

Name of Project: Waste Management and Circular Economy	
ToR Reference No.: 2022-III	
Version: <input type="checkbox"/> Draft <input type="checkbox"/> Final <input checked="" type="checkbox"/> Adopted	Date: 22/03/2022
TERMS OF REFERENCE FOR WORK UNDER THE AUSPICES OF IMPEL	

1. Work type and title

1.1 Identify which Expert Team this needs to go to for initial consideration	
Industry and air	<input type="checkbox"/>
Waste and TFS	<input checked="" type="checkbox"/>
Water and land	<input type="checkbox"/>
Nature protection	<input type="checkbox"/>
Cross-cutting tools and approaches	<input type="checkbox"/>
1.2 Type of work you need funding for	
Exchange visits	<input checked="" type="checkbox"/>
Peer reviews (e.g. IRI)	<input type="checkbox"/>
Conference	<input type="checkbox"/>
Development of tools/guidance	<input checked="" type="checkbox"/>
Comparison studies	<input checked="" type="checkbox"/>
Assessing legislation (checklist)	<input checked="" type="checkbox"/>
Other, (please describe):	<input checked="" type="checkbox"/>
IT Tools (End of waste database)	
1.3 Full name of work	
Waste management based on the "circular economy" principles and the "waste hierarchy": create a level playing field and common understanding in permitting and inspection processes.	
1.4 Abbreviated name of work or project	
WMCE	

2. Outline business case (why this piece of work?)

2.1 Name the legislative driver(s) where they exist
<ul style="list-style-type: none"> • EU new Circular Economy Action Plan 11/03/2020 • EU Endorsed work programme 2020-2022 to improve environmental compliance and governance • Waste Framework Directive 2008/98/EC as amended by Directive 2018/851/EC. • European Parliament resolution of 13 September 2018 on implementation of the circular economy package: options to address the interface between chemical, product and waste

legislation (2018/2589(RSP).

- Commission Staff Working Document “Sustainable Products in a Circular Economy - Towards an EU Product Policy Framework contributing to the Circular Economy” {SWD(2019) 92 final}.
- Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: “The role of waste-to-energy in the circular economy”.
- Industrial Emission Directive 2010/75/EU
- EU Directive 2015/720 of amending Directive 94/62/EC as regards reducing the consumption of lightweight plastic carrier bags

2.2 Link to IMPEL MASP priority work areas

- | | |
|---|-------------------------------------|
| 1. Assist members to implement new legislation. | <input checked="" type="checkbox"/> |
| 2. Build capacity in member organisations through the IMPEL Review Initiatives. | <input type="checkbox"/> |
| 3. Work on ‘problem areas’ of implementation identified by IMPEL and the European Commission. | <input checked="" type="checkbox"/> |
| 4. Other, (please specify): | <input type="checkbox"/> |

2.3 Why is this work needed?

The work streams set out in this ToR specifically address the actions of the EU environmental policy, as mainly outlined in the New Circular Economy Action Plan (CEAP), in the programme of the Environmental Compliance and Governance Forum (2020-22) as well as in the amended Waste Framework Directive (Directive (EU) 2018/851). The adoption of guidance documents for the ad hoc application of the harmonised conditions established at Union level for waste management is needed as well as initiatives to improve cooperation with Member States for better implementation of EU waste legislation.

The new CEAP aims at accelerating the transformational change required by the European Green Deal, while building on circular economy actions implemented since 2015. The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.

The plan indicates a list of key actions, some of which constitute the working area of identified subgroups in this ToR.

One key point of the Plan is the development of further EU-wide end-of-waste criteria for certain waste streams based on monitoring Member States’ application of the revised **rules on end-of-waste status and by-products**, and support cross-border initiatives for cooperation to harmonise national end-of-waste and by-product criteria. The recast of the WFD clarify rules on **by-products** and those to enable recycled materials to be reclassified as non-waste whenever they meet a set of general conditions (**end of waste**). Uncertainties about how materials can **cease to be** waste are a main issue of concern. This ToR specifically addresses these topics.

Another key point is about, including the integration of **circular economy practices in the Review of the IED Directive in upcoming BREFs**, which EU Member States have to reflect when issuing permits for industrial installations, thus promoting innovation in industrial processes and helping to reduce waste generation, boost recycling and reduce resource use. This project aims to look at how



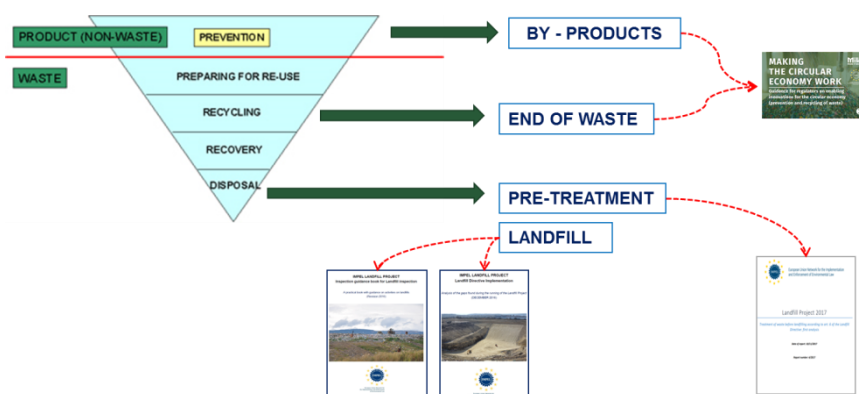
the IED and BAT in combination with Eco-Innovations can be better used to achieve Circular Economy in IED Installations.

The programme of the Environmental Compliance and Governance Forum (2020-22) promotes inter-actions within and between the expert teams and projects of the IMPEL network at sectoral/thematic level, in particular with reference to Circular Economy (focal topic of the “Green Deal), e.g. through integration of this topic into inspection-and surveillance-related IMPEL-projects. This ToR specifically addresses the above mentioned action, taking also in consideration Action No. 9: Strategies for Verification of **Self-Monitoring** and Reporting, within the subgroups related to BAT analysis on waste incineration.

The “European Parliament resolution of 13 September 2018 on implementation of the circular economy package” addresses the **interface between chemical, product and waste legislation**. One of the goal of this TOR is to better understand the interface between waste and product legislation and giving practical guidance on how to apply **REACH** regulation to secondary raw material.

Waste-to-energy processes play a role in the transition to a circular economy as one of the step of the waste hierarchy. **BAT Conclusions on waste incineration** have been recently issued and their relevant application in IED permits is a challenge for regulators. The need for practical guidance for regulators, permit writers and inspectors is widely felt.

The IMPEL “Waste Management and Circular Economy” project **is moving through the waste hierarchy steps**, in order to achieve a common understanding of the key points of the Waste Framework Directive and homogenize behaviours across MS; the project has already produced guidance documents related to the waste hierarchy steps, as shown in the following figure:



Previous studies, including IMPEL’s own work on practical challenges in the implementation of EU environmental law and the European Commission’s project on implementation support for the IED, show that there are several outstanding areas in which regulatory authorities in Member States would benefit from technical support in helping to overcome implementation gaps.

The project also aims at investigating the implementation of the EU Directive 2015/720 on reducing the consumption of lightweight plastic carrier bags. The implementation differs among Member States: some make use of voluntary agreements, other prefer a system based on fees on plastic bags, some MS have banned the use of plastic bags. A subgroup will look for the challenges and the successful stories for reducing plastic bag consumption.

2.4 Desired outcome of the work

The main outcomes of the project can be summarized as follows:

- Promote Eco-innovation and Circular Economy.
- Foster compliance with EU environmental law on Waste management hierarchy.
- Provide training to environmental inspectors and permit writers on waste management.
- Homogenise implementation of waste treatment and waste incineration BAT Conclusions

This will be achieved by inspectors and permit writer coming together to learn from each other, identifying good practices, developing guidance to promote those practices and disseminating technical know how through training and professional development initiatives. Supporting regulatory authorities in this way should result in stronger compliance assurance and a more level regulatory playing-field.

The Guidance “*‘Making the Circular Economy work’*, launched in Rome in March 2019, is a living document that will be further revised with the results of the subgroups running in 2022-2024.

Specific outcomes of the project along 2022-2024 will be:

- A better understanding of Value-Retention Processes (namely remanufacturing, refurbishment, repair and direct reuse) as complementary to recycling at the step of prevention of waste hierarchy (primary objective) to enable faster achievement of circular economy.
- Guidances to help regulatory practitioners in applying by-product criteria.
- Identifying the instruments within the IED that can contribute to the overall objective of achieving a circular economy in Europe and sharing good practices on how they are implemented.
- Setting up a practical tool to help operators and the competent authorities to check the more appropriate way to evaluate the compliance of EoW/by-products with REACH Regulation.
- Investigate specific waste streams for reuse or recycling activities (plastic, C&D, biomethane).
- Convert the End of waste database (case by case and national criteria set up by MS) demo version into the IMPEL website, to share information on technical and environmental criteria of secondary raw material.
- Identify criticalities in the “Waste incineration subgroup” BAT Conclusions implementation in IED permits, in order achieve a more homogeneous level playing field across Europe.
- Build an overall framework on waste-to-energy installations in MS and criticalities.
- Specific training session on End-of-waste and by-products and waste management.

Report for policy makers or regulators with the best available options for reducing plastic bag consumptions and overview of the implementation approaches.

2.5 Does this project link to any previous or current IMPEL projects?

- IED Implementation Project: The project will run jointly with the “IED Implementation” Project on the topic of IED&CE and Waste incineration.
- IMPEL TFS NCP Best Practice meetings: link with waste/products shipments across EU and out of EU.
- Knowledge and Innovation Programme Project (KIP): WMCE Training programme will support KIP.



3. Structure of the proposed activity

3.1 Describe the activities of the proposal

The project will be overseen by a core team that will be responsible for ensuring that the project outcomes are met. Priorities and timetable can change according to the implementation challenges voiced by IMPEL's member organisations and a willingness of those member to contribute to working groups.

The work of this project will be structured into the following subgroups:

1. Value-Retention circular processes (Extended use, EoW & By-products, tools & study of main fluxes (C&D, plastic, organic ecc), industrial symbiosis, R-ladder process)
2. REACH & Circular economy
3. IED & Circular economy
4. End-of-waste and By-products Database
5. Waste incineration BAT Conclusions (kick off) – Joined with the IED Implementation project
6. Training activities
7. Waste-to-energy
8. Plastic legislation

Here a summary of the areas of interest of the subgroups is presented:

Value-Retention circular processes (Extended use, By-products, R-ladder process)

- I. A first work-strand is on **by-products**. The aim is to provide regulators with the tools to assess about the by-product status, the connection with products legislation and help them to build related inspections. Different practices and approaches in countries in Europe on by-products assessment will be presented. Minimum content of by-product criteria will be outlined.
- II. A second strand concerns the study of **waste/reusable streams** of particular interest due to quantities produced across EU and reuse-recycling possibilities, namely: plastic waste, construction & demolition waste, organic waste (for biometahne production)
- III. A third strand is related to the "**extended use of products**" with reference to the R-ladder of circular strategies. It aims at facilitating a common understanding and application in practice of the definition of 'waste', including the term 'discard', and should take into account new circular business models in which, for instance, a substance or object is transferred from one holder to another holder without the intention to discard.

REACH & Circular economy

For the next edition of the 'Making the Circular Economy work' Guidance the application of REACH in relation to by-products and end-of-waste will be looked at in more detail (resulting in additional guidance/tools etc.). This includes the following main action:

- Clarify when and how REACH comes into play when assessing by-product or end-of-waste status in practice. How can operators and regulators make sure that REACH is applied at the right moment in the right way in practice (step by step tool).
- Collect and analyse some more case examples where REACH played a role in the assessment of by-product or end-of-waste status.

IED & Circular economy

This group will look at how the application of different aspects of the IED can help to promote a more circular economy. The work will be carried out jointly with the IMPEL project 'IED



Implementation' and a joint working group has already been set up to take this forward. The work will involve three main areas:

i. Guidance for permit writer and inspectors on how to make IED permits more 'circular' and to promote compliance.

The Guidance aims at helping regulators to ensure that the main themes of the European Green Deal policy are properly reflected in IED permits. It can indicate what an IED application should contain with reference to the circular economy and what regulators need to do to prescribe to promote circularity. The Guidance should also help regulators to include in the 'new IED circular permits' provisions to provide a **self-monitoring** plan and reports containing the necessary information to monitor the circularity of the installations.

ii. Develop a Circular Economy Index for installations

The circular economy index aims to give an overall picture of the extent to which the installation is performing in a circular manner and can be monitored to demonstrate circularity. Criteria need to be identified, and guidance needs to be developed on how to apply the index and the benefits that this will bring to businesses.

iii. Amending Annex A of the Guidance 'Making the Circular Economy work'

For the next edition of the 'Make It Work'-IMPEL Guidance the role of IED in respect to the circular economy will be further elaborated, amending the existing Annex A, including further examples.

End-of-waste Database

A first demo of the voluntary End-of-waste database as outlined in the '*Making the Circular Economy work*' Guidance has been issued in 2021 and tested by a panel of members. A meeting with DG ENV Unit Waste has already be planned in January 2022 to present the tool (beside the other achievements of the project).

The database can help permit writers, inspectors and operators to find information on end-of waste (case-by-case) decisions (permits, legal opinions) or end-of-waste operator self-assessments and EoW national criteria. The suggested database is one of the possible tools to implement the following provisions of the WFD 2018: *Article 6: "Member States may make information about case-by-case –decisions and about the results of verification by competent authorities publicly available by electronic means"*.

The database may become a strategic tool to promote the exchange of information and to guarantee uniformity of behaviour for the proper circulation of end-of-waste new products.

The demo version has to be converted into the IMPEL website.

Waste incineration BAT Conclusions and Waste to energy

A working group has been set up in 2021, jointly with the IED Implementation project. An initial survey will be prepared.

The aim is to examine the implementation issues related to each of the 37 individual BAT Conclusions for the Waste Incineration sector. A particular focus of the work will be on self-monitoring requirements. The field of analysis will then be widened to waste-to-energy installations to build an overview of environmental impacts and critical points as well as the requirements for input waste and air emission control.

Training activities

In 2021 a workshop on REACH & Circular economy will be held on the 25th of November; furthermore a training programme proposal has been drafted with a detailed offer for the Norway EEA grant beneficiaries countries. Some of them expressed interest to receive training sessions.



The training package proposal in the field of waste regulation and relevant aspects on Circular Economy, drafted in 2021 will be carried out in the 2022-2024 period. The aim is to share knowledge and build skills on crucial aspects of waste management and Circular Economy, Value-Retention circular processes, End of Waste and By-products, connection among waste, REACH and shipment of waste inspections, landfill inspection and pre-treatment of waste.

The training activities will be carried out by means of remote seminars, frontal lessons (if the Covid restrictions will be lifted) and joint inspections (Experience with preparation, execution, reporting steps of the inspection). The possibility to execute training programmes under EU or national programmes, e.g. a Peer to Peer EU programme will be explored.

Plastic legislation

A survey will be drafted to identify the current approaches in the implementations of Directive 2015/720 and others related to plastic (SUP) in MS. The core team will meet remotely to discuss the survey results, the challenges and best practices. A report to summarize project studies will be drawn up.

Possible developments:

Depending on the number of active members, further subgroups can be activated on issues which have been regarded as relevant during by the members of the WMCE projects:

- Waste Treatment BAT Conclusions: developing tools for inspections and self monitoring requirements
- Extended producer responsibility: collection of best practices
- Waste prevention national plans: collection of best practices

3.2 Describe the products of the proposal (what are you going to produce in terms of output / outcome?)

The working groups will carry out their detailed work predominantly using online meeting tools. Each group is expected to conduct periodic catch-up video-conferences along the year of the project. In addition, depending on the Covid restrictions, there will be two face-to-face project meetings.

Two progress reports and one interim report will be produced every year.

A final project report that brings together all the outputs from the working groups and the results of project meetings, webinars and workshops will be produced each year.

The working groups will produce a range of products that will be disseminated through IMPEL's network of members to support them in achieving better implementation of the Waste framework Directive in their countries and to help develop circular economy principles.

The following products are expected in 2022-2025, as specific per each subgroup:

Value-Retention circular processes (Extended use, By-products, R-ladder process)

In 2022 and 2023 the following Guidances/factsheets will be drafted; the Guidance on circular economy will be revised. These documents can also be stand-alone docs:

Guidance on 'DISCARD' and NEW CIRCULAR BUSINESS models.

1. Introduce the topic of discard and new circular economy business models and explain its importance and its relevance for regulators.

2. Provide general explanation on when a material is not discarded but reused or further used.
3. Give examples of reuse and extended use, perhaps by distinguishing certain categories (for instance low, medium and high risk materials)
4. Explain distinction between extended use and reuse
5. Explain distinction between reuse and preparing for reuse
6. Give suggestions on how to assess if a material/product is discarded or not:
 - What conditions have to be met for reuse and for extended use (based on EU case law and MS guidances/practices)
 - Procedures that can be followed (prior approval or via operator self-assessment / enforcement)
 - Burden of proof
 - Use of supporting tools like declaratory opinion
7. Various practical issues: temporal storage, requirements/certification for repair businesses etc.

By-products – Guidance to be developed

1. Provide some further general explanation on the concept of by-products
2. Give examples of by-products, perhaps by distinguishing certain categories (for instance low, medium and high risk materials)
3. Discuss application of article 5-3 WFD in the MS (national criteria)
4. Discuss application of article 5-1 WFD in the MS (case-by-case assessment)
 - a. procedures in MS to assess by-product status (prior permit or via operator self assessment /enforcement)
 - b. methods used to assess by-product status (compliance with conditions in 5-1 WFD)
 - c. supporting tools used in MS (e.g. guidances)
 - d. inspections related to the production, storage, transport and use of by-products >
PRACTICAL TOOL
5. Elaborate on production/use of by-products in relation to IED requirements regarding resource efficiency and prevention of waste. Give examples, refer to MS guidances
6. Elaborate on the production and use of by-products through optimizing and redesigning production processes and through industrial symbiosis and chain approach.

In 2023-2024, waste streams as plastic, C&D and organic (biomethane) will be investigated around the recycling process and reusing opportunities achieving the waste status; a Report will be produced with a collection of best practices. Technical and environmental standards will be highlighted as well as the recycling processes technologies and environmental impacts to be considered.

REACH & Circular economy

In 2022 a factsheet will be produced, including a step-by-step diagram, to help practitioners to assess if REACH has been properly applied to by-products and End-of-Waste.

The results of the workshop REACH & Circular economy, to be held on the 25/11/2021 and organised within the ToR WMCE 2021, will be used to improve and complete the draft of the document produced so far.

IED & Circular economy

In 2022-2023, starting from the outline and first structure produced so far, the “*Guidance for permit writer and inspectors on how to make IED permits more ‘circular’ and to promote compliance*” will be further developed. At the same time the *Circular Economy Index for installations* will be developed and used for pilot tests. The cooperation with the EIPPC Bureau will be strengthened.

End-of-waste Database

In 2022-2023, as soon as the new IMPEL website will be set up, the End-of-waste database will be converted in a web-based tool within the IMPEL website. Rules for maintenance will be defined as well as those for implementing data by public authorities. The demo version will be completed and enriched with new cases and the guide for users.

In 2023 and 2034, the database can be operative and its use will be promoted by a strong communication campaign.

Training activities

One up to two training activity will be carried out in 2022 to support Norway EEA Grant beneficiaries (namely Slovak Republic and Romania). The training session can be performed face-to-face (back to back with a project meeting) or remotely. The training topic will be around secondary raw materials (End-of-waste / by-products) and the concept of waste and discard.

Another tool to be used to exchange good practices are joint inspections/site visits, to be performed back to back with the project meetings.

In 2023 and 2024 other two training session will be planned face-to-face on the same topic or related to waste incineration. A follow-up of a training on REACH&Circular economy can also be planned.

Waste incineration BAT Conclusions

In 2022 two joint inspections will take place (one using the budget of the IED Implementation project); a back-to-back meeting of the core team will be planned. Additionally, a survey will be circulated to detect critical points and gather best practices.

A workshop is planned in 2023 as well as the draft of practical tools (checklist for inspections, self monitoring plan minimum content), to continue in 2024.

2022

- January – May 2022: Draft of a survey to be circulated. Analysis of the results of the survey.
- July - October 2022: Performing a joint inspection in two Waste Incineration plants: Netherlands (Rotterdam) and Italy (Cagliari or Milan). Back to back meeting of the core team
- Collecting ideas and material to develop practical tools – checklist for inspections, self monitoring plan for WI, common approaches to critical BATc.

2023



- March - April 2023: Preparation of the workshop Agenda; contact potential speakers of various MS, EU Com, EEA;
- June 2023: Workshop on Waste Incineration;
- Drafting a practical tool - self monitoring plan for WI

2024

- Drafting a practical tool – checklist for WI inspectors and common approaches to critical BATc.

Waste to energy

In 2024 a survey on waste-to-energy main environmental aspects will be launched, covering input waste, process technologies, environmental impacts.

Plastic: Directive 2015/720

In 2022 a survey and a report including an overview of the implementation approached and challenges as well successful examples will be provided.

