European Union Network for the Implementation and Enforcement of Environmental Law

Waste Management & Circular Economy Project

Activities carried out in 2020 – March 2021

Date of report: 03/04/2021

Report number: 2020/03

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 EU Member States, acceding and candidate countries of the European Union and EEA countries. 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 7th Environment Action Programme 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

Title of the report: WMCE: activities carried out in 2020	**Number report:** 2020/03
Project Manager/Authors: - Romano Ruggeri (Project Leader) - Jan Teekens - Gabrielle Kuhn - David Pugh - Rainer Bullita - Topi Turunen	**Report adopted at IMPEL General Assembly Meeting**: 7-8 December 2021, Ljubljana, Slovenia **Total number of pages: 44** Report: 44 Annexes: 0

Executive Summary

This report contains a summary of the activities carried out in 2020 – March 2021 within the running following subgroups:

- Discard and by-products
- IED & Circular economy
- REACH & Circular economy
- Training
- End-of-waste database
- Update Landfill Guidance

It also include a description of the connections with other network-organizations established along the year.

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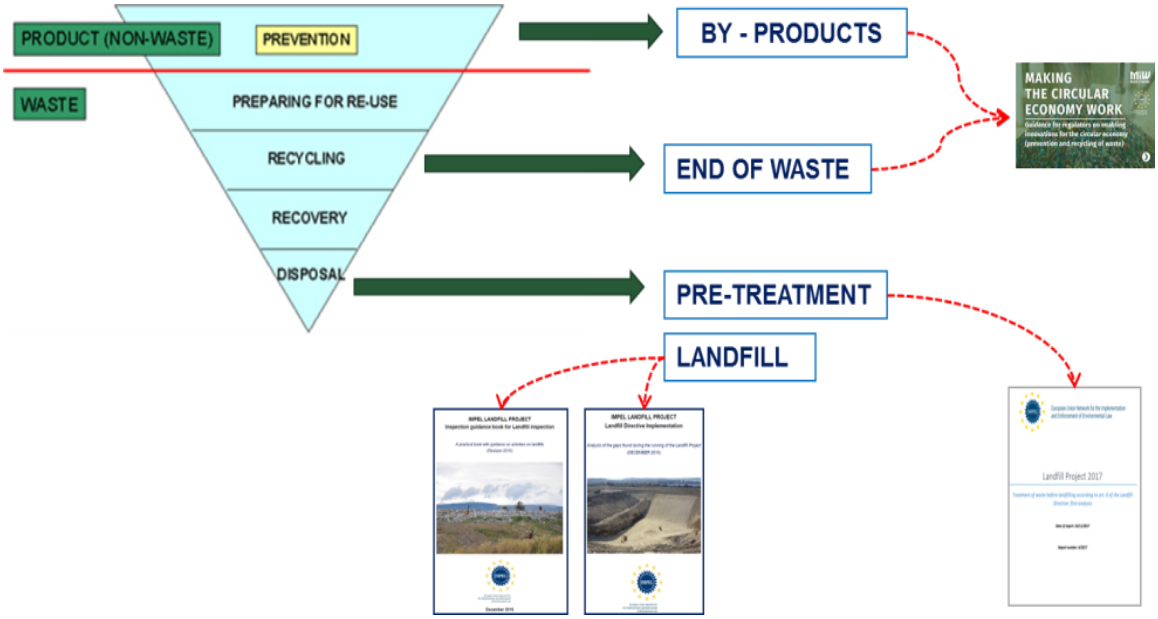
1. Purpose of the project and background

As set in the Directive (EU) 2018/851 (amending Directive 2008/98/EC on waste), Waste management in the Union should be improved and transformed into sustainable material management, promoting the principles of the circular economy.

Waste management plays a central role in the circular economy: it determines how the EU waste hierarchy is put into practice. The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.

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 IMPEL "Waste Management and Circular Economy" project (former called "Landfill and Circular Economy") 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:



The Guidance "Enabling eco-innovations for the circular economy (prevention and recycling of waste)" has been launched in Rome in March 2019 and is a living document that will be further revised with the results of the subgroups running in 2020.

The project is examining the topic of enabling eco-innovations for a circular economy under current EU environmental legislation with a focus to the implementation of the End of waste criteria and By-products, set in Article 5 and 6 of the Waste Framework Directive (WFD), as amended by the recast of the WFD. The need for practical guidance for regulators, permit writers and inspectors is widely felt.

2. ToR 2020 & budget framework

The project is outlined in the following ToR 2020:

Adobe Acrobat Document

During the project frame 2020-2021, the following costs have been addressed to the budget of the project:

- Support for communication:
  - Invoice n.55/2020 Arcobaleno: 557,92 €
- EoW Database:
  - Invoice n.1 Alva Design: 4.574,00 €
  - Invoice n.2 Alva Design: 4.574,00 €
- Meetings: 0 €

3. Structure of the project

Under the umbrella of the project, the following subgroups have been structured:

For each subgroup a referent has been appointed:

- Discard and by-products: Jan Teekens (The Netherlands)
- REACH & Circular economy: Topi Turunen (Finland)
  IED & Circular Economy: David Pugh (UK)
- Landfill Guidance: Rainer Bullita (Germany)
- Training: Gabrielle Kuhn (The Netherlands)
- EoW Database: Myriam Fernandez (Spain)

Each subgroup can count on a core team actively involved in the activities.

55 people from 27 Member States expressed their interest to participate at different levels. More then 20 people are actively involved in working subgroups.

The project has switched to Basecamp 3: the page of the project is constantly updated with Schedule, Library, Working docs.

4. Meetings carried out in 2020

The initial schedule of the year, as outlined in the ToR has been completely changed because of the flight restrictions due to the COVID-19 pandemic. Physical meetings have been replaced with virtual meetings. Running subgroups periodically met using initially the platforms *Join.me* and *TEAMS* later on. A strong activity of networking has been carried out.

The following meetings took place remotely:

PLENARY MEETINGS	
n.3 Plenary meetings	27/03/2020, 25/06/2020, 15/02/2021
NETWORKING	
Videocall with Norway EEA Grant	23/09/2020
Videocall with EuRIC	09/10/2020
Videocalls with ECHA/ ECHA Forum	29/04/2020, 04/09/2020
Participation at ECHA Forum Meeting	24/06/2020
Videocall with EIPPC Bureau	10/03/2021
IMPEL Project IED Implementation	Meetings of the IED&CE Subgroup
SUBGROUP MEETINGS	
n.4 REACH & CE subgroup meetings	30/04/2020, 05/06/2020, 18/09/2020, 02/11/2020
n.6 Landfill subgroup meetings	16/04/2020, 13/05/2020, 18/06/2020, 31/07/2020, 19/11/2020, 22/01/2021
n.4 IED&CE subgroup meetings	24/04/2020, 15/06/2020, 24/09/2020, 01/03/2021
n.3 Byproduct subgroup meetings	07/05/2020, 06/10/2020, 18/02/2021
n.4 Training subgroup meetings	23/04/2020, 25/05/2020, 15/07/2020, 07/09/2020

LIST OF SCHEDULED MEETINGS

Apr 16, 2020	LANDFILL Subgroup Videocall 2 3:00pm - 5:00pm
Apr 23, 2020	TRAINING Subgroup videocall 11:30am - 1:30pm
Apr 24, 2020	IED & CE subgroup videocall 3:00pm - 5:00pm
Apr 30, 2020	REACH & CE subgroup meeting 1 11:30am - 1:30pm
May 7, 2020	BY-PRODUCTS Subgroup videocall 4:30pm - 6:30pm
May 13, 2020	LANDFILL Subgroup Videocall 2nd meeting 2:00pm - 4:00pm
May 25, 2020	TRAINING Subgroup Videocall 2nd meeting 2 2:30pm - 4:30pm
Jun 5, 2020	REACH & CE Subgroup vdc n.2 2:30pm - 4:30pm
Jun 15, 2020	IED & Circular economy subgroup: 2nd meeting 3:30pm - 5:30pm
Jun 18, 2020	LANDFILL Subgroup Videocall 3rd meeting 3:30pm - 5:30pm
Jun 22, 2020	Sbgroup Byproducts vdc n.2 3:30pm - 5:30pm
Jun 25, 2020	PLENARY Videoconference 6 11:00am - 1:00pm
Jul 15, 2020	3rd vdc Training subgroup 2 3:30pm - 5:00pm
Jul 31, 2020	4th vdc Landfill Subgroup 3:30pm - 4:30pm
Sep 4, 2020	Training REACH&CE: ECHA contribute videocall 3:00pm - 4:00pm
Sep 7, 2020	Core team vdc and Subgroup Training 4th vdc 2 3:30pm - 5:30pm
Sep 18, 2020	Subgroup REACH & CE 3rd videocall 8 3:00pm - 5:00pm
Sep 23, 2020	IMPEL and NORWAY EEA Grant cooperation vdc 1 2:00pm - 4:00pm
Sep 24, 2020	Subgroup IED&CE 3rd vdc 3 3:30pm - 5:30pm
Oct 6, 2020	Subgroup By-products 2nd vdc 6 11:00am - 1:00pm
Oct 7, 2020	LANDFILL Subgroup Videocall 4th meeting 3 3:30pm - 5:00pm
Oct 9, 2020	EuRIC videocall EoW Database 1 3:30pm - 5:00pm
Mon, Nov 2	Subgroup REACH & CE 4th videocall 3 3:00pm - 5:00pm
Thu, Nov 19	LANDFILL Subgroup Videocall 5th meeting 2 3:30pm - 5:00pm
Jan 22, 2021	Landfill subgroup vdc n.1 3 2:30pm - 4:00pm
Feb 15, 2021	WMCE Core team meeting n.1 2 3:30pm - 5:00pm
Feb 18, 2021	Byproduct subgroup vdc n.1 2:00pm - 3:30pm
Mar 1, 2021	Subgroup IED&CE 1st vdc 7 3:30pm - 4:30pm
Mar 10, 2021	IED&CE subgroup and EIPPC 5:00pm - 6:00pm

5. Plenary meetings

5.1 "Join-me" Videoconference 27th March 2020 9.30 – 15.30

LIST OF PARTICIPANTS					
Italy Romano Ruggeri Luca Paradisi Elena Foddanu **Netherlands** Gabrielle Kuhn Jan Teekens Arjen Snijder John Tieman **Belgium** Liesbet Rommens **Estonia** Rene Rajasalu **Cyprus** Chrystalla Nisiotou	**Turkey** Pinar Ece **UK** Paul Corrigan David Pugh Tom Nickson Norman Donnelly **Germany** Charlotte Goletz Rainer Bullita **Spain** Myriam Fernandez Alberto Martín Albert Avellaneda Carmen Duran Itziar Asenjo Alice Leal	**Croatia** Danijela Granic Vlajkovic **Portugal** Patricia Teixeira Cristiana Gomes **Austria** Franz Waldner **Finland** Topi Turunen Katriina Koivisto **Czech Republic** Vojtech Pilnacek **Malta** Simon Farrugia			
1. Welcome by Project Leader and introduction to agenda		Romano Ruggeri	9.30 – 9.45	Presentation	Related documents
1.1	Presentation on the State of play of the work	Romano Ruggeri	9.45 – 10.00		
2	**SUBGROUP 1: Discard/circular business model an by-products – CHAIR: Jan Teekens**				
2.1	Introduction to the goals of the subgroup. Summary of the key issues of the subgroup		10.00 – 10.15		
2.2	Presentation of the Generalitat Valenciana	Joan Piquer. Generalitat	10.15 – 10.30		

		Valenciana			
2.3	Innovative by products identified in industrial sectors	Irina Celades. Technological Institute of Ceramics	10.30 – 10.45		
2.4	Guide of economic activites for reuse and preparation for reuse	Elena Bagaria. Catalunya.	10.45 – 11.00		
2.5	The issue of By-products in Estonia	Rene Rajasalu	11.00 – 11.15		
2.6	The issue of By-products in Germany	Charlotte Goletz	11.15 – 11.30		
2.7	Proposal on amendments of the Guidance and what to include in the practical tools. Division of labour.	Jan Teekens	11.30 – 11.45		
3	**SUBGROUP 2: Training session – CHAIR: Gabrielle Khun & Myriam Fernandez**				
3.1	Proposal of a training package for 2020-2021	Gabrielle Khun	11.45 – 12.00		
3.2	Training session: REACH & CE (Helsinki, June 2020). Definition of the programme	All	12.00 – 12.45		
4	**SUBGROUP 3: REACH & Circular Economy – CHAIR Topi Turunen**				
4.1	Introduction to the outcome of the subgroup. Discussion on the draft of new Annex D Discussion on the content of practical tools Division of labour	Topi Turunen/All	12.45 – 13.15		blueprint for the tool 2.0.pdf ANNEX D amended (2).doc

4.2	The European Commission study on the Chemical-Product-Waste Interface (CPWI).	Tom Nickson	13.15 – 13.30		
	Lunch break		**13.30 – 14.00**		
5	The HAZBREF Project: overview of the results	Topi Turunen	14.00 – 14.15		
6	**SUBGROUP 4: IED & Circular economy – CHAIR: David Pugh**				
6.1	Presentation of the key issues contained in David's proposal	David Pugh/All	14.15 – 14.40		 200131 Circular Economy and Industr
7	**SUBGROUP 5: Landfill Guidance – CHAIR: Rainer Bullita**				
7.1	Presentation of the new index and discussion on possible amendments	Rainer Bullita/All	14.40 – 15.00		 NEW Index LF_Guidance docume
8	**Conclusions and wrap up. CHAIR: Romano Ruggeri** - Suggestions for ToR 2021 and beyond - Meetings in 2020		15.00 – 15.30		

5.2 2nd Plenary videoconference June 25th 2020

Agenda

20 minutes: General overview of the state project: what we have done, further steps. Ideas for EoW DB.	Presentation of the meeting and of the project state of play (Romano Ruggeri)	 Microsoft PowerPoint 97-2003 Presentation
1 hour: Update of the subgroups: REACH & CE, IED & CE, By-products&Discard, EoW Database, Training, Landfill Guidance	Discard-byproduct subgroup update (Jan Teekens)	 Microsoft PowerPoint 97-2003 Presentation
	Landfill Guidance subgroup update (Rainer Bullita)	 Microsoft PowerPoint 97-2003 Presentation

	REACH & CE subgroup update (Topi Turunen)	Microsoft PowerPoint 97-2003 Presentation
	Training subgroup update (Gabrielle Kuhn)	Microsoft PowerPoint 97-2003 Presentation
20 minutes: Case studies on REACH application	Practical case of REACH application: Pb in Polyvinyl chloride polymer	Microsoft Word 97 - 2003 Document
	Practical case: Hotel soap (Arjen Snijder)	Microsoft PowerPoint 97-2003 Presentation
	Practical case: Restriction of lead in PVC (Spain)	Microsoft PowerPoint 97-2003 Presentation
30 minutes: ToR 2021-2024: collecting ideas		

5.3 Core team videoconference February 15th 2021

Minutes of the WMCE CORE TEAM Videocall – 15/02/2021

In Attendance

- Romano Ruggeri
- Jan Teekens
- Simon Farrugia
- Topi Turunen
- Rainer Bullita
- Gabrielle Kuhn

Agenda

Romano presented a proposal of actions and schedule for 2021 (end of ToR 2020 and ToR 2021 April-December). The content of the proposal is summed up in the following ppt:

Microsoft PowerPoint 97-2003 Presentation

Topic 1: Meetings in 2021

It was agreed to have 3 meetings along 2021:

- A remote meeting in **May** focused on reuse/byproducts topic
- A possible face to face meeting (depending on the COVID situation) in Helsinki in **September** back to back with a training session
- A possible face to face meeting (depending on the COVID situation) in **November** back to back with a training session

The content of the 1st plenary meeting (remote workshop on reuse/byproducts) will be discussed within the byproducts subgroup. Main points of discussion arising from the work of the subgroup can identify areas for presentations to be given in the workshop.

Topic 2: Training

Two training sessions are planned in 2021:

- REACH & CE in September (Helsinki)
- Waste-no waste, EoW, Byproducts (November)

The second one can be included in the Norway EEA Grant project if any donors will express interest within the 1st of March.

A further session on "train the trainer" can be included in the plan, with the aim to give trainers some skills about training preparation and conduction.

If the COVID restrictions will not be lifted, online training tools can be developed (e.g. remote workshop).

Topic 3: IED & CE

David communicated to step down as referent of the subgroup. Romano asked Simon to take over jointly with Romano himself. EU COM expressed interest in this work in an informal contact with Romano.

The 1st vdc of the subgroup has to be fixed jointly with the IED group to start the work from the document drafted by Simon and Romano.

Topic 4: REACH & CE

Topi asked to postpone the videocall of the subgroup. It is important to catch up with Tom to have his feedback. ECHA Forum should be involved to receive a feedback.

Topic 4: Waste incineration subgroup

A new subgroup will be set up in June with the aim to draft a survey and trigger the work for 2022.

Topic 5: Landfill subgroup

Hopefully, the Landfill Guidance revision will be issued by the end of March. The subgroup can be kept if any new needs come up.

Next steps

Core team meetings will be fixed on Thursday. Here is the work plan and the list of next meetings (next videocalls is fixed for the 18th of March at 15.30 CET):

6. Networking

6.1 Norway EEA Grant

The EEA and Norway Grants are funded by Iceland, Liechtenstein and Norway. The Grants have two goals – to contribute to a more equal Europe, both socially and economically – and to strengthen the relations between Iceland, Liechtenstein and Norway, and the 15 beneficiary countries in Europe. More info at: https://eeagrants.org/about-us.

The current EEA and Norway Grants programme period 2014-2021 covers 15 beneficiary countries. The Norwegian Environment Agency cooperates with 8 of those countries. The priority programmes for the current period are set, and the possible bilateral activities have to be concluded by end 2024. Negotiations for priority sectors and programme areas for the next period beyond 2021 are expected to start in the upcoming years. See more information on the grants in the attached presentation as well as the information document which were shared before the meeting.

It was previously agreed to search for collaboration between the EEA-grants and IMPEL.

A videocall took place on the 23rd of september with the following Agenda:

- Tour de table
- IMPEL Waste management & Circular Economy project
- EEA and Norway Grants programme
- Areas of collaboration: IMPEL training proposal
- Budget
- First proposal for 2021
- Next step: videocall/docs to draft
- A training proposal has been drafted and sent to the referents of the project to be possibly carried out in 2021.

A training proposal has been drawn up to be circulated to the beneficiary Countries:

Adobe Acrobat Document

6.2 ECHA and ECHA Forum

Forum (for exchange of information in enforcement) is a body of ECHA (as described in REACH Art 76(f)) with the main task to coordinate the enforcement of the chemical's legislation in the Member States. Its members are representatives from the national enforcement authorities. REACH, CLP, PIC, BPR and POPs are the legislations under the remit of the Forum.

Three meetings have been arranged with members from ECHA and ECHA Forum to outline a possible collaboration with the ECHA Forum's WG Pilot Recovered Substances. IMPEL has also attended the meeting of the ECHA Forum.

It is a pilot project of the Forum, mostly focused on the exemptions from REACH Registration described in Art 2(7)d.

The WG identified some points of interface between the WFD and REACH when assessing the EoW criteria described in Art 6 of WFD. These are in line with the IMPEL Guidance.

The following areas for collaboration were identified:

Joint inspections

Primarily in context of the Forum pilot project on Recovered substances – involvement of waste NEAs is highly welcomed.

Moreover, the Forum is discussing a new project to take place in 2022 on articles. If selected, this could be another opportunity to for joint work of REACH and Waste inspectors (WFD obligation to notify articles containing SVHC to the SCIP Database).

Revision of the IMPEL Guidance and participation of the Forum/WG

The Forum project manual and the IMPEL guidance are covering different scope and target different audiences, so must be written separately. The Forum project on recovered substances focuses on exemption under REACH Art 2(7)(d). The scope of the IMPEL Guidance is much broader as it covers all REACH duties. The Forum project WG can contribute to the review of the IMPEL Guidance in relation to REACH Art 2(7)d exemptions.

Forum's Training for national coordinators of Forum pilot project on recovered substances

IMPEL's Training on REACH & Circular economy (postponed to 2021)

Minutes of the meeting held on the 29/04/2020:

Microsoft Word 97 - 2003 Document

6.3 IED Implementation IMPEL Project

The subgroup IED & Circular eocnomy has joined forces with experts from the IED Implementation project. The two project coopearate on this area, attending videoconferences jointly. Further agreements to work together has been taken for the period 2021-2024.

6.4 EuRIC

The European Recycling Industries' Confederation brings together recycling federations from 20 EU and EFTA Member States and represents: 5,500+ companies including small and medium-sized entreprises 300,000 local jobs Millions of tons of waste recycling every year (metals, paper, plastics, glass etc.)

EuRic is in charge of the sub-working group on incentives for the circular economy:

- Circular Plastics Alliance of the European Commission
- Ecodesign Stakeholder Consultation Forum of the European Commission
- CEN / CENELEC (WEEE, ErP, Paper, Plastics, Tyres, etc.)
- Member of the Ecodesign and Energy Labelling Consultation (EELCF)
- Market Access Advisory Committee (MAAC)
- JRC / IPPC Bureau (TWG) • Observer of UN Basel & Stockholm Conventions
- Regular expert/speaker at TAIEX, Circular Economy Mission, High Level Conferences of G7 & G20 Environment / COP
- OECD (BIAC)

https://www.euric-aisbl.eu/

A videocall took place on the 09/10/2020 with Emmanuel KATRAKIS Secretary General of IMPEL who had showed interest in the initiative of the end of waste database.

6.5 EIPPC Bureau

The EIPPC Bureau organises and coordinates the exchange of information that leads to the drawing up and review of BAT reference documents according to the dispositions of the Guidance document on the exchange of information (Commission Implementing Decision 2012/119/EU). For each BREF, the European IPPC Bureau sets up a Technical Working Group (TWG) to carry out the exchange of information on BAT. Along the revision of the BREF Ceramics, a subgroup focussed on decarbonisation and circular economy has been set up within

the TWG. EIPPC Bureau expressed interest to liaise with the "IED & Circular economy" subgroup of the WMCE project and offered IMPEL the possibility to nominate two members to act as observers within the TWG to participate to the Sevilla process for the BREF Ceramics recast.

Minutes Subgroup IED & Circular economy – EIPPC Bureau: vdc 10/03/2021

In Attendance

IMPEL

- Romano Ruggeri
- Horst Buther
- Simon Farrugia
- Jan Teekens
- Marinus Jordaan

EIPPC Bureau

- Serge Roudier: permanent officer JRC
- Maria Gomez Cruz
- Georgios Chronopoulos
- Martin Weiss

Agenda

- Tour de table
- Presentation of the IMPEL projects on IED & Circular economy
- Presentation of the EIPPC Bureau activity on the BREF Ceramics
- Discussion on possible cooperation areas

Discussion: main points

- Romano presented the IMPEL network, the two projects "IED Implementation" and "Waste management & circular economy" and finally the ***IED&Circular economy subgroup*** expected outcomes and state of the work. The presentation is here reported:

Microsoft PowerPoint
97-2003 Presentation

Under the IED Implementation project, other subgroups are running that can have an interest to the broaden scope of a BREF revision: e.g. Self- Monitoring subgroup, BAT Subgroup, BREF Cycle subgroup.

Romano informed that a webinar on "*Air-emission self monitoring*" will take place before

summer.

Romano informed that the "*Guidance for regulators on enabling innovations for the circular economy*" dedicates an Annex to the IED Directive, highlighting the key topics relevant to circular innovations .

The Guidance can be downloaded at the following link:

https://www.impel.eu/guidance-making-the-circular-economy-work-launched/#:~:text=Guidance%20'Making%20the%20Circular%20Economy%20Work'%20launched,-december%2013%2C%202019&text=A%20crucial%20element%20in%20the,end%2Dof%2Dwaste).

Romano informed about the aim of the work of the IED&Circular economy subgroup. The group is working at a document aimed at helping regulators to adjust IED permits to circular issues: it can indicate what an IED application should contain with reference to circular economy and what regulators have to prescribe to boost circularity.

It can help regulators to include in the "new IED circular permits" provisions to provide self monitoring plan and reports containing pieces of information needed to monitor the circularity of the installations by the use of a circularity index. The document could be used as a basis for decision making and setting conditions.

Serge expressed real interest in some aspects of the IMPEL work upon which it is possible to establish a solid cooperation. He informed that for the first time, despite the IED Directive has not been revised yet, a subgroup on decarbonisation and circular economy has been set up within the TWG of the BREF CER review. A value chain approach will be used in order to assess how the installation can affect the supply chain and the end of life of the products. IED Revision and BREF review are two independent actions under different leads; anyway DG ENV and JRC are tied and a strong collaboration is in place.

Martin informed about the state of the review process of the BREF CER; it has started in 2019 and a kick off meeting took place in February 2021. Anticipating the IED revision, there is a strong address to give emphasis to aspects as circular economy, decarbonisation, industrial symbiosis, value chain approach.

An important step of the process is start with the collection of data related to the above mentioned topics. The issue of the final version of the BREF is expected in 2025. Spain, Italy and Poland are the Member States with the highest number of installations.

Horst said that a possible evolution within the IED Implementation project can be to come out with technical working groups on specific BREF (as did in the past with cement and IRPP subgroups). It is also worth to explore the possibility to be involved in the TWG in a formal or informal way. Become an observer is a possibility, as well as keeping a constant contact with JRC people along the process with informal meetings.

Romano suggested to set up a technical group on experts on the ceramic sector, to apply the products of the IED&Circular economy subgroup to the ceramic sector as a pilot.

Marinus suggested to use the experience of inspections and enforcements as elements to be considered in the BREF review.

Next steps

It was agreed to trigger a mutual collaboration and keep constantly updated on future progress of the work.

7. Work of the subgroups

7.1 Training subgroup

The Waste management and Circular Economy project (previous Landfill Inspections Project series) started in 2011 and has developed different products/tools. The main tools are:

- Guidance Making the Circular Economy work
- Guidance on Landfill inspection
- Guidance on Pre treatment

In 2018 a training needs assessment has been conducted by the waste management and circular economy project through an online survey for the target group inspectors and permit writers. The following main areas on training were identified by the survey: Joint inspection in landfill; end-of waste; by-products; waste classification and waste acceptance and pre-treatment. Furthermore several tools were identified, e.g. workshops, seminars; e-learning; joint inspections.

The main goals of the subgroup training are:

- Development of a training programme consisting of training goals and modules for the main identified areas/subjects with the aim to develop knowledge and skills on crucial aspects of waste management: landfill, pre-treatment, End-of-waste, By-products; REACH and Circular Economy using the guidance Making the Circular Economy work, guidance on Landfill inspection and the guidance on Pre treatment.
- Supporting trainers on the development of training materials.
- Sub-goals:
- Development of a training schedule
- Development of the training tools
- Development of training modules
- Support on organizing training programmes with host country

Expected outcome:

- Development training programme on REACH and Circular Economy in Helsinki, Finland
- Development training programme on waste and Circular Economy (to be carried out within the Norway EEA Grant)
- Development of a training package 2020-2021

Activities performed in 2020

- Development of draft agenda training programme on REACH and Circular Economy in Helsinki, Finland (the training session should had to take place in October 2020 and has been postponed to 2021)
- Development of a draft agenda training programme waste and Circular Economy Norway EEA Grant.

Next steps in 2021

- To develop a training programme on waste and Circular Economy with the Norway EEA Grant; including support on organization of the training programme with the host country and supporting trainers on the development of training materials;
- To implement the training programme on REACH and Circular Economy in Helsinki, Finland (second half of 2021); including support on organization of the training programme with the host country and supporting trainers on the development of training materials;
- To implement Joint inspections (IMPEL members) with ECHA Forum project on recovered substances;
- To develop a training session on train de trainer;
- To explore training possibilities on training subjects on crucial aspects of waste management, e.g : landfill and pre-treatment;
- To explore Peer to Peer EU COM tool possibilities on training subjects on waste and Circular Economy
- To draft a final report on the outcomes of all training sessions conducted in 2021.

As far as the Norway EEA Grant, we got positive reactions from six of the eight beneficiary countries, which expressed interest in receiving the proposed training.

Contact information from each of the countries are here summarized in the table below.

Bulgaria	Rositsa Karamfilova Margarita Stoykova Desislava Stefanova Petar Markov	rkaramfilova@moew.government.bg mstoykova@moew.government.bg dnstefanova@moew.government.bg pmarkov@moew.government.bg
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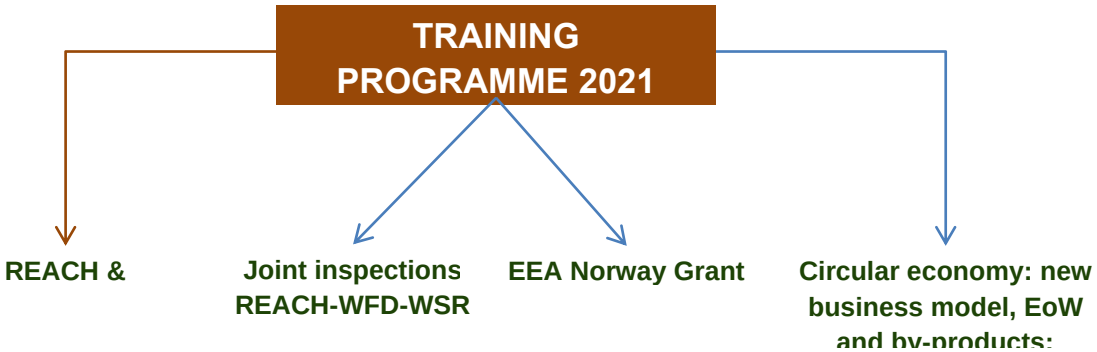


IMPEL "Waste management & Circular Economy" Project

Draft training programme REACH & Circular Economy

Week 43 (19-24 October), Helsinki

Training topics:

- REACH legislation
- Interaction REACH – WFD
- Hazardous waste (SVHC) REACH and WFD
- REACH-Waste Shipment Regulation

Trainers:

- **Tbd**

Day 1			
Location: tbd			
Time	**Topics**	**Trainers**	**Training material**
09.15-09.45	***Introduction*** • Opening and welcome • Round of introduction • General overview training 19 and 20 October *Opening of the training REACH and CE and welcome to the participants. Round of introduction, possible to include to ask participants on their expectations of the training and what is the main issue they would like to learn in the 1,5 day of training*	Romano?	

09.45-11.15	***REACH legislation***
	• Basic principles of REACH
	  ○ Definitions
	  ○ Scope
	  ○ Registration and authorisations
	
	Trainer 1: In the training methodology STEA-method this
		Tbd (2 trainers)	Presentation
			
			Exercise

	step is "Slide". Trainees will be confronted with the fact that the REACH legislation and how it interacts with the WFD and WSR can be challenging. The introduction includes answers to questions: what's in it for them and what will they learn. Introduction on how they will learn (theory, exercises etc) and when each topic will be presented during the training. The "slide" exercise could be description of a situation in practice on the topic and asking the trainees if they recognise such situation and why it is difficult. After the slide the theory on basic principles of REACH can be introduced by trainer 2.		
	Coffee break		

11.30-13.30	***Interaction REACH – Waste Framework Directive***
	• Overview
	  ○ Scope (EoW and By-products)
	• Registration
	  ○ What: substances and/or mixtures
	  ○ How: process
	  ○ Exemptions, including PPROD
	• Restrictions
	• Inspection issues on REACH – WFD
	
	In the training methodology STEA-method this step is theory. After the theory, following step could be and exercise on an inspection issue and interaction REACH – WFD. E.g. on registration of the substance and inspection on EoW
		Tbd	Presentation
			Exercise
			
			Annex D guidance

	Break		

15.00-17.00	***REACH – WFD – Hazardous waste (SVHC)***
	• Hazardous waste (SVHC)
	  ○ Definitions
	  ○ Authorisations
	  ○ Information obligation and SCIP database
	
	In the training methodology STEA-method this step is theory on definitions, authorisation, the information obligation and SCIP database. After the theory, the following step could be and exercise on applying theory
		Tbd	Presentation
			Exercise
			
			Annex D guidance

	of interaction REACH/WFD/SVHC .		
	End day 1		

Day 2			
Location: tbd			
Time	**Topics**	**Trainers**	**Training material**
09.00-09.15	***Introduction*** • Opening and welcome • Introduction 2nd training day	Tbd	
9.15-12.30	***Interaction REACH – WFD - WSR*** • Control procedures hazardous and non-hazardous waste • Cross border EoW decisions *In the training methodology STEA-method this step is theory on control procedures and cross border issues on EoW. After the theory, following step could be and exercise. This exercise can combine the topics REACH/WFD/Hazardous waste/WSR and applying theory learned on these topics. In the training methodology STEA-method this is the final exercise.* *Final exercise could consist of splitting the group in 3 and giving 3 different assignments they need to solve. The assignment could be a cases wherein the different issues play a role. The participants need to solve the casus with a checklist. Plenary discussion of one or all cases by the participants.*	Tbd	Presentation Exercise *Annex C guidance*
12.30-13.00	***Closure and evaluation*** *Evaluation of the training. To evaluate the training (topics, training materials etc) participants could be asked to fill out a form at the end of the training or by sending an electronic form (e.g Google forms)*		

7.2 Landfill Guidance subgroup

Members of the subgroup:

- Romano Ruggeri (I) – Leader Project Team LF/CE
- Rainer Bulitta (D) – Leader SG 5
- Paul Corrigan (GB/Sco)
- Liesbet Rommens (B)
- Pinar Ece (TR)
- Danijela Granic (HR)
- Franz Waldner (A)
- Christiana Gomes (P)
- Elena Foddanu (I)
- Luca Paradisi (I)
- Andoni Martinez de Guereñu (E/Gal)

The IMPEL Project "Landfill and Circular Economy (LF/CE)" decided in 2019 to revise the "Guidance Book for Landfill Inspection" which was created in 2016. Even though the main focus of the group is on circular economy, the revision of the handbook was recognized as important. For the revision subgroup 5 (SG 5) was found.

During the "live revisions" of miscellaneous landfills, the guidance book was used for preparing and inspecting. It turned out that both the checklists and the chapters need to be adapted for practical application. The main tasks were identified as follows:

- Reflecting on the fact that the main purpose of the Guidance is to be used by inspectors, not mainly by permit writers.
- Avoiding to deal extensively with sources of rights, it's more important to put the focus on the practical things.
- Taking into account, that the LF Directive might be transposed differently in the MS, some MS have implemented additional rules
- Repetitions should be avoided and the chapters have to be amended accordingly.
- Revising of the checklists (form and content) for better and quicker use during inspection
- Implementing chapters e.g. for "stable non reactive waste", "financial guarantee", "trigger levels/thresholds for gw" , "definite closure and aftercare", "self control"
- Implementing "Best Practices" from member states to give an overview.

The individual chapters were assigned to the team members. For each single chapter a "MS-word" file was created. The team members worked on the files and uploaded the drafts to basecamp 1, later to BC3.

Subgroup 5 performed six Videocalls supplemented by 2 videoconferences of the “core team”.

Some of the contributions have been already gathered. Within March 2021, they will be merged in one final draft to be circulated. The final approval will be postponed to late 2021.

7.3 IED & Circular Economy subgroup

Background documents

- MIW-IMPEL Guidance on circular economy - Annex A (https://www.impel.eu/wp-content/uploads/2019/08/Guidance-Making-the-Circular-Economy-Work.pdf)
- Green Deal & New Circular economy action plan (https://ec.europa.eu/info/node/123797)
- The European Green Deal Communication COM(2019) 640 – elements linked to this topic include; mobilizing industry for a clean and circular economy, boosting the market for secondary raw materials, and a focus on resource intensive sectors such as textiles, construction, electronics and plastics.
- A New Industrial Strategy for Europe (Brussels, 10.3.2020 COM(2020) 102 final) (https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en)
- IED Contribution to the circular economy – Ricardo Energy and Environment.

This study aimed to provide an understanding of the extent of the IED’s contribution to meeting circular economy objectives looking at the following topics:

Use of energy, Use of materials, Generation of waste, Reduction of hazardous chemicals, Industrial symbiosis.

- Hazbref Study. The EU funded project HAZBREF (2017–2020) will increase the knowledge of the industrial sources and the reduction measures of hazardous chemicals. The aim is to enhance the way these substances are addressed in the IED BREFs by contributing to the systematic utilization of data from various EU regulatory frameworks. This will help to reduce the use of hazardous substances in industrial installations and diminish the emissions to the environment.

https://www.syke.fi/en-US/Research__Development/Research_and_development_projects/Projects/Hazardous_industrial_chemicals_in_the_IED_BREFs_HAZBREF

- Resources and Waste strategy, England

https://www.gov.uk/government/publications/resources-and-waste-strategy-forengland

Rationale

Circularity is an essential part of a wider transformation of industry towards climate-neutrality and longterm competitiveness. It can deliver substantial material savings throughout value chains and production processes, generate extra value and unlock economic opportunities. Enabling the implementation of industrial symbiosis is also a key point.

In line with Europe's new growth strategy, which gives back more than it extracts, Europe's industry must play a leading role in the ecological transition. This means reducing its carbon and material footprint and embedding circularity across the economy.

EU chemicals policy and legislation, in particular REACH, encourage a shift to 'safe-by-design chemicals' through the progressive substitution of hazardous substances to better protect citizens and the environment. However, the safety of secondary raw materials can still be compromised, for instance, where banned substances persist in recycled feedstock.

The European Green Deal sets the objective of creating new markets for climate neutral and circular products, such as steel, cement and basic chemicals.

This work should link up with the IED review by the Commission.

State of play

In the MIW-IMPEL Guidance Making the Circular Economy work (Annex A), key provisions in the IED relevant to circular innovations have been highlighted:

Item	Topic	Relevance
1	Definition of installation	Sets a framework for Industrial symbiosis, including transferring material streams between installations
2	IED categories of activities	Determining what regime is applicable to a certain industrial process (example chemical textile recycling)
3	Requirement to apply Best available techniques (BAT) and BREFs (BAT reference documents), in particular the BAT Conclusions in BREF's	Sets a framework for assessing innovative, more circular production and waste recovery processes including the use of new secondary raw materials (by-products and end-of-waste)
4	Stimulating the use of Emerging Techniques (ETs) and allowing for temporary derogations from the requirements on emissions for the testing and use of emerging techniques	Can encourage and facilitate carrying through innovative, more circular production and waste treatment processes
5	Requirement to use resources efficiently	Can trigger and encourage circular innovations at production/waste treatment facilities aimed at using less resources, substituting primary resources by secondary resources or substituting low quality/harmful resources by

Item	Topic	Relevance
		high quality/less harmful resources
6	Requirement to prevent waste and to properly manage waste	Can trigger and encourage circular innovations at production/waste treatment facilities aimed at preventing waste from processes and/or producing secondary materials from waste streams.
7	Requirement to have an environmental management system (EMS)	Can facilitate a dialogue between regulator and operator on opportunities for circular innovations

<u>Expected outcome of the Subgroup IED & CE</u>

1. ***Guidance for permit writer and inspectors: how to make IED permits more "circular" and promote compliance.***

The Guidance aims at helping regulators at adjust IED permits to Green Deal: it can indicate what an IED application should contain with reference to circular economy and what regulators have to prescribe to boost circularity. Industrial symbiosis and Climate change are among the criteria to be considered.

The Guidance can also help regulators to include in the "new IED circular permits" provisions to provide self monitoring plan and reports containing pieces of information needed to monitor the circularity of the installations. A link with the circularity index is an option.

The Guidance can include a focus on some specific IED sector, to look deeper into existing studies and experience and come out with best practices (i.e. cement, chemicals, steel, glass sectors). It can also include a focus on the role of inspector to promote compliance and stimulate circularity.

2. ***Develop a Circular Economy Index for installations***

The circular index shouldn't be numerical. It aims to give an overall picture of how much the installation is circular and can be monitored.

Criteria have to be identified, as well as how to use it and the benefit for the businesses.

It can used as a basis of discussion with businesses to include those goals in the EMS policy and monitor them.

3. ***Amending Annex A of the Guidance Making the Circular Economy work***

For the next edition of the MiW-IMPEL Guidance the role of IED in respect to CE will be further elaborated, amending Annex A. This includes:

- identifying further examples of where the IED has successfully delivered upon the circular economy, e.g. fuel swapping/raw material swapping/waste prevention etc. and analysing to what extent provisions in the IED have triggered/supported such innovations;
- review of the relevant provisions of the IED and their role in the circular economy. This review can assess
- any flexibilities that may exist.

Further optional points:

- where (national or EU) interpretation, guidance or policies could enhance their role;
- Does the EIPPC approach in BREF and BATc consider and facilitate the circular economy when BAT conclusions are developed?
- whether (legislative) improvements could make the provisions more effective. Some of the obvious areas that pop into mind are improving the "emerging techniques" derogation, making CE a consideration for permitting and investigating EIPPCB making a horizontal CE BREF.

The subgroup is attended by members of the WMCE Project as well as the IED Implementation Project.

During one of the meetings of the subgroup, the group discussed around te following interesting presentation: *Circular Economy and Environmental Assessment: Tom Ludwig*

Discussion and hints for our work:

- Circular economy in environmental assessment (EIA, SEA)
- Compare alternatives with less impact on the environment. These alternatives can contribute to CE-goals
- The environmental assessment shows what the project contributes to Circular Economy goals.
- E.g.: Business park – Draw up of a Circular quality plan
- NCEA recommended to write in the EIA:
- What they contribute to CE. By using the LCA or Carbon Footprint tool. Describe how this initiative relates to the r-ladder of circularity strategies.
- Provide a detailed description of the production process of the plant, and the (raw)material-, water- and energy balance.
- Provide detailed information about (potential) substances of very high concern in the process. Investigate how to minimalize these substances.
- Provide alternatives with less impact on the environment:

- How to reduce the energy-use (f.e. to use steam from a company nearby and to reuse process-heat)
- Different possibilities to use the CO2 (f.e. a pipe to an other company)
- Reduce the nitrogen-emission (Nox) (f.e. industrial design and electric transportation)
- Broaden the discussion to the use phase. We are used to business to business schemes; consider also business to users.
- Use the idea of a Circular quality plan for the IED application.
- Use the circular index to summarize the info requested in the application (monitoring, indicators)

Another interesting document that triggered the discussion was the following dutch doc:

"Recognizing and assessing circularity at companies"

Microsoft Word 97 - 2003 Document

Jan presented the attached document. Businesses can contribute to the circular economy at different stages of consumption:

- before consumption (production process) (1 to 3),
- during consumption (4 + 5)
- and after consumption (6 to 8).

In the design and production of new products or materials:

- secondary raw materials are used;
- no waste is generated during the production process;
- if waste does nevertheless arise, this waste is used in its own production process or that of third parties;
- consideration has been given to how the lifetime of the product or material can be extended;
- the reuse of the products or materials is facilitated;
- the products or materials can be applied at the end of their life in other products without processing (extended use);
- if no reuse or extended use is possible, the products or materials can be recycled and returned to the raw material level in order to be used in products;
- Preventing the incineration / landfilling (final disposal) of the waste.

A first skeleton of the Guidance has been produced:

GUIDANCE FOR PERMIT WRITERS AND OPERATORS: HOW TO MAKE IED PERMITS MORE "CIRCULAR". Proposal for a new "CIRCULAR ECONOMY PLAN" to be included in the IED application

The document aims at helping regulators at adjust IED permits to Green Deal: it can indicate what an IED application should contain with reference to circular economy and what regulators have to prescribe to boost circularity.

It can help regulators to include in the "new IED circular permits" provisions to provide self monitoring plan and reports containing pieces of information needed to monitor the circularity of the installations by the use of a circularity index. The document could be used as a basis for decision making and setting conditions.

A separate document (to be edited by a different working group) can include a focus on some specific IED sector, to look deeper into existing studies and experience and come out with best practices (i.e. cement, chemicals, steel, glass sectors).

CONTENT OF THE CIRCULAR ECONOMY PLAN: IED APPLICATION

A. INTRODUCTORY PART

Activities at the installation – to describe in a process like manner the activities taking place at the installation and identify those areas where circularity can be feasibly be implemented

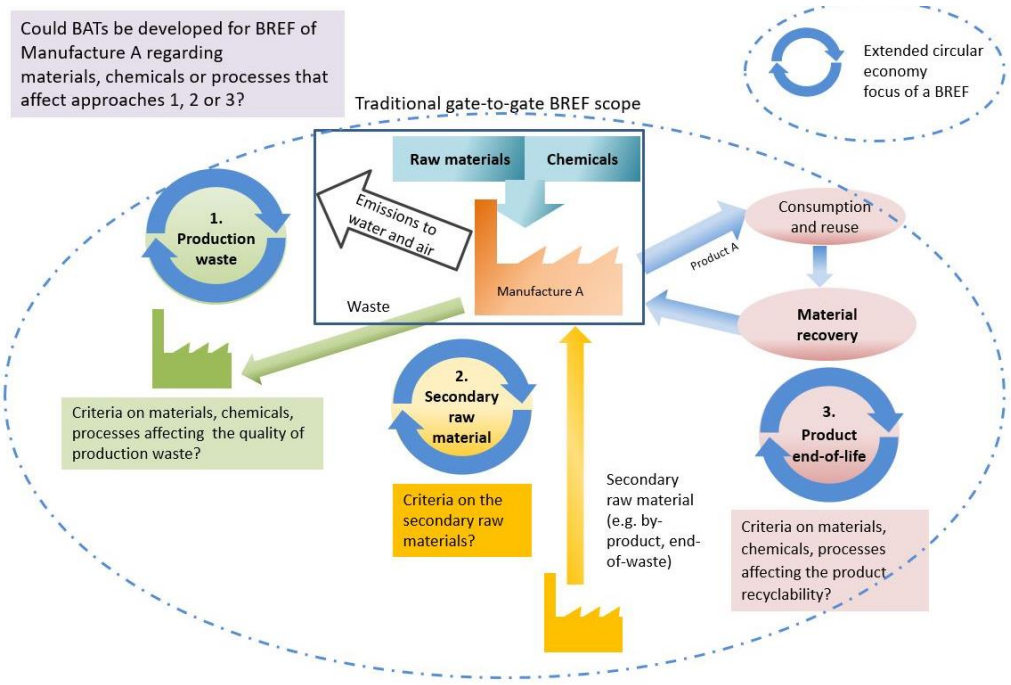
Regulatory background – to compile a legal register of applicable regulations which provide the framework in which circular economy practices need to be considered.

Environmental Management System – How is the proposed EMS addressing circular economy?

B. CONTRIBUTE TO THE CIRCULAR ECONOMY

- Production process
- Product end of life
- Production of waste
- Decommissioning

The following diagrams can be used (Hazbref Project):



B.1) PRODUCTION PROCESS

- Operational aspects and alternatives – various alternatives to each of the below aspects are to be described.
  a) Raw materials – consideration of procurement practices and types of inputted materials sourced in order to commence the activity. Material inputs, water and energy consumption are to be considered here.
     Focusing on the use of secondary raw materials (materials that can be used in a manufacturing process instead of or alongside virgin raw materials, e.g. by-products or end-of-waste) at the installation.
     Can requirements be given on the quality of secondary raw materials originating from other facilities/installations/sectors to be used at the installation from the point of view of how this affects the recoverability of the wastes or products produced?
     Provide detailed information about (potential) substances of very high concern in the process. Investigate how to minimalize these substances.
  b) Main production process/activity/technology used on site
  c) Emissions to air
  d) Effluent discharges – assessment of feasibility for effluent re-use including identification of technologies required
  e) (Intended) Product output – Description of the products and final user

- Industrial symbiosis – links with other installations or industrial areas leading to better circularity
- Adaptation to climate change – will the above factors address and remain valid with a changing climate? How will any new technologies identified through the above assessment result in lower emission of GHGs

B.2) PRODUCT END OF LIFE

End-user strategy – A strategy aimed at the end-user of the intended material output promoting circularity. If applicable, this may also include an internal policy on the preference of more circular end-users of the output.

Consideration of a life cycle assessment of the product etc. How the lifetime of the product or material can be extended.

Destination of the product after use. Can be reused/repaired/recycled?

Focusing on the recoverability of the product at the post-consumer end-of-life phase. Can requirements be given on the use of materials, chemicals or processes at the installation from the point of view of how they affect the post-consumer product recoverability?

B.3) PRODUCTION OF WASTE

Waste – the material outputs of the installation which are not intended to be produced by the activity but are nonetheless produced.This could also include assessment of feasibility of re-use of certain wastes and/or by-products including achievement of End of waste.

Focusing on the quantity and quality of wastes generated at the installation. Can requirements be given on the use of raw materials, chemicals, or the installation processes from the point of view of how they affect the amount and recoverability of production/industrial waste generated?

If waste is generated during the production process, this waste is used in its own production process or that of third parties?

Preventing the incineration / landfilling (final disposal) of the waste.

B.4) DECOMMISSIONING

How will any eventual closure/termination of the activity contribute towards circularity by consideration of production residue, types of construction material/methods used in the installation, equipment utilised etc.

C. ALTERNATIVES: CREATION OF AN ASSESSMENT TOOL

Develop a tool to assess alternatives: describe aim and purpose.

The applicant, to complete the pieces of information given in the application, considers alternatives and provide input data for selecting the best available circular option/business model.

Describe how the installation relates to the r-ladder of circularity strategies.

The following diagram (Material Circularity Indicator) is an example describing input indicators to build up an assessment tool:

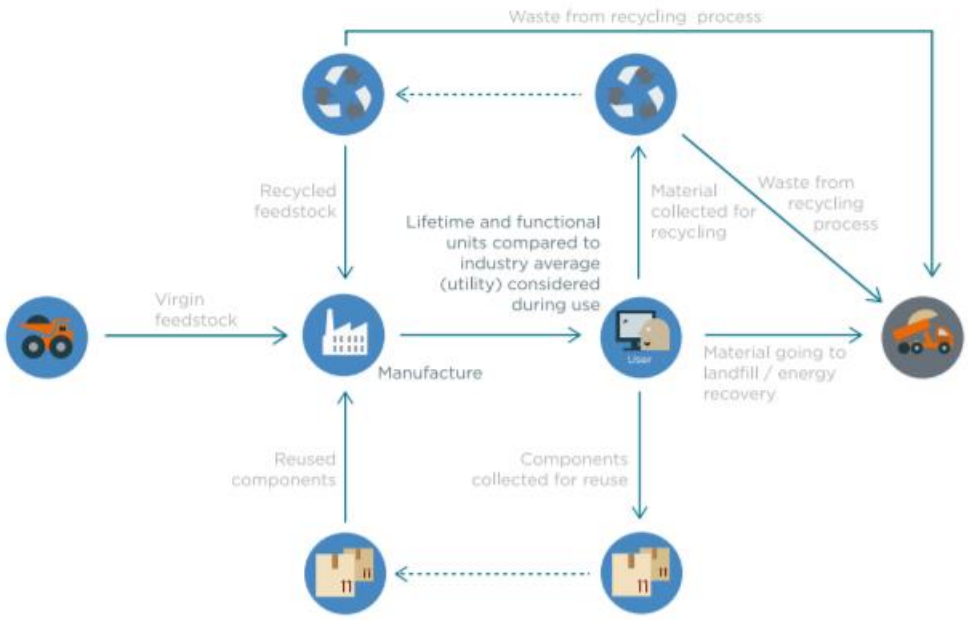
THE MATERIAL CIRCULARITY INDICATOR FOR PRODUCTS

The diagram below shows the material flows taken into account to arrive at the **Material Circularity Indicator** of a product. The MCI gives a **value between 0 and 1 where higher values indicate a higher circularity.**

More specifically, the following inputs are used to calculate the MCI:

- **Input in the production process:** How much input is coming from virgin and recycled materials and reused components?
- **Utility during use phase:** How long and intensely is the product used compared to an industry average product of similar type? This takes into account increased durability of products, but also repair/ maintenance and shared consumption business models.
- **Destination after use:** How much material goes into landfill (or energy recovery), how much is collected for recycling, which components are collected for reuse?
- **Efficiency of recycling:** How efficient are the recycling processes used to produce recycled input and to recycle material after use?

A detailed **bill of materials** for the product is needed to compute the MCI, listing the above data for all its components and materials.



D. REPORTING

- Monitoring and performance indicator – how will the success of this circular quality plan be measured and assessed during the lifetime of the installation
- Circularity Index- explanation and calculation of the chosen circularity metric

Circularity Index criteria
1. Raw material replaced by by-products and EoW
2. Reduction of generated waste (prevention of waste)
3. Produced waste sent to recycling/recovery plants
4. Reduction in the use of SVHC in the raw material
5. Use of recycled waste water
6. Reduction of water consumption
7. Reduction of energy consumption and CO2 emissions
8. Industrial symbiosis initiatives
9. Destination after use

7.4 Discard and by-products subgroup

Discard and circular economy business models

According to article 3.1 of the WFD waste is defined as any substance or object which the holder discards or intends or is required to discard. This provision remains unchanged under the revised WFD 2018.

Increasingly, in circular business models reuse, repair, remanufacturing and refurbishment extend the lifetime of products which would otherwise have been discarded. These activities in fact prevent that products become waste: products are not discarded and therefore do not become waste.

According to the waste hierarchy (article 4 of the WFD) reuse, repair and other waste prevention measures are preferred over preparation for reuse, recycling and other waste recovery operations.

In these circular business cases the practical question may arise whether indeed a substance or object is discarded or not. Recital 61 of WFD 2018 stresses the need for a common understanding and application in practice of the term 'discard', especially taking into account circular business models in which, for instance, a substance or object is transferred from one holder to another holder without the intention to discard. Through the abovementioned questionnaire we aim to collect information about how IMPEL members interpret the term discard in these circular business cases.

In addition to cases of reuse, repair etc. other circular business cases can occur. In these cases materials become available when products are used or consumed. These materials may then be used as a product (for another use) or as a raw material for the production of other, new products. Again the question can arise whether such materials are discarded or not. An example are coffee grounds from cafés which are collected and then used to grow mushrooms. Another example are orange peels from juicers at cafés which are collected and then used for the production of flavouring agents or animal feed. In a non-binding legal opinion concerning this case, issued by the Dutch government, it was declared that the peels were not discarded but further used. Also for such cases this questionnaire seeks to collect information about how IMPEL members interpret the term discard (these cases will be referred to as "extended use").

In the questionnaire respondents are asked if they know of cases of new circular business models where the issue of discarding of waste was raised, what they consider to be critical aspects in these cases, whether there are any tools available to support them in assessing whether waste is discarded or not and what aspects or topics the MIW-IMPEL-guidance should cover.

Critical points:

- Distinction between reuse and repair, refurbishment or remanufacturing
- Distinction between reuse and preparing for reuse; what repairs are still accepted under reuse?
- Meaning of 'extended' use, distinction with reuse (reuse: same purpose; extended use often not the same purpose); what requirements should extended use meet (nl: certain, lawful and high quality use)
- Distinction between reuse/extended use and by-product
- Reuse: when is a material suitable for direct reuse for the original intended purpose? What conditions or criteria has the product to fulfil? The same characteristics of the virgin product?
- The need of certification after the step of repairing, refurbishing or remanufacturing in order to establish that the product may be considered as new good,
- The need of a system to grant a guarantee for the repaired product (especially for eee)
- Authorising a preparation for reuse activity: can this be done through a simplified procedure? Is the final product a sort of an eow or something different?
- Intention to discard; the intention of the holder of the material (is it a burden or not?), example used clothes
- Temporal storage.

There are few tools or guidances on this topic in the MS.

Byproducts

According to article 5 of the WFD production residues are not considered as waste but as by-products if these residues meet certain conditions. A production residue is a substance or object resulting from a production process (industry, mining, agriculture, forestry etc.) which the operator not primarily aims to produce. These residues may be used as secondary raw material in another production process. Examples: Tomato stems and leaves used for the production of solid board, nylon spill used for the production of yarn, calcium sulphate and synthetic fluorite produced in a chemical plant producing aluminium fluoride and cryolite which are used in cement plants. Or they may be used as finished material for instance as animal bedding or as construction material.

Article 5 of the revised WFD (2018) now states that Member States shall take appropriate measures to ensure that a production residue is considered not to be waste, but to be a by-product if the conditions in that article are met. Recital 16 of directive 2018/851 amending the WFD links this obligation to facilitate the recognition as a by-product to the promotion of sustainable use of resources and industrial symbiosis. Appropriate measures may include

legislation (for instance permitting system for by-products, information obligations for operators), instructions for inspections, guidance, web-tools, etc.

The obligation to take appropriate measures implies that a regulator in a Member State (a national, regional or local environmental authority in charge of permitting and or inspection) may need to assess on a case-by-case basis the by-product status of production residues in case no European or MS criteria exist. Depending on the MS legislation this could take the form of a prior authorisation or a verification afterwards as part of inspections (compliance assurance activities).

In the questionnaire respondents are asked how their MS has transposed article 5, what appropriate measures it has taken, whether national criteria exist, how a case-by-case assessment takes place and how the use of by-products is encouraged under IED and in relation to industrial symbiosis.

Critical points:

- What is a production residue?
- Further use of the substance or object is certain >
- What to do with by-products which are exported, how to assess certainty about the use over there?
- What to do with prior or intermediate storage before selling and use?
- What to do when the by-product is forwarded by an intermediary and the "final user" is not identified?;
- Intermediate storage only in authorised storage facility for products (no waste)?
- The substance or object can be used directly without any further processing other than normal industrial practice >
- What does other than normal industrial practice mean?
- What does 'directly' mean?
- How to determine if prior processing is a waste recovery operation or not?
- The substance or object is produced as an integral part of a production process >
- What does an integral part of a production process mean?
- What is the practical meaning of this condition in connection to condition b and the fact that articles 5 relates to materials which are not primarily produced within a production process?
- Further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts >
- What approach is followed if no product, environmental or health protection requirements are available?;

- Standards for environmental or health protection requirements for non-hazardous substances are often not existent;
- Information of (possible) contaminants are often missing in (national) standards or other technical papers;
- How does REACH relates to this requirement? A REACH certificate may be a precondition for a residue being regarded as by-product. But from a REACH certificate you cannot conclude, that condition d is fulfilled. However, this is what operators tend to think.
- REACH registration is a big obstacle to obtain by-product status (and no recycling privilege is applicable). High cost of efforts to obtain by-product status which are economically not feasible.
- Very limited experience/policies with regard to by-products and IED or industrial symbiosis

The following document is the basis to steer the work of the subgroup:

Microsoft Word 97 - 2003 Document

7.5 REACH & CE subgroup

For the next edition of the IMPEL 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 actions and issues:

- Collect and analyse some more case examples where REACH played a role in the assessment of by-product or end-of-waste status.
- Discuss 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? Assess relevant studies like the report 'Recovered Substances by the Swedish Chemical Agency (https://www.kemi.se/global/tillsyns-pm/2016/enforcemnet-13-16-recovered-substances.pdf)
- Discuss in what sectors REACH is particularly relevant: mainly in areas of fuels and plastics?
- Collect and analyse any relevant MS guidance or ECHA Guidance; ask input from experts on (recovered) waste materials and REACH. Assess current ECHA guidance and needs for additional/more up to date guidance on how to apply REACH in case of by-products and end-of-waste.
- Further clarify registration and authorisation requirements under REACH, when are these applicable, what does it entail for the operators/regulators, what do they have to do and when? How do exceptions work (By-product exemption, Recovery exemption, SR&D exemption, PPRORD exemption) How to do a registration?
- Clarify restrictions under REACH, what materials are restricted? Is this the same for waste-based and virgin materials?
- Examine to what extent attention should be given to other chemicals legislation like POP regulation.
- More general angle: discuss how to deal with hazardous/harmful substances in secondary materials?
    - How does the precautionary principle play a role here?
    - What role can product legislation play?
    - Role of Article 9-1(i) and 9-2 in WFD 2018. These articles require MS to ensure that any supplier of an article provides the information on substances to ECHA. ECHA shall establish a database for these data and provide access to waste treatment operators.
    - Review the plastics chapter in the current MiW-IMPEL Guidance.

Take account of relevant recent developments like NL assessment framework for dealing with substances of very high concern (SVHCs), HAZBREF-project etc.

The following draft of step-by-step process for REACH registration for secondary raw materials has been produced:

Adobe Acrobat Document

7.6 EoW DATABASE

IMPEL aims to set up an international voluntary database for end-of-waste (case-by-case) decisions.

In the MiW-IMPEL Guidance (Tool1) an outline is given of the goals and possible structure of this database.

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.

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”.
- Article 38: “The Commission will organize a regular exchange of information and the exchange of best practices among Member States, including, where appropriate, with regional and local authorities, on the practical application and compliance with the requirements of this Directive, including: (d) the national by-product and end-of-waste criteria, referred to in Article 5, Paragraph 3, and in Article 6, Paragraphs 3 and 4, provided by an electronic register at Union level that will establish the Commission”.

Frequent use of information from the database could help create uniformity across Member States as certain technical and environmental standards listed in the database will be more widely used, making also end-of-waste movements across the borders easier.

At the same time, such a database can help operators to find information such as standards and provisions set in other Member States for a particular secondary raw material they would like to produce or use; they may use the documentation from the database in self-assessment or permitting procedures related to end-of-waste.

Public access is considered an added value with respect to transparency, availability of environmental data and building trust on new products derived from recycling of waste. Eco-innovative products are likely not to be known by many actors and this can create difficulties to customers as well as to public authorities.

The lack of information and uniformity is an obstacle to innovation and detrimental to exchange of best practices, particularly in those situations where no market is present at all and there are no technical standards to refer to.

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 selection process of the IT company in charge to convert the structure into a web based tool (in the IMPEL website) has been concluded.

Adobe Acrobat Document

The contract has been signed in 2021 with ALVA Design and a demo version will be delivered soon. The following steps are:

- Testing the demo version within a core team of MS
- Present the Database to DG Environment and to the IMPEL network
- Convert the Database into a web-based tool (into the IMPEL Website)