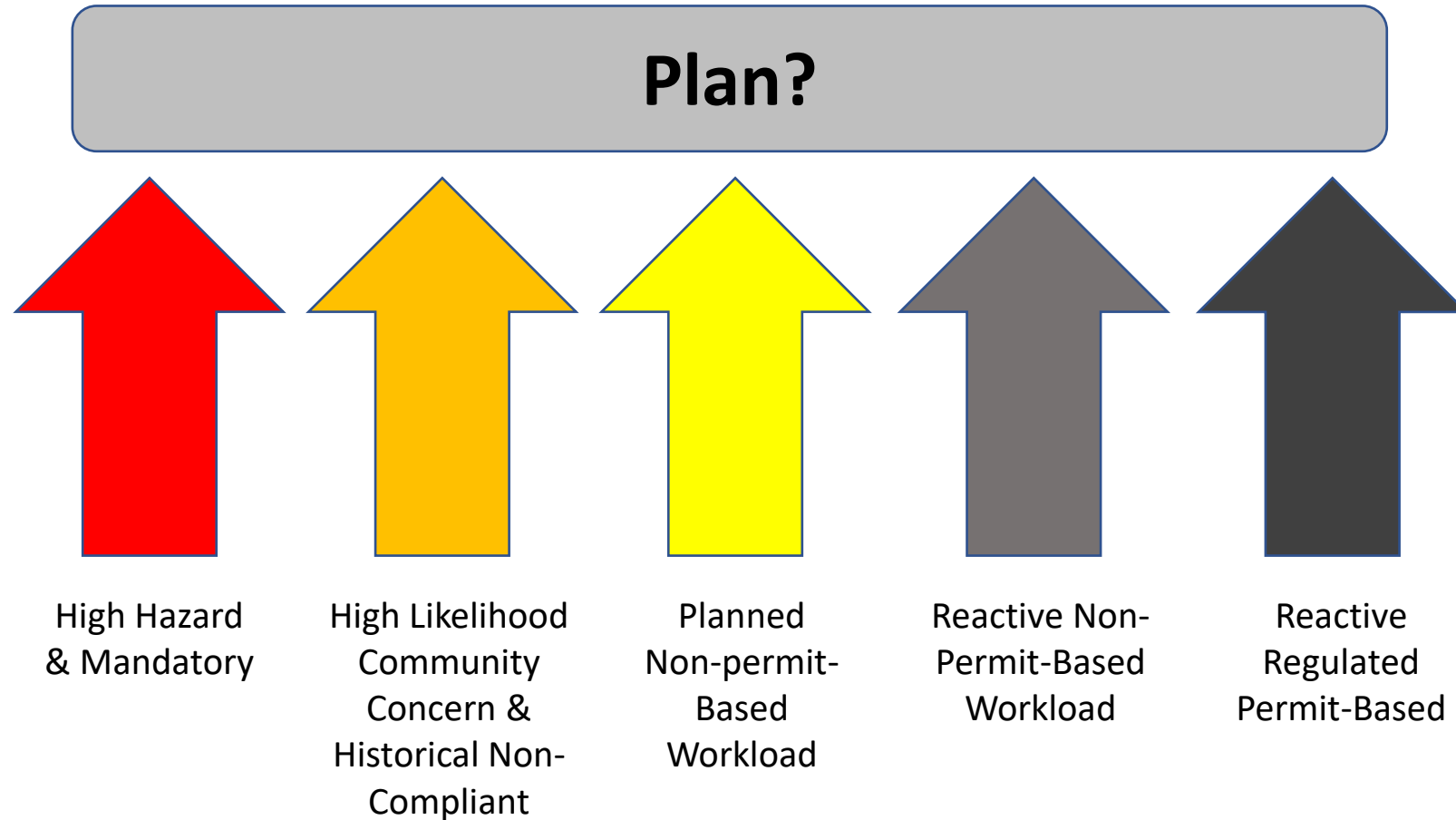
Regulatory Framework

Project 3 2024

Re-thinking the regulatory framework to meet the challenges of the climate emergency



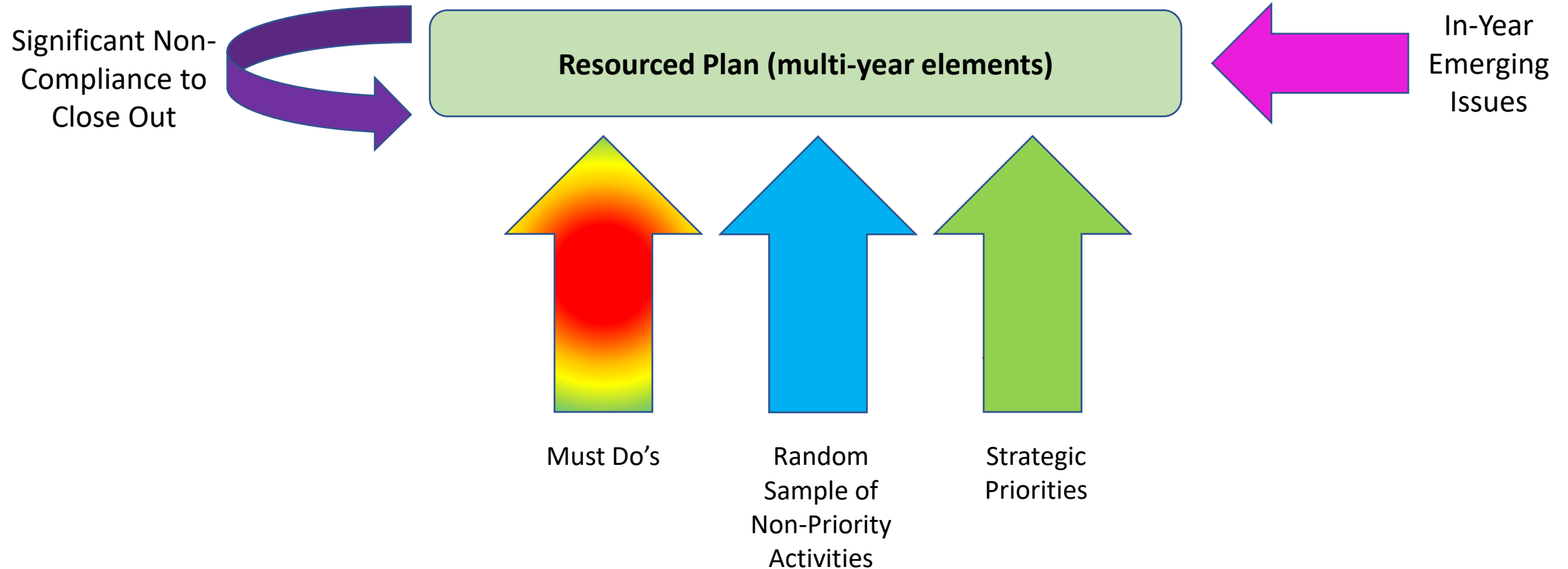
Historical - the busy doing stuff approach...



Need a centralised mechanism by which work is prioritised - clear what you will do and won't do!



Operationalised Strategy - The Complete package



Changes in permitting required



Changes in Inspection required



Provision of Advice & Support



New Problems

Just Transition

Project 4 2024

Managing end-of-life activities, sites and sectors towards a satisfactory transition or closure

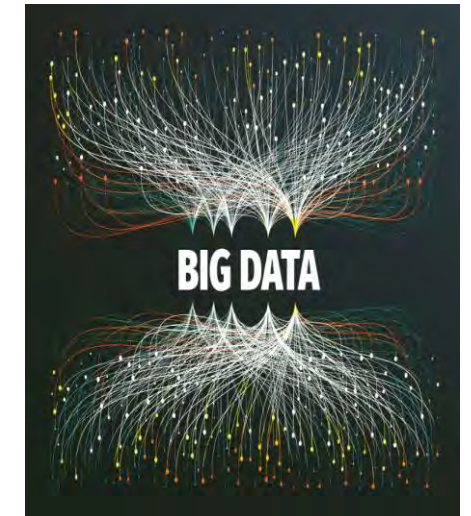
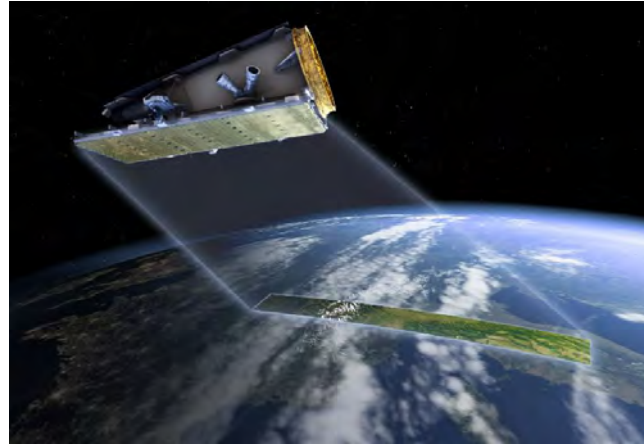


New Technology & Re-purposing

Technology

Project 6 2024

Developing best practice – How to create a remote regulatory monitoring programme to compliment a traditional reg approach



My 3rd Duck – The ‘soft stuff’



Complimentary approaches

Complimentary Approaches

Project 7 2023

Developing knowledge – How best to employ behavioural design to achieve satisfactory regulatory outcomes

Project 8 2023

How to engender partnership working between environmental regulators and third parties to drive change



End

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