MAKE IT WORK

Project Enabling eco-innovations
for a circular economy

IMPEL

European Union Network for
the Implementation and Enforcement
of Environmental Law

Waste management and
Circular Economy Project

Making the Circular Economy work - Connecting policy, law and practice

Report of the Make it Work & IMPEL Conference – Rome 20-21 March 2019
ISPRA Office, Rome, Italy

Date of report: 01/12/2019

Report number: 1/2019

TABLE OF CONTENTS

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

Introduction To Make It Work

The Make it Work initiative serves as a platform for Member States to exchange experiences and ideas on the implementation of EU environmental legislation. MiW brings together MS law-makers, policy-makers and authorities implementing legislation to produce concrete suggestions for simpler, future-proof rules and smarter implementation practices.

The approach is cross-sectoral, looking at horizontal themes, with an emphasis on strengthening consistency and coherence between directives and regulations. MiW has produced recommendations, the so-called MiW drafting principles, for uniform and smart environmental inspections (July 2015) and for improved environmental reporting (November 2016).

Information on MiW is also available through its website at http://minisites.ieep.eu/work-areas/environmental-governance/better-regulation/make-it-work/

Title of the report: Making the Circular Economy work - Connecting policy, law and practice – MIW & IMPEL Conference Rome 20-21 March 2019	**Number report:** 2019/1
Project Managers: IMPEL: Romano Ruggeri, Sardinian Regional Environmental Protection Agency (ARPAS), Italy MIW: Jan Teekens, Ministry of Infrastructure and Water Management, the Netherlands	**Report adopted at IMPEL General Assembly Meeting**:
Authors: ***MIW Core team members*** Jan Teekens, Sascha Grievink, Gabriëlle Kühn, John Tieman, Ministry of Infrastructure and Water Management, The Netherlands Robert Hitchen, Department for Environment, Food & Rural Affairs, UK David Pugh, Environment Agency, UK-England Eva Dalenstam, Sabina Nilsson, Swedish Environmental Protection Agency, Sweden ***IMPEL*** Romano Ruggeri, Sardinian Regional Environmental Protection Agency (ARPAS), Italy Elena Foddanu, Piedmont Regional Environmental Protection Agency, Italy Luca Paradisi, Veneto Regional Environmental Protection Agency (ARPAV), Italy Bruno Barbera, Environmental Consultant, Italy Myriam Fernandez Herrero, Generalitat Valenciana, Environmental Inspection Service, Spain Arjen Snijder, Omgevingsdienst Noordzeekanaalgebied, The Netherlands ***SUPPORT BY*** Foxgloves Consultancy (Ilia Neudecker) Institute for European Environmental Policy, IEEP (Andrew Farmer)	**Total number of pages: 38** Report: 22 Annexes: 16

Executive Summary

A crucial element in the transition to the Circular Economy are the innovations at production and recycling facilities that aim at resource efficiency, the prevention of waste and the use of production residues or materials recovered from waste as secondary raw materials. A key condition for making these circular innovations work is to better connect policy, law and regulation on the ground. This guidance was developed to support regulators, policy- and law-makers and businesses in enabling and carrying through such innovations and rise to some of the commonly shared challenges.

The report contains the minutes of the MIW&IMPEL Conference, where the "*Guidance for regulators on enabling innovations for the circular economy (prevention and recycling of waste)"* has been launched.

1. Opening

1.1. Opening by Chair of the Conference, Mr John Seager

The Conference Chair welcomed participants to the conference and to ISPRA. The Chair highlighted that the participants had much collective knowledge to contribute to the discussion. The conference will look into a range of issues addressed in the MiW and IMPEL guidance *Making the circular economy work*, Guidance for regulators on enabling innovations for the circular economy (prevention and recycling of waste). The guidance had been developed since the MiW conference in The Hague in December 2017 which scoped much of the thinking. The guidance is a living document, to evolve as it is used. The circular economy is a broad and potentially daunting issue, but this guidance helps to suggest some useful practical steps forward.

Fig. 1: Opening of the meeting by the chair John Seager

1.2. Welcome and presentation by Mr Alfredo Pini, ISPRA

Participants were welcomed to the conference by the host of the conference. ISPRA is a public research body independent of government. It has over 1,200 staff in eight sites in Italy. It has to respond to obligations in law which set its goals and it receives annual guidance from the minister for the environment. It looks at both Italian and international issues, including supporting EU developments.

It has an operational mandate typical of environmental agencies elsewhere – inspections, environmental data gathering, setting environmental standards. However, it also conducts research

and this makes it rather unique in the EU context. It covers all environmental issues, including nature conservation, inspections, civil protection, etc.
In 2017 a new legislative foundation was adopted in Italy, with 19 regional and 2 provincial agencies co-ordinated by ISPRA. These agencies have a total of around 10,000 staff. The reform aims to provide a common level of environmental protection across the country.

1.3. Video message by Ms Emmy Meijers, Director of Regional Environmental Agency Amsterdam (Omgevingsdienst Noordzeekanaalgebied)

The responsibility of the Regional Environmental Agency is to ensure companies comply with environmental regulations. Along with this it is important to prepare for the future, including the circular economy and energy transition. This is a challenge. It is important to work with companies to help them see opportunities, to set up networks to facilitate waste recycling, facilitate partners with data and information and best practice. Exchanging ideas, as in the conference, is important to support these types of activities for regulators across Europe.

1.4. Video message by Mr Malcolm Lythgo, Deputy Director Waste Regulation, Environment Agency for England

A circular economy is vital for future prosperity, but it requires countries and businesses to develop new techniques for products, materials and waste management. The MiW and IMPEL guidance helps people to do the right thing and make it harder to act carelessly. The fight against criminals is more than just compliance – the Environment Agency is working with others to take an intelligence-led approach to tackle the problem. The issue of plastics is in the spotlight and brings into focus the challenges of the circular economy, such as waste, chemicals, IED and their interactions, so the focus in the guidance on this is welcome.

2. Enabling circular innovations in practice – key challenges, role of MiW-IMPEL guidance

2.1. Presentation of the MiW-IMPEL Guidance - Mr Jan Teekens, Project leader of the Make it Work-Project Enabling eco-innovations for a circular economy, Ministry of Infrastructure and Water Management in The Netherlands and Mr Romano Ruggeri, Project leader of the IMPEL-Waste management and circular economy project, ARPA Sardegna, Italy

The circular economy is a broad issue to explore and many activities are taking place. This includes new business models, new manufacturing processes, etc. The aim is a transition from a linear to a circular economy. There is not a single action to take, but many different ones, each of which contributes to circularity.
The MiW and IMPEL guidance focuses on circular innovations at production and recycling facilities, but this still covers a range of different activities. Circular innovations may raise economic, environmental and legal uncertainties and risks. Businesses, policy makers and regulators are struggling with these – at EU level and the range of different practices at MS level. So it was thought

to be useful to look at the different perspectives of the actors involved and also at the different areas of law relevant for CE-economy, focussing at prevention and recycling of waste and the use of secondary (raw) materials (by-products and end-of-waste materials).
For regulators, the guidance explores difficult issues, it identifies opportunities in EU law, how they can organise themselves, how to work proactively with business, as well as practical tools for end-of-waste.
The guidance is a joint effort of MiW and IMPEL, with support from IEEP and Foxgloves Consultancy. Its development was supported by workshops, sessions with businesses, policy makers and regulators; feedback on a draft was provided by the European Commission and there was feedback from NEPA.
Participants were presented with a brief overview of the structure of the guidance and the content of the different chapters.

Regarding end-of-waste (EoW) there is a need for a common understanding of the rules and of the inspection system. So the guidance has two tools: on EoW assessment and on inspection. There is also a proposal for a database collecting EoW decisions.
The tool on EoW assessment looks at what regulators need to do to make such assessments. There are different approaches in the MS: permitting, legal opinion and self-assessment systems. The guidance explores these in detail. It provides a checklist to help to ensure the conditions of the Waste Framework Directive (WFD) are met. It also explores procedures to promote innovative EoW procedures.
On the proposed database, it is mandatory for MS to notify national criteria for EoW materials to the European Commission (TRIS database), but there is no collection of case by case EoW decisions, so the database aims to collect this important information. The follow-up of the project will start to populate the database, but there are still some questions concerning who will feed and maintain the database.
The inspection tool explores different elements of inspection and what changes they may need to make, such as in combatting different forms of illegal activity. It sets out what needs checking at different stages of the waste recovery chain. It provides a checklist for each of these and guidance on how to prioritise inspections in a strategic way.

2.2. Views from the European Commission - Mr. Jorge Diaz Del Castillo, DG Environment Unit B3 - Waste Management & Secondary Materials

The Circular Economy Action Plan is an important step forward. It contains 54 actions covering the whole production/consumption cycle. There will be a new Commission in 2019 and there are talks about new steps on the circular economy, e.g. taking better account of social inclusion. There are, therefore, many initiatives taking place. The opportunities for by-products and EoW have been under-utilised. The guidance shows that it is possible and the message needs to be spread to make it work. The guidance will, therefore, be a useful tool.
Easy access to cheap raw materials, lack of trust in secondary materials and lack of knowledge are all barriers to the circular economy and many produced materials are lost as waste. Therefore, it is important to ensure trust in secondary raw materials. If something is placed on the market that is not right, this is a failure for the circular economy. However, we cannot be too prescriptive as this is a barrier to the necessary innovation.

The adoption of national EoW criteria has been very limited across the EU. There are serious challenges in implementing the different elements of the WFD in MS and the MiW – IMPEL Guidance will help. There is an ongoing study commissioned by the European Commission on by-products and EoW regimes and this study will make recommendations on the design of legal and enforcement regimes at national level, so this could be put together with the guidance.

Fig. 2: Presentation of Mr. Jorge Diaz Del Castillo (DG ENV)

There is also a study commissioned by the European Commission on the IED contribution to the circular economy (as well as evaluation work on IED). The study is looking at energy and materials use, waste generation, secondary raw materials, industrial symbiosis and reduction in use of hazardous chemicals.
On the Waste Shipment Regulation (WSR), there is a review required by the end of 2020. There is an ongoing evaluation, which highlights the problems of different EoW interpretations across MS, which is a barrier to movement across borders. Also 25% of shipments are illegal. So there are significant implementation challenges.
There is also work on the interface between chemicals, products and waste, such as how to deal with substances of concern in secondary raw materials, traceability, etc. On 4 March a report was published on sustainable products in a circular economy. Much needs to be done on specific product groups and on enforcement.
There is no chance of rapid adoption of lots of EoW decisions at EU level due to the time and resources needed. There is a need, therefore, for MS to take action and to share information on these.

2.3. Views from the European Environmental Bureau (EEB), Mr Piotr Barczak and Ms Francesca Carlsson

The EEB is the largest network of environmental NGOs in Europe with more than 150 members organisations. There are problems with implementation and enforcement of EU environmental law and with policy coherence, with environmental, political and economic consequences.
The circular economy is a circularity of production and consumption including resource management, efficiency, energy efficiency, consumption patterns and consumer habitats. To achieve this innovation

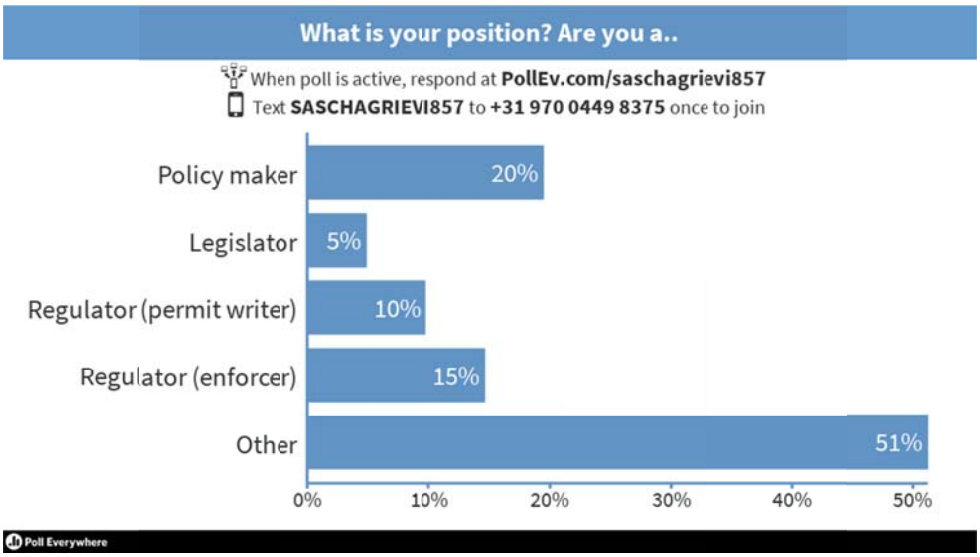
is needed, but the idea of an “innovation principle” is a threat to the precautionary principle which is core to environmental protection and the circular economy.
There is a need for NGO engagement, but this requires enabling conditions such as access to information, public participation, access to justice and enforcement of the law. EEB has a project “Implement for Life” looking at barriers and opportunities for engagement at national level to support proper implementation.
EEB engages with the whole policy cycle regarding the circular economy. This is not just about recycling, but all resource/product use, etc. It should follow these principles and discussion should explore how far products as well as secondary materials meet these:

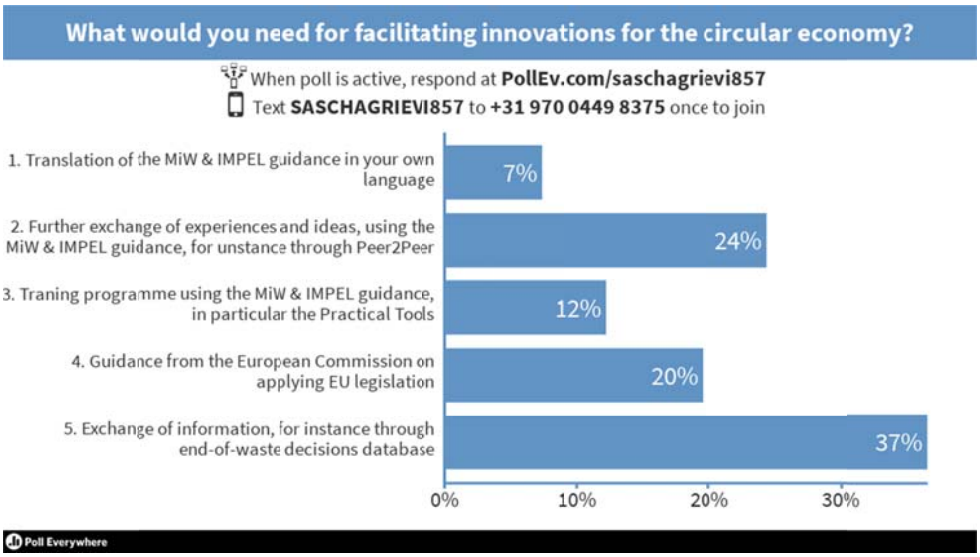
- Slow – long life of products
- Small – no superfluous waste
- Local – territorial hierarchy
- Clean – no toxic substances, ensuring trust
- Sustainable feed stocks – materials and energy
- Perpetual – down cycling avoided

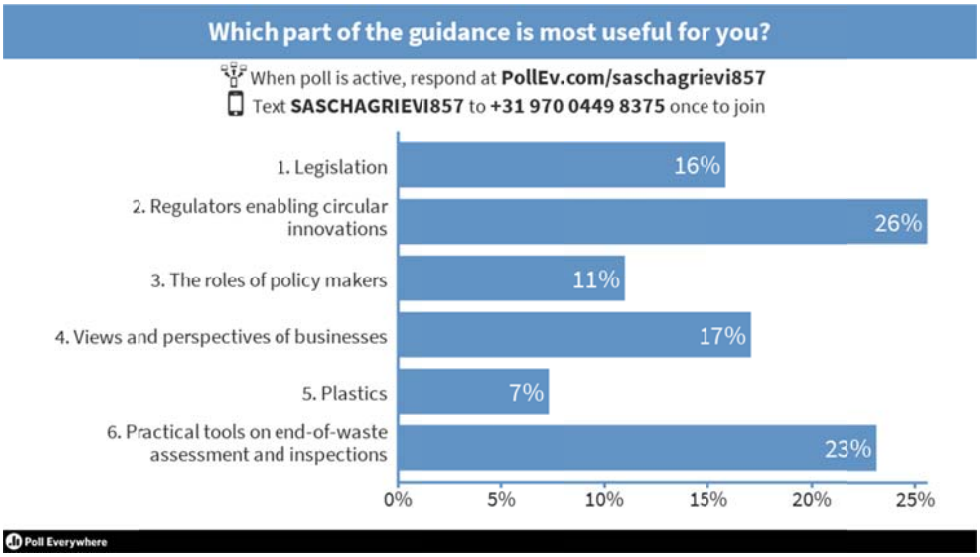
Revised waste legislation includes specific targets for municipal waste, collection requirements, minimum general requirements of extended producer responsibility, etc. It is important for national policy makers to include instruments such as economic instruments to support the circular economy and in particular waste prevention.

2.4. Interactive on-line poll

The participants took part in a first online survey. The results are shown here below.







2.5. Panel discussion

Michelle Griffiths (Natural Resources Wales), John Tieman (Ministry of Infrastructure and Water Management, The Netherlands), Maria Letizia Nepi (FISE UNICIRCULAR), Piotr Barczak (EEB) and Francesca Carlsson (EEB).

It was noted that the circular economy both aims to protect the environment and to stimulate business to work more sustainable. The goals both aim at resource efficiency so work together, but in detail there can be conflicts. So legislation should be fit for purpose and allow room for such actions. However, circularity is not enough – it needs to be a clean circular economy, so that secondary materials do not contain contaminant which may harm the environment or health and undermine public confidence.

A key issue is that business is challenging regulators and regulators are not always clear how to react, so the guidance is helpful. Businesses need flexibility and need to be trusted. The guidance can

support regulators on how to apply EoW status on what is necessary to prove conditions on end-of waste status have been met. Both for business as well as regulators.
The consequences of reaching EoW can be significant – once it has been made, the material is out of the waste regulatory regime and there are no longer environmental controls. However, where there is product legislation this makes it easier to protect the environment. Further, substances/products released from waste regime should meet chemicals legislation. So this needs to be tackled for each waste stream. However, there is a balance: where there are material shortages and where we might be too risk adverse. It was noted that the issue of how clean is clean has been around for ages and has not be answered – hence the dilemma. It will take a long time to become circular and it is important to be united to deliver this.
Different MS are working on similar issues, such as developing secondary materials from incineration ash, so exchange of experience on the development of standards would be very helpful.
It was suggested that a useful message from regulators to business would be to identify the non-negotiables – what regulators should not be considering. However, this needs to be done with care to avoid closing off avenues for material reuse which may develop in the future.

2.6. Official launch of the guidance: presenting the guidance to the Chair of IMPEL, Professor Dimitris Dermatas

The IMPEL Chair thanked the team for producing the guidance and for ISPRA for hosting the event. The guidance is significant and the tools which it contains are helpful. It is a strong start for further work. The development of the guidance also showed that it is important to co-operate together to deliver outcomes, such as IMPEL with the MiW project. The MiW and IMPEL guidance was then officially launched.

Fig. 3: Launch of the Guidance with IMPEL Chair Dimitris Dermatas

3. Making the Circular Economy work - PARALLEL WORKING SESSIONS

3.1. Enabling circular innovations – discussing different topics

Participants broke into discussion sessions, focused on different relevant topics. Each reported to the plenary with a key concluding statement or question and short summary. **Please note that in Annex III summary reports are included of some of these working sessions.**

3.2. Conclusions and wrap –up from the parallel working sessions

Regulatory strategies – how to facilitate circular innovations (regulators)

Statement: every regulator needs a strategy.

The session discussed regulatory strategies with examples from NL and UK. All regulators need a strategy if they are to take the circular economy seriously. Businesses come to regulators with plans, some good, some not. But regulators have limited time and resources, so a strategy to prioritise actions is important.

For example, the Irish EPA has a strategic plan for the whole organisation and it is useful to guide priorities when the workload is large. It is also important to review strategies and a recent review identified the need to increase the emphasis on the circular economy.

Supporting regulators - the importance of joined-up thinking (policy makers)

Question: what would be a good design for a pilot (room for experimentation)?

There is importance for experimentation of new processes for the circular economy, so what would be a good design for such a pilot? It is important to stop a risk adverse regulator avoiding a pilot, but also to avoid unnecessary risks – so there is a need to determine the right approach.

In discussion it was noted that in Wales there is an innovation unit in government rather than the regulator which has an initiative trialling used paints. This issue links with that for strategies – that part of an organisational strategy is to have an innovation unit or to guide pilots.

It was stressed that whatever pilots are developed it is critical that the questions for the pilot are clear and that delivering the pilot will answer those questions (e.g. that it has long enough to produce the necessary data). If not, there is no point in having the pilot.

It is also important that pilots are developed with specific principles, such as engaging stakeholders, ensuring protection of the environment, supporting the outcome while allowing flexibility. It is also important to think about the consequences for other companies, e.g. if they want to copy the pilot.

Finally, it is important to consider how to capture the experience of pilots across Europe. This is, of course, a challenge if the operator does not want the information shared as it is a competitive advantage to the operator.

End-of-waste and by-products

It was stated that there is a need for guidance for by-products and EoW (in a general way, less for specific fluxes): there is a need for practical procedures, better exploration of definitions and how to assess environment and human health impacts.

Question: do you agree with this statement? Which points have to be more explored?

Discussion on this was integrated with the following break-out discussion.

Carrying through circular innovations – Perspectives of Businesses

Statement: to facilitate circular innovations MS should seek to recognise benchmarked methodology/criteria for decisions on both EoW and by-products.

Benchmarking processes could be devised at EU level involving bodies such as JRC and this could draw on the proposal for a database. Information exchange could also build on forums and networks such as the circular economy stakeholder platform.

Both groups suggested exchange of information at pan-EU level, but who should organise this? This could be through an EU project, possibly led by civil society, so that it is impartial.

IED and circular economy

Question: What is the key point to recommend for the IED evaluation on IED/BREFs to stimulate integration of circular economy in the performance of installations? [a change, an emphasis, clarification, etc.] What practical examples can you bring as evidence to the evaluation on this issue?

One action could be to look again at the specific role of BREFs.

Discussion also raised the issue of whether authorities monitor the results of the outcomes for the environment on IED implementation, such as waste and resources. An example was provided of air pollution changes, but resource use is a larger challenge to track. It was noted that there is a conference taking place in Paris on monitoring progress in achieving the circular economy.

New environmental crime linked to circular economy

Statement: it is important to create a blacklist of priority "end-of-waste crimes" to focus the inspection. Prioritisation should be based on:

- Hazards
- Volume
- Financial motivation (EU subvention, business yield)

It is important to share information between stakeholders in enforcement organisations as well producers of EoW products. It was noted that the European Prosecutors network has a database of environmental crimes and this might be a place for such a black list.

An example was given of a business receiving public money for recycling, but it closed the plant as it was a fake activity. Also income is driven by amount of waste received, not on quality of the product from the treatment of the waste, so some operators do not care. This would undermine trust in secondary raw materials.

Facilitating circular innovations for plastics

Question: What is the next step at EU level for plastics (after S(ingle)U(se)P(lastics) Directive)? Possibilities:

- Not all plastics are created equal: get rid of worst cases, stimulate best cases
- More upstream thinking (eco-design)
- Differentiate between single, medium and long-term use of plastics

There is a need to differentiate between plastics and uses of plastics. Plastic pollution has got much attention, but fire event are important as they result in large emissions of dioxins, etc.. So we have to start a conversation about alternatives. The recent European Commission report on the Circular Economy Action Plan had a chapter on plastics, noting some progress, but issues such as safety go beyond the remit of DG ENV or environment ministries in the MS.

It is also important to be clear about what is meant by “best cases”. This might include bioplastics and new molecules, but is likely to mean substitution rather than less harmful plastics which still cause problems.

Conclusions of the parallel sessions and end of the first day
The Chair noted that the conference had had a rich debate with concrete proposals to take forward. The Chair thanked all for their contributions.

4. Making the Circular Economy work - PLENARY SESSION

4.1. Wrap up previous day: Chair of the Conference, Mr John Seager

Yesterday covered much ground – on the MiW and IMPEL guidance, its structure, etc. and the Guidance was officially launched. There were also interesting perspectives from different actors – policy makers, regulators, business and NGOs. All presentations will be made available on the MiW webpages of the IEEP website.

On strategies, there was a recognition for a need for organisational strategies to take the circular economy forward. This is happening in some cases, but in others it is still in its early stages and it is important to think about how to build in circular economy thinking across the full regulatory cycle (permitting, inspection, enforcement, etc) and then think about how to make the strategies drive change.
The role of pilots was discussed. These are important for learning and there is a need for mechanisms to share that learning – both on the design and execution of pilots and their outcomes. There is a need for principles on their design – such as on stakeholder involvement, protection of the environment, etc.
On guidance, there is a real need for this on EoW and by-products to help promote a level playing field in Europe and to help regulators in their decision making. Work has been done in developing protocols, so there is already work to build on. There is also a mechanism to do this through the continuation of the IMPEL project.
The role of the IED is important and the current evaluation is an opportunity to feed in suggestions on how to drive eco-innovation and circular economy thinking, such as what the BREFs should do. We should contribute evidence of performance data, etc., to support this.
On crimes, there is a need for more data sharing on their nature, outcomes, results of enforcement, etc. There is also an opportunity to link with the prosecutors’ network and their database.
On plastics, there were good ideas on the next steps and the Commission stock taking on the plastics strategy is an opportunity as is the thinking of the next Commission. There was also a particular focus on substitution.

4.2. Actual trends and developments - presentations and plenary discussion

Transposition and implementation of the new Waste Framework Directive, Ms Sascha Grievink, Ministry of Infrastructure and Water Management, The Netherlands

The revised WFD still needs to be transposed in the EU Member Stated and there are choices to be made. The waste hierarchy remains important for the decisions to be made and to meet WFD targets. In the objective of the WFD the circular economy is explicitly mentioned for the first time. We are currently in a recycling economy, but we need to move to a circular economy and to do this we need to address other issues such as product legislation. So this requires action in legislation beyond waste law.
The WFD has stronger provisions (Art. 9) on waste prevention, addressing different aspects of this and an Annex lists many possible waste prevention measures. This leaves choices for MS. The MiW and IMPEL guidance addresses this issue, including those beyond waste law, such as links with IED, role of Environmental Management Systems, measures for plastics, etc.
The WFD has recycling and landfilling targets. In NL the targets are quite achievable, but the situation varies across MS in how challenging they are. The WFD sets out different measures to meet these, such as EoW, separate collection, Extended Producer Responsibility (minimum requirements) and economic measures to support the waste hierarchy (Annex Iva of the WFD). The MiW and IMPEL guidance also explores this, by addressing producing and using secondary raw materials, optimising production and recycling, industrial symbiosis and chain approach.
The EoW and by-products provisions in the WFD are important as they affect the ease to which these materials can be used in production. The MiW and IMPEL guidance examines these issues in detail. The revised WFD has changed provisions so that MS now need to take appropriate measures to ensure EoW provisions (there are different ways to do this) and there are court cases on whether MS must take decisions, e.g. if a company wants material to be determined as EoW. Across the MS different systems for EoW decision making are used and the MiW and IMPEL guidance explains these clearly.
EU criteria for EoW are useful as they enable the material to cross borders and there is a level playing field. However, national criteria do provide legal certainty and transparency, but they might be inflexible and they may not stimulate innovation. Some MS make case by case decisions or verifications. Verification leaves self-assessment to operators (with some help) and afterwards the authority checks if the self-assessment is correct. This option needs good support tools to avoid poor self-assessments and to make subsequent checking easier.
On future developments, it is hoped the MiW and IMPEL guidance will help improve implementation in Europe. The recitals of the WFD state which waste streams the Commission should give priority to for EoW criteria, but the Commission is reluctant to proceed on these due to limited use of the existing EU criteria.

In discussion, participants were presented with three statements to stimulate debate:

Statement 1: the revised WFD provides enough incentives to not only result in a recycling economy but in a circular economy.

It was argued that the WFD does not focus enough on the circular economy as there are no mandatory prevention or reduction targets and reuse is integrated with recycling targets. So the WFD

still focuses too much on recycling. Although MS have different situations, all have the same starting point for prevention. It is not a technical problem as prevention does not need treatment.
However, it was noted that delivering prevention and reuse is not only about waste law, but other instruments are needed, such as on pricing, products and consumers. It was noted that Art. 9 of the WFD asks MS to adopt prevention measures, so the WFD does get beyond just management of waste, but it is correct that the necessary instruments are in other policy fields.
It was also noted that the WFD is a framework directive and there are other directives to take account of such as the Packaging and Packaging Waste Directive. The lack of prevention targets is unfortunate. However, it is hard to measure prevention as opposed to less waste, so defining it in law is extremely difficult, but may be possible in a few years, so such targets could be formulated.

Statement II: Exchange of information and best practices between MS is crucial for achieving a circular economy
It was noted that having information only in English is a barrier to action at a local level. This issued has been raised with the Commission, which has noted the problem in its wider work on better implementation.
While EoW criteria are welcome, there are regulatory challenges around EoW as there are legal challenges on decisions which costs time and money. So, the costs to the regulator are significant. This should this be discussed with policy makers/ministries to help support/overcome this problem.

Statement III: Future EU product legislation is the key to a circular economy

The WFD recital states that EoW criteria can be included in product law. In some cases, waste issues are considered in product design, such as with the Ecodesign Directive and new product specifications under this are starting to address this slowly. The WFD has measures that can address products. Further, other measures can be taken, such as where MS have banned microplastics in products.

Barriers and opportunities for circular business models in electrical and electronic equipment (EEE) – stakeholder views, Mr James Horne, WEEE-Forum

The WEEE Forum represents 37 non-profit producer responsibility organisations which exchange best practice and include 31,000 manufacturers in their countries. It develops a knowledge toolbox covering many issues. There are two campaigns currently running – on online free-riders and on mandatory standards for WEEE handlers and recyclers. It conducted the CWIT Project focused on illegal trade – only a third of the 9.45 million tonnes of e-waste in EU is recycled and 1.5 million tonnes is estimated to be illegal exported.
The WEEE Forum is undertaking C-SERVEES, a four-year H2020 project. WEEE is a growing issue and the waste is valuable – there is a need to prevent waste as well as better manage the waste. The project is proposing to develop circular business models looking at the life cycle of an EEE product from design to end of life. There are four demonstration products, printers, televisions, washing machines and telecoms link monitoring equipment. The project will implement the business models, manufacturing the products and testing the results, spreading the findings. The project is looking at design, leasing, reuse, recycling and ICT services.
The project has been running a survey with stakeholder groups across all aspects from design to manufacture, sale, use of products. The interim results of the survey show that consumers are

motivated by durability of a product, interested in repair potential, not as motivated by leasing products and the low cost of EEE is a significant challenge.
For suppliers and manufacturers and WEEE handlers the results show that the main issues are related to end of life, lack of knowledge on product context, a fiscal incentive for reuse and repair and new markets and reputation are a key motivation. For them developing a long-term circular economy strategy is viewed as a significant challenge. Leasing is not seen as a significant enabler and skills and training is the least significant challenge and enabler. The most significant challenges were the lack of a global regulatory consensus, inconsistent level of compliance with law and varying level of enforcement. The most important enablers included mandatory legislation and awareness campaigns to ensure compliance.
In discussion is was noted that eco-design and standards for repairability and remanufacture are important – so this is at the start of the chain. This is a large part of the work of the project - designing products and testing them.
WEEE has recycling targets through producer responsibility schemes, but this is a barrier to eco-design as we should be looking to reduce and reuse for a circular economy.
It was asked whether money raised in EPR fees could go to repair. This is the case in at least one MS, Estonia, and the money can also be spent on education. It was also noted that in France there is a right for consumers to go to court if a product is not sufficiently repairable. It was noted that EEB is running a campaign for right to repair.
On barriers it was noted that changing standards can make equipment redundant, so affecting reuse. The answer to this to make products more modular so only specific parts need replacing. This can help future proof equipment. However, consumers may also want the "latest" fashionable model and addressing this requires education and communication to change habits.
On enablers, it was argued that a tax on primary raw materials is necessary to make them more expensive. Also consumers need confidence in quality of repaired products and the Netherlands has introduced a certification scheme for this. It would also help in repaired products had good guarantees.
On working with regulators, it was noted that in the Netherlands leakage is a problem and the WEEE sector offered to pay the regulators for more enforcement, but the Ministry was not in favour due to concerns over issues of independence of regulators. However, in Ireland producer compliance schemes are helping to fund the regulator to help ensure compliance and is also funding research on WEEE. It was also noted that better tracking of waste is needed and this is being taken forward in the UK.

4.3. Next steps, the role of EU and MS initiatives and networks - presentations and panel discussion

Jan Teekens of the MiW project noted that the MiW project in its current form will be concluded, but experts who were active under MiW will continue to contribute to the further development and use of the joint MiW and IMPEL guidance. However, at this point in the conclusion of the current project it is important to thank all those involved in MiW as well as underline the excellent and very fruitful cooperation between MiW and IMPEL.

4.4. Further development of MiW-IMPEL guidance in 2019, End-of-Waste database, peer2peer, training programme, Mr Romano Ruggeri, Project leader IMPEL Waste management and circular economy project, ARPA Sardegna, Italy

The IMPEL project initially focused on landfill, but evolve to cover the circular economy. It began with visits to landfills in several MS and developed three main documents – guidance for landfill inspection, guidance for pre-treatment of waste before landfilling and transposition gaps on the Landfill Directive in MS. The idea of the project moved up the waste hierarchy – looking at EoW and by-products.
For 2019-2020 there are 48 participants (active and less active) from 24 MS identified. There will be three meetings in 2019. The topics are:

- By-products – how are provisions under the WFD applied, what are the MS practices etc.
- IED and circular economy – the aim is to add value and not duplicate other activities on this.
- By-products, end-of-waste and the application of REACH
- Database implementation – the main question is who will input the data and look after maintenance.
- Training programme – focus on enabling eco-innovation using the MiW and IMPEL guidance, the guidance on landfill inspections and the guidance on pre-treatment of waste before landfill. One possibility is for the peer to peer support within TAIEX-EIR.
- Updating the guidance – the MIW and IMPEL guidance and those on landfill inspections and pre-treatment.

Although there will be three meetings, most of the work will be at home, so the aim is to create some sub-groups for each of the topics.

4.5. International Green Deal, North Sea Resources Roundabout (NSRR), Ms Robine van Dooren, Inter-ministerial Programme Smart Regulation for Green Growth, The Netherlands

The national Netherlands green deals were evaluated and participants noted a number of benefits – with new partnerships, the green deal label is helpful and there is increased understanding between different actors. The green deal model is applied, with a bottom-up initiative with companies/civil society trying to overcome the barriers they find. The aim is to facilitate sustainable innovations and green growth. It is starting small, but the aim is to be able to scale up. There is no financial support. The NSRR is the first international Green Deal and it aims to create opportunities for countries to facilitate sustainable trade of secondary resources. MS have their own interpretations of EU law and this makes it hard for companies to move secondary materials across borders. The solutions within the NSRR all fit in the existing legal framework, so it is looking at MS interpretation and addressing any barriers that result from this. The NSRR covers NL, FL, FR and UK. It also focuses on particular streams of resources. The NSRR was signed in March 2016 by ministers signed, companies and NGOs. The cases will be limited to ten, but currently there are five:

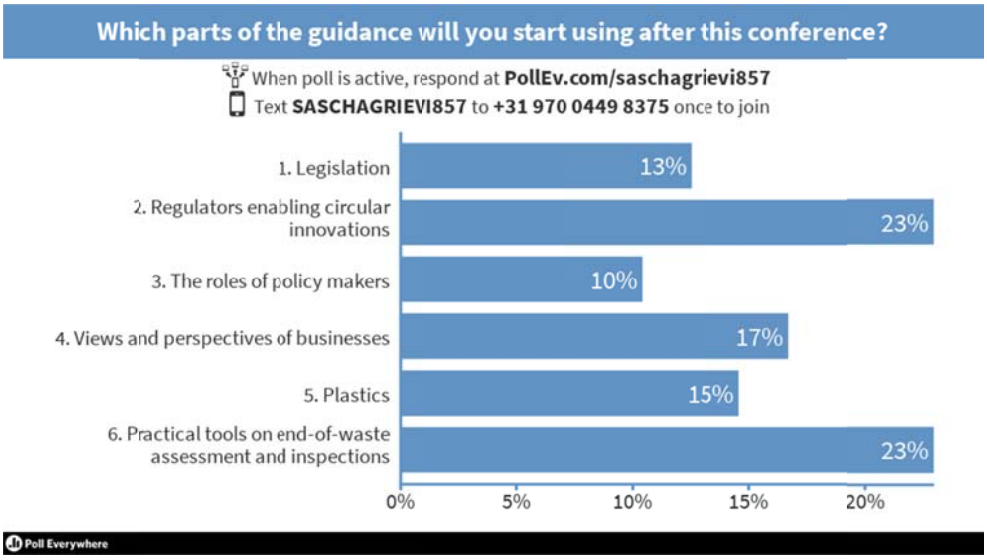
- Compost – looking at EoW, comparing criteria between NL and UK and looking to see if they will be mutually recognised.
- PVC – covering FL, NL and UK. FL ships PVC waste to NL, where it is granulated and shipped to the UK where it is used to make the inner part of the pipe. PVC can be hazardous, but what it is not clear what this means in practice for its management and possible use.
- Non-ferrous metals from bottom ash – there are several procedural barriers such as from the WSR and there is the potential to streamline procedures.
- Struvite – companies would like to send recovered phosphate from sludge from NL to FR. It would be EoW. However, producers have little information on the product composition, such as contamination with medical pathogens, so this is now being looked at.

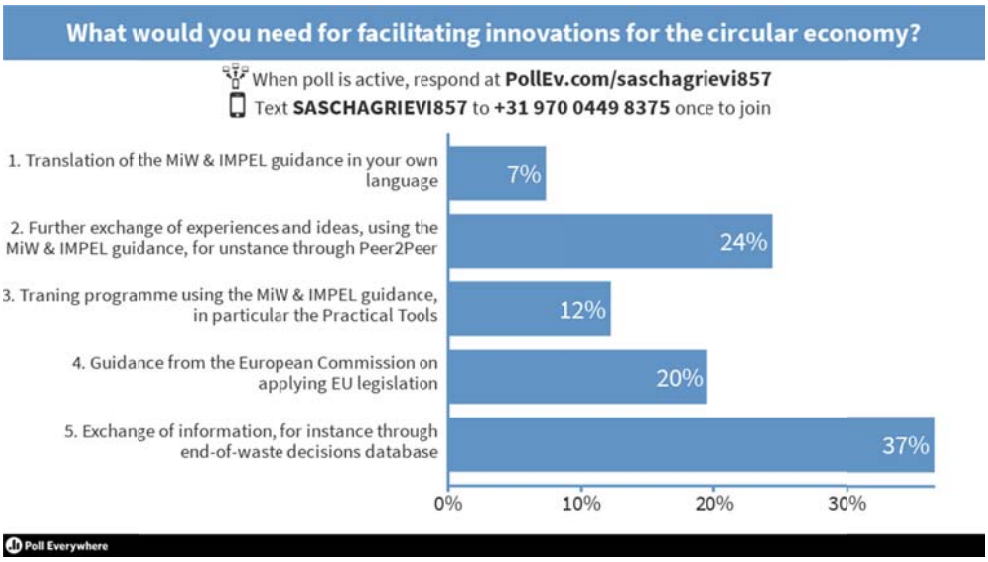
- Fast-track – deals with WEEE as WSR. Art 14 WSR mentions the idea of faster procedures for pre-consented facilities, but few MS have these. Each MS has its own criteria, so there is work on mutual recognition leading to shorter procedures.

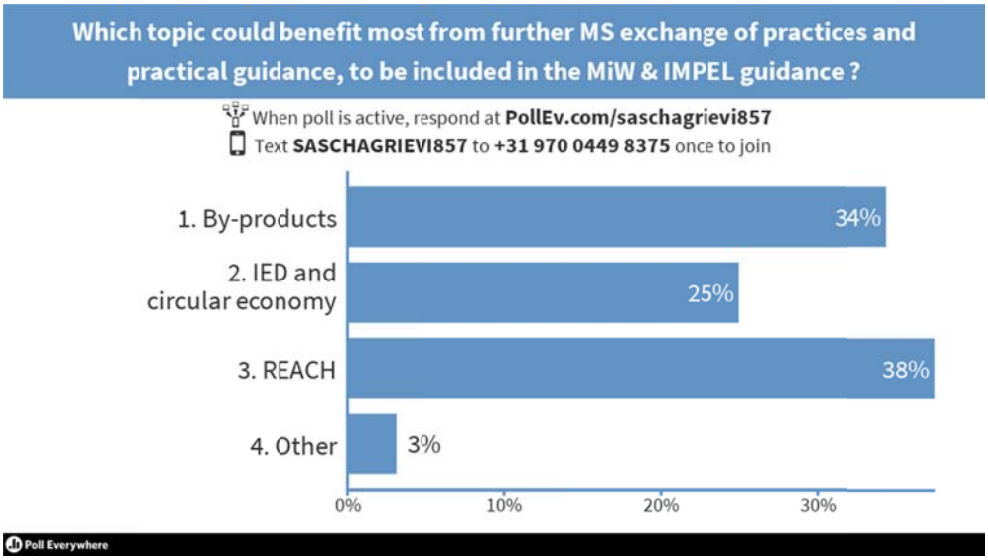
The project is about half way through. The lessons are that trust is important, but it takes time; cultural differences are important both between countries and organisations, so an open mind on what needs to be done is needed; dialogue is needed to share experience.
The project is open to new cases (e.g. carpets and tyres) and participants (DK and SE have expressed interest).

4.6. Online poll

The participants took part in a short second online survey. The results are shown here below.







4.7. Panel discussion

Robine van Dooren, Inter-ministerial Programme Smart Regulation for Green Growth, The Netherlands; Vojtěch Pilnáček, Ministry of the Environment of the Czech Republic; Myriam Fernandez Herrero, Generalitat Valenciana, Spain; Francesca Carlsson, EEB.

The panel discussed the changes they would make to make the circular economy work. Issues raised included:

- Exchange of information between authorities, countries, companies and NGOs.
- Participation – regulators with business and engagement with society. The latter is challenging given the different approaches to EoW decision making.
- Using the power of public procurement to use by-products, etc.
- Using spatial planning to influence businesses.
- Ensuring policy makers have a clear strategy to deliver the circular economy.
- Helping people to change their habitats.
- Ensuring there is sufficient infrastructure (e.g. as shown by the failure to be able to react to the Chinese waste ban)

5. Conference conclusions and closure of main conference programme, Chair of the Conference Mr John Seager

In conclusion, the Conference Chair noted that the circular economy is a broad concept that touches on much of what is done. It, therefore, needs to be brought down into specific practical actions and to learn lessons from these. There is an emphasis on the implementation gap and sharing knowledge will help address this. There are also mechanisms to help, such as the peer to peer scheme under EIR and the work of IMPEL.
The current European Commission is taking stock and it is important to input our ideas to shape the new Commission. Time is needed, but we also need to think about how to accelerate the process.

The Chair thanked all participants for their contributions and the joint MiW and IMPEL team for preparing the conference.

Fig. 4: Group photo

Annexes

Annex I Conference Programme

Wednesday 20 March 2019

***Making the Circular Economy work* - PLENARY SESSION**	
Registration	**09:00 – 09:30**
Kick off	**09:30 – 10:15**
1. Opening by Chair of the Conference, Mr John Seager	09:30 – 09:40
2. Welcome and presentation by Mr Alessandro Bratti, General Director of ISPRA	09:40 – 09:55
3. Key note speeches • Video message by Ms Emmy Meijers, Director of Regional Environmental Agency Amsterdam (Omgevingsdienst Noordzeekanaalgebied) • Video message by Mr Malcolm Lythgo, Deputy Director Waste Regulation, Environment Agency for England	09:55 – 10:10
Enabling circular innovations in practice – key challenges, role of MiW-IMPEL guidance	**10:10 – 11:10**
4. Presentation of the MiW-IMPEL Guidance • Mr Jan Teekens, Project leader Make it Work-Project Enabling eco-innovations for a circular economy, Ministry of Infrastructure and Water Management, The Netherlands • Mr Romano Ruggeri, Project leader IMPEL-Waste management and circular economy project, ARPA Sardegna, Italy	10:10 – 10:45
5. Views from the European Commission - Mr. Jorge Diaz Del Castillo, DG Environment Unit B3 - Waste Management & Secondary Materials	10:45 – 11:10
Coffee	**11:10 – 11:30**
Enabling circular innovations in practice – key challenges, role of MiW-IMPEL guidance continued	**11:30 – 12:45**
6. Views from the European Environmental Bureau (EEB) - Mr Piotr Barczak and Ms Francesca Carlsson	11:30 – 11:50
7. Interactive on-line poll	11:50 - 12.05
8. Panel discussion with representatives from Commission, EEB, MS regulators	12:05 – 12:35
9. Official launch of the guidance: presenting the guidance to the Chair of IMPEL, Professor Dimitris Dermatas	12:35- 12:45
Lunch	**12:45 – 14:00**
***Making the Circular Economy work* - PARALLEL WORKING SESSIONS**	
Circular innovations – Actors	**14.00– 15:00**
10. Regulatory strategies – how to facilitate circular innovations (regulators)	
11. Supporting regulators - the importance of joined-up thinking (policy makers)	
12. End-of-waste and by-products	
Coffee	**15:00 – 15:30**
***Making the Circular Economy work* - PARALLEL WORKING SESSIONS**	
Circular innovations – Themes	**15.30 – 16:30**
13. Carrying through circular innovations – lessons learned (businesses)	
14. IED and circular economy	
15. New environmental crime linked to circular economy	

16. Facilitating circular innovations for plastics	
***Making the Circular Economy work* – PLENARY SESSION**	
Conclusions of the parallel sessions	**16.30 – 17:30**
Social Dinner	**From 19:30**

Thursday 21 March 2019

***Making the Circular Economy work* - PLENARY SESSION**	
Wrap up previous day: Chair of the Conference Mr John Seager	**09:00 – 09:15**
Actual trends and developments - presentations and plenary discussion	**09:15 – 10:50**
17. Transposition and implementation of the new Waste Framework Directive – Ms Sascha Grievink, Ministry of Infrastructure and Water Management, The Netherlands	09:15 – 09:45
18. Plenary discussion	10:00 – 10:15
19. Barriers to and opportunities for circular business models in electrical and electronic equipment (EEE)	10:15 – 10:35
20. Plenary discussion	10:35 – 10:50
Coffee	**10:50 – 11:15**
***Making the Circular Economy work* - PLENARY SESSION**	
Next steps, the role of EU and MS initiatives and networks - presentations and panel discussion	**11:15 – 12:45**
21. Further development of MiW-IMPEL guidance in 2019, End-of-Waste database, peer2peer, training programme – Mr Romano Ruggeri, Project leader IMPEL Waste management and circular economy project, ARPA Sardegna, Italy	11:00 - 11:20
22. Other initiatives for cooperation, North Sea Resources Roundabout (NSRR), Robine van Dooren, Inter-ministerial Programme Smart Regulation for Green Growth, The Netherlands	11.20 – 11.45
23. Panel discussion with MS policy makers (Nancy da Silva (BE); Robine van Dooren (NL), regulators (Vojtech Pilnacek CZ, Myriam Herrera ES), EEB	11.45 – 12.15
24. Conference conclusions and closure of main conference programme, Chair of the Conference Mr John Seager	12.15 – 12.30
Lunch	**12:30 – 14:00**
***Making the Circular Economy work* - PARALLEL WORKING SESSIONS**	
Sharing knowledge	**14:00 – 15:30**
25. Master class enabling circular innovations - applying the MiW-IMPEL Guidance in practice	
26. Serious game *Smart regulation for Green Growth* Robine van Dooren (NL) and Gabriëlle Kühn (NL)	
Closure	**15:30 - 15.45**

Annex II: Workshop Participants

First name	Last name	Function	Organisation
Andrew	Farmer	Consultant for Make it Work	Institute for European Environmental Policy
Aurel	Dumitru	Member of the Board (Counselor of Accounts)	Romanian Court of Accounts (Corte dei Conti)
Bruno	Barbera	Impel group	Environmental consultant
Caitriona	Collins	Senior Inspector	Environmental Protection Agency
Carla	Mazziotti	Tecnologo	CNR-IBIMET
Caroline	Tuck	Policy	Defra
Chiara	Vicini	Researcher	ISPRA
Cosmin	Nicula	Vice-president	Romanian Court of Accounts (Corte dei Conti)
Cristian	Cristian	lawyer envirnoment	Rovito
Dan	Fîrțescu	Member of the Board (Counselor of Accounts)	Romanian Court of Accounts (Corte dei Conti)
David	Pugh	Future Regulation	Environment Agency
Domenico	Marchesini	Technical expert	ARPA Lombardia
Donatella	Giacopetti	HSE MAnager	Unione Petrolifera
Elisabetta	De Maio	researcher	ISPRA
Emma	Porro	Technical expert	ARPA LOMBARDIA
Emmanuele	Fabbri	Direttore	ANPAR
Emmi	Vähä	Researcher	Finnish Environment Institute
Eva	Dalenstam	Innovation Coordinator	The Swedish EPA
Federica	Bonaiuti	Responsabile Ingegneria di Processo	HERAmbiente S.p.A.
Francesca	Carlsson	Legal Officer	European Environmental Bureau
Francesco	Andreotti	Technologist	ISPRA
Francesco	Chiavaroli	Direttore Generale	Arta Abruzzo
Francesco	Mundo	Tecnologo	ISPRA
Francesco	Loro	Environmental advisor	Waste and chemicals
Gabriëlle	Kühn	Advisor	Ministry of Infrastructure and Water Management
Geneve	Farabegoli	Environmental Inspector	ISPRA
Goritsa	Grancharova - Kozhareva	Vice President of the Bulgarian National Audit Office	Bulgarian National Audit Office
Helena	Dahlbo	Senior researcher	Finnish Environment Institute SYKE
Ilia	Neudecker	Senior Adviser	Foxgloves Consultancy
Ivan	Kozolka	Inspector of environmental	Slovak environmental inspectorate
Izabela	Szadura	Director of Department of Waste Management Control	Chief Inspectorate for Environmental Protection
James	Horne	Project Manager	WEEE Forum
Jan	Teekens	Co-ordinating policy advisor	Ministry of Infrastructure and Water Management

First name	Last name	Function	Organisation
John	Seager	Workshop Chair	Independent
John	Tieman	Lawyer	Ministry of Infrastructure and Water management
Jorge	Diaz	Legal officer	EC
Kalvis	Avotiņš	Pollution control section, Deputy Head	The State Environmental Service of Latvia
Karl	Kupits	HAZBREF project member	Estonian Environmental Research Centre
Kertu	Sapelkov	Enforcement	Estonian Environmental Inspectorate
Laura	Cutaia	Researcher - Resp. Valorization resources Lab.	ENEA
Lena	Stig	Advisor Sustainable use of plastics	Swedish EPA
Luca	Paradisi	Technician	ARPAV
Luciana	Sinisi	Responsible of Sustainability and health Unit	ISPRA
Luigi M	Casale	Sustainability Consultant	STF - Indipendent Consultant
Magdalini	Topouzidou	Environmental Inspector	Hellenic Ministry of Environment and Energy
Marcello	Iocca	Geologo, esperto ambientale, settore industriale, IPPC, VIA, VAS	Waste and Chemicals srl
Marco	Falconi	Researcher	ISPRA
Marek	Surmacz	Deputy Chief for Environmental Protection	Chief Inspectorate for Environmental Protection
Maria Letizia	Nepi	Secretary	FISE UNICIRCULAR
Marianna	Marconi	Funzionario abilitato ingegnere APPA Trento	Agenzia Provinciale per la Protezione dell'Ambiente Trento
Massimiliano	Bienati	PM	Fondazione sviluppo sostenibile
Michelle	Griffiths	Senior Waste Policy Advisor	Natural Resources Wales
Myriam	Fernandez Herrero	Ambiental inspection division	Generalitat Valenciana
Nancy	da Silva	Environment expert	Belgian federal Public Service Environment
Nancy	Isarin	IMPEL Project Manager	IMPEL
Nicu	Marcu	Vice-president	Romanian Court of Accounts (Corte dei Conti
Paolo	Barberi	Presidente	ANPAR
Paul	Bernaert	Projectmanager environmental enforcement policy	Flemish Government/Belgium Department of Environment and Spatial Development
Piotr	Barczak	Waste policy officer	European Environmental Bureau
robert	hitchen	EU Strategy	Defra
roberto	borghesi	ispettore ambientale	ISPRA
Robine	Van Dooren	Advisor	RVO
Romano	Ruggeri	Project Manager	ARPA Sardegna
Rossana	Cotroneo	researcher	enea
Rossena	Gadjeva	Head of Performance Audit of EU Funds, Performance Audit Directorate	Bulgarian National Audit Office
Sascha	Grievink	Lawyer	Ministry for the Environment
Saverio	Venturelli	Tecnologo	Ispra

First name	Last name	Function	Organisation
Silviu	Nistor	Head of Unit International Affairs	Romanian Court of Acoounts (Corte dei Conti)
Simon	Farrugia	Senior Officer (Environmental Permitting)	ERA
Simonne	Rufener	IMPEL Expert Team Leader TFS & Waste	IMPEL / Fed. Office for the Environment Switzerland
Stefan	Martens	Licensing authority	Omgevingsdienst Noordzeekanaalgebied
Timo	Jouttijärvi	Head of unit	Finnish Environment Institute (SYKE)
Toshko	Todorov	Vice President of the Bulgarian National Audit Office	Bulgarian National Audit Office
Vito	Bruno	Director General	ARPA Puglia
Vojtěch	Pilnáček	Waste management department	Ministry of the Environment of the Czech Republic

Regulatory strategies

Lead: David Pugh (UK) and Stefan Martens (NL) , Rapporteur: Gabriëlle Kühn

Overview of chapter 3 of the MiW IMPEL Guidance
David Pugh presents an overview of the content of chapter 3 of the MiW IMPEL Guidance Making the Circular Economy work. The chapter contains ideas on regulatory strategies on how to take forward the Circular Economy. Regulators across Europe are organized differently and can have different tasks on various levels. Also different legislation may apply depending on local issues that may be at . Also different players are involved to make the system work. They need to join up and businesses want to have consistencies.
Therefore, regulators need to have a strategy in place, on strategic (management level) and operational level (big eight). Chapter 3 of the guidance provides ideas on different approaches on regulatory strategies, e.g on materials and sectors. Also the chapter provides a permitting and inspection framework (IMPEL toolkit). Also there can be an advantage to use room in experimentation. Using strategies also help to manage and balance risks when uncertainties arise.
Managing Circular innovations demands for a strategic approach, cooperation between partners/other regulators, trust, adequate policies and cooperation with businesses.

Example of an UK strategy
Davis Pugh presents an example of a UK strategy. In the UK a national strategy has been developed: A green future. The strategy entails different pillars, e.g. climate change and resources and waste. Defra has no specific Circular Economy strategy, but it is has further developed a strategy under the pillar resources and waste. The strategy is aimed at sustainable production, combatting waste crime and research and innovation. The regulator has the task that the regulated industries are managed in the right place and in the right way. This means that e.g. waste has to be managed in the right way and the right way and a green growth and industrial strategy applies. End-of-waste decisions are managed in cooperation with other organizations.

Example of a strategy in the Netherlands
Stefan Martens presents an example of a strategy in the Netherlands (ODNZK). In the Netherlands different environmental laws and regulations apply. An all in one permit applies for physical aspects. On an organizational level, in the Netherlands there are 29 environmental competent authorities (Omgevingsdiensten). Their clients and owners are both the municipalities as the provinces. The environmental authorities are licensed for permitting and inspections & enforcement. Fields of work include soil, building, environment and air pollution.
At the environmental agency North sea channel area (ODNZK) is facilitating circular innovations by providing a breeding ground for industrial innovators. For this purpose, the municipality of Amsterdam has provided an old industrial building for start-ups. The building is equipped with concrete floors and a sewage system for waste water. Also the storage of waste and hazardous substances is in place. The environmental agency provides support, e.g. advise on environmental issues/regulations and how to make use of the flexibility in regulation. Important issue is the exchange of information between the regulator and the businesses, this always needs to be two ways

(e.g. explanation of the applicable legislation to the company on the process). Bottlenecks encountered: a company is processing waste into animal feed. During the permit procedure the raw material in use changed. The installations in use were also changed (from above ground to storage underground).
The strategy for permitting process for the company processing waste into animal feed executed by the regulators: an extensive consultation took place followed by a phased application on environment and construction aspects. An instruction was included for experimentation notification.

Discussion
Also in other Member States regulatory strategies are used. E.g. in Sweden tools were introduced for more sustainable health care sector. In this sector many single use plastics are used, but there is no producer responsibility to reduce the amount of these single use plastics. On national and regional level green public procurement is used to stimulate to find other products to replace single use plastics in the health care sector. Also a plastics strategy was introduced in Sweden. In general, the regulator needs a proactive approach, but on the other hand businesses are demanding attention from the regulator. A strategy is needed to select sectors/areas which should be given more attention and need pro-active approach from the regulator. Also under the revised Waste Framework Directive (2018) the regulator need to act more, for this a strategy needs to be in place. The statement for the plenary reporting back of the working sessions was agreed by the participants as: that every regulator needs a regulatory strategy for facilitating circular innovation.

Eow and byproducts

Lead: John Tiemann (NL) and Francesco Mundo (IT)

John Tiemann and Francesco Mundo introduced the session, explaining the contents of art. 5 and 6 of the new WFD, the Italian state of play of rules on EoW and byproducts and lastly some case studies were proposed (glass cullets from recycling of discarded glass, copper and metal scraps, carbon black from discarded tyres and granulates from recycling of C&D waste).
Some open questions were proposed to the participants.
1) Do we need criteria for byproducts?
2) Do we need criteria for EoW and for which waste streams?
The discussion participants were splitted in 3 subgroups:
1t group discussed about the needs of criteria for EoW and/or byproducts:
- Byproducts, definition of production process: there's a need for clarification of the definitions set out in art. 5; for instance there wasn't an agreement within the group if construction and demolition waste may be considered as byproducts.
- The normal industrial practice has to be further explained.
- It was also discussed if there's a need to establish byproduct criteria for each IED sector: someone proposed to select some relevant byproducts streams, others were more keen to have a guidance that goes through a practical procedure for the application to the Competent authority.
- Another key point of the discussion was how to demonstrate the environmental compliance, when there aren't standards at EU level: Someone (Italy-Region Lombardia) suggested to use REACH/CLP criteria to assess environmental compliance of a byproduct or EoW although the assessment includes only the impact on water and not on soil. Others proposed a risk analysis assessment, but the question was how to choose the most suitable parameters for the assessment: for instance

someone discussed that for construction and demolition waste sulphates may be considered as constituents and not as pollutants. Another example on materials recovered as animal bedding was briefly discussed in order to state that in some cases a specific expertise is required (for instance research institutes for animal health).
- Summarising the need for a guidance was strongly stressed by the group, particularly containing specific procedures and examples in order to better clarify in a practical way the definitions set out in art. 5 and 6 of the WFD.

- 2nd group discussed about the conditions set out in art. 5 and 6 of WFD:
- The subgroup stated that sometime innovations may be inconsistent with circular economy actions: for instance the production and use of biodiesel obtained from cooking oil is a good action in order to develop circular economy, but a wide use of the biodiesel needs a financial support like low taxes in order to disadvantage the common fuels. So promoting ecoinnovation requires a decrease of taxation
- The group proposed to insert in the guidance a focus on food byproducts

3d group discussed about the interface between waste (WFD) and product (REACH) legislation:
- REACH legislation is very complex and an obstacle for EoW promotion
- Another obstacle is that different authorities are responsible for the different legislations
- Waste and product legislation are both important and should be connected
- A guidance on byproducts is welcome: the group recommended to insert practical examples.

Supporting regulators - the importance of joined-up thinking (policy makers)

Lead: Sascha Grievink (NL) and Caroline Tuck (UK), rapporteur Eva Dalenstam (SE)

Presentations

Sascha introduces the session describing how regulators can be supported by policy makers, giving examples from the guidance.

Caroline gives an example from the UK, describing good practice regarding resources and waste strategy.
Clean Growth Strategy, 2017
Industrial Strategy, 2017
25 Year Environment Plan, 2018
Resources and Waste Strategy from 2018, about leaving from the linear model to the circular.
Part 1 – the product lifecycle
Part 2 – topical areas
Part 3 – the bigger picture
Policy mixes on what we can do now and what we can do in the future. There is an importance of bringing everybody on board, so conducted a lot of engagement activities, engaging NGO:s and forward-looking businesses. Working groups regarding different part of the cycle (consumption and use, resource recovery etc).
Some of the content is about increasing producer responsibility. Consultations regarding for example: EPR on packaging, taxing, deposit-return schemes.

Some of the challenges are tracking systems, we have one now but that does not have that huge uptake. Working at the moment with a gov-tech fund – Smart Waste Tracking – how to track waste through the system. Another challenge is the chemical waste interface, how to best reconcile conflicting priorities.

Sascha then gives an example from NL on good practice, regarding the waste management plan, LAP.
It covers all waste. The competent authorities must take into account the minimum standards, can however deviate from them but must then explain why. They must do this when looking at different waste streams, when permitting.
The minimum standards include expected developments, so investments can be made.
They are a good push for companies that are lagging behind.
One challenge in NL is the feedback loop, especially with regulators at local level – need to create a way to be in more tune with what regulators are practicing.

Joined up thinking I
Question:
How does your MS organize feedback loop and/or structural dialogue between policy and regulators?

Q: are you also faced with different cultures – policy makers and inspectors in the field? From IMPELs view we've done these studies with input from the field and fed back to the COM that led to alterations in the legislation. There are different ways of getting the practitioners involved, and they need to be involved to get good feedback.
UK: a very good challenge, because we are currently not working directly with people in the field.
NL: yes, we are. And that's one of the biggest issues. An issue within regulators – to get it into the organisations and out in the field is very difficult.
GR: If many people (>2000), than involvement via website could be a good way to involve practitioners.
NL: a lot of enforcement is at local level. Direct dialogue at the table. Difficult for ministry to organize that conversation – they have a representative organisation for all the municipalities.
NL: you don't need all the 5000, some of them.
BE: in Flanders we meet once a month, and have representatives from different stakeholders within the regulators, about 20 people, making plans and reporting about them, and making recommendations (advising our minister) about better regulation and enforcement. Doing that the latest 10 years, and it is working well. All the people implementing the environmental legislation, department of environment and spatial planning. Also member of spatial planning and development is working together with us.

Question: Does your MS have guidance to support regulators to facilitate innovations for the circular economy?

NL: Looking how we can do things differently. There needs to be more guidance for this, because your asking people that are doing things the same way always, now asking to do it in a different way without trespassing the law.
UK: are there examples within your country when there are guidance?
BE: not only guidance, but enough critical mass. Authorities – one civil servant doing everything from spatial planning and environmental legislation. That is a problem that not enough critical mass. That's

why we are entering into working together to tackle the environmental problems for waste, water etc. Not possible only one person – permitting, enforcement. You need a professional team.
NL: it is a comfort with a critical mass. Regulators feel that if there is a mistake, they are the ones responsible for it.

Specific issue: how can a policy maker help a regulator to balance different seemingly conflicting environmental interests which can involve accepting uncertainties and taking risks in authorising or assessing circular innovations?

NL: for example, we have a help desk regarding EoW.
UK: if they stick to the old they are safe, but if they try the new, there is a risk. They may not be confident to do so.
NL: Policy maker does not have the technical knowledge to do that, and rely on regulator to do so, who in turn lack the confidence.
UK: England – to big an area to experiment – maybe something in a smaller scale, a city region etc, where you can experiment.
Q: But the question is – what kind of agreement do you have with the ministry – we give you the room to test that but staying in the legal framework.
GR: the question is technical not legal, because of the apparent lack of time, they usually bring in some legal advice. They move on the borderline on legality, with help of lawyer's office. But only resolved because it's a technical question – innovation can solve something with environmental impact. If risk averse, not give room for pilot test. We are here to move forward, not to do it the same way.
EEB: matter of using strategic assessment properly, with an actual engagement with the public. Political backing to support that innovation. If you're saying that here's an innovation and we're taking the risk – and then the consultation, that is not the right way of doing it.

Reflect on the question or statement to the plenary.

Something on the feedback loop or the specific issue of being risk adverse. Or on the engagement of different stakeholders. For example if you're in the risk assessment, it's important to engage NGO's and the public.

What are the conditions on which you can have these pilot projects – list of criteria on which you can experiment/ test/ have a pilot project.
Are there good organisational ways to carry it out?
One difficulty is the lack of information.
IED has a good design with the 9 months period for testing.
Public procurement is a powerful tool, the pilots can be linked to that.
Innovative public procurement – functional procurement. Go together with the pilot in the permit.

Plastics working session

Lead: Eva Dalenstam and Lena Stig, Rapporteur Sascha Grievink

Tour de table

Lena and Eva introduce vision EPA: a good living environment for people and all living things no wand for future generations – plastic is a valuable material that we have to use as sustainable as possible

Areas of actions – examples of approaches in guidance, presentation mainly covers examples

Less use, examples:

- Gram – zero-waste grocery store
- Event check list 3Rs used when licensing events – 5 measures
- Plastic Promise – several organisations of events have made promises
- Houdini – rent clothes – lower VAT

More re-use, examples:

- restaurant in Paris – reusable lunchbox - reconcile
- WRAP – trade in online electronic gadgets for gift card

Less littering, examples:

- collecting ghost nets and making new fibres, there is a burden in transboundary shipments
- dolly ropes on fishing gear – design project to phase out dolly ropes because they litter
- plastic pellets from industrial installations, there is a need for dialogue – and management systems (to monitor) to reduce pollution

Recycling, examples:

- Swedish stockings
- PET recycling – break down polymers into monomers, also break down pollution in polymers: important aspect were dialogue, dome permit
- Cooperation between selling point (stores) and producers: product made by 100 % recyclate, in that case you have to accept changes in color

Avoid harmful substances, examples:

- EPA is funding procurement to set standards to avoid harmful substances
- Decision tool for substances of high concern, can be used in permitting proces (NL)

For all area of actions:

- Knowledge and tools (climate effective plastic procurement, the plastic hunt)
- swedish EPA is funding to municipalities to clean beaches, and works together with KeepSwedenTidy with information campaigns, policy labs (designing packaging for easier sorting and recycling)
- Deposit system from ReturPack and SEPA: 82 % of bottles were recycled

Single use plastics:

- 85 % wasted in health care have potential to be recycled
- Life plus project is a demonstration project that started from demand in healthcare to have a safer blood bag: bag not containing harmful chemicals. It is initiated by health care themselves, started by procurement, but the product was not market ready. It ended up in complete revision of supply chain.
- Set of 4 bags: today they are made of pvc that needs a plasticizer, most common plasticizer DHEP. The idea is to select a plastic that didnt need a plasticizer, even though there are plasticizer that are better than DHEP. It is possible to make them pvc-free, not yet on market, but it is possible, studies are important: economic feasibilty study, environmental lifecycle assessment
- Success factor is engagement and knowledge from people working on it, good studies, arguments for increasing awareness and demand.
- Currently there is a new medical device directive, new legislation (a new essential requirement) but the implementation is very important

Discussion and questions:

- How does SEPA stimulate innovation? You have to stimulate knowledge, funding standarization work etc, competitions to work towards future common goal for certain products
- Queston Stefan Martens (NL): recycling – converting plastic into oil (pyrolisis), is that recycling? It concerns a mix of plastic that cannot be recycled anymore, SWE: new recycling processes should not be a argument to keep the plastics in the loop, because in the production there is still a high environmental impact.
- Question Francesco (IT): bioplastics, could it be solution? In case of fairs and events, controlled environment, to replace plastics, SWE: substitution is a good approach, but there are many different ways. Bio-based can be greenwash method and can lead to confusion. You also still have the problem of littering and micro-plastics. But, this is different environmental issue, because it is mismanagement of waste? Important aspects are information and making sure the public treats waste in the right way.
- Sharing other examples:
    - EEB: actions by city Hamburg – phased out/ban certain plastics from administration offices etc; transposition of SUP-directive and you don't need to wait for that, you can do more; SUP-directive treats bio-degradable the same as 'normal' plastics. Less littering: fund clean up beaches, but companies have to pay as stated in SUP-directive. SWE: it is not only that, but it is also communication project. EEB: italian example, banning smoking on beaches
    - IT: voluntary ban use of plastic glasses – use alimuminum cans; ban of cotton buds (jan 2018); ban for microplastics in cosmetic products (jan 2020); IGDP initiative: in tenders minimum percentage of recycled plastics
    - SWE: textiles and microplastics
    - Ireland: In jan 2019 all governmental departments banned cutlery plastics and extending to agencies as well, just some exceptions to hygiene restrictions

Questions:

- What do you need for further takeup?

- What should be taken to EU level/how to scale up? SWE: definitely demand side, important to work in dialogue with those who have solutions. EEB: strongly believe in modulated EPR fees, in Brussels discussion on essential requirements and guidance on modulation of fees. ITA: and growing modulation during time.
- In Sweden at production level/public procurement level: difficulty in choosing the right material/how to select material. How to deal with that? ITA: at EU level discussion about recycled plastic, with food contact you have a specific regulatory isssue, but different for commonly recycled plastics, you have to find a balance, you have to find a solution at EU level. ITA: It is a matter of supply chain, local level, producers have to know what is at the bottom of the line, otherwise not legal, it is important to take into account the supply chain of recycling, to do an economic asessment and for legislation to set standards.

Statement/question:

What is the next step at EU level for plastics (after SUP-directive)? What are the most important measures that have to be upscaled?

Make a difference between mandatory/voluntary – not all plastics are created equal – EU has to put a pyramid, what is the direction –get rid of worst cases (substances of high concern; forms that are impossible to reuse), stimulate best cases

Upstream thinking and downstream thinking; supply chain is downstream, look at upstream by better design

Education is important but does not solve issues now

Difference between shortlive plastics and durable plastics

Modular products – modularisation is key to rethinking plastics and longer lives of plastics

<u>IED and Circular Economy</u>

Helena Dahlbo (FI) and Alfredo Pini (IT), Rapporteur: Andrew Farmer (IEEP)

IED is main EU instrument for industrial installations and aims for high level of environmental protection. According to CE Action Plan the EC plans to develop guidance on inclusion of CE in the BREFs. CE aspects have been included in some recent BREFs. But is there is a need to add more to the BREFs process for CE?
The MiW and IMPEL guidance includes different cases of business that may wish to be more resource efficient. All link to IED permitting, such as on input material use, nature of outputs, etc. With IED new processes raise a number of questions in implementing specific provisions, from what category it is to individual aspects of understanding BAT. The other side on the coin is how to use IED to promote new processes for CE, such as use of emerging techniques, role of EMS.

The HAZBREF project is looking at hazardous substances in BREFs. The aim is for a systematic methodology for inclusion of hazardous substances in the BREF process, including for 3 industrial sectors. The CE is part of the work. Some BREFs include CE aspects, but there is a need to be more concrete on hazardous substances not least as these may prevent recycling of materials. So how to promote clean and non-toxic materials in BREFs? Key is to consider the value chain aspects in BREFsand sometimes this is done – it is not systematic yet. So project is looking at it from three angles: production waste approach, secondary raw material approach and product end-of-life approach.
In discussion is was noted that in the early days of IPPC regulators asked operators for a list of hazardous substances within the permitting procedure as during the first BREF round there were no lists of hazardous substances.
The question is how to extend scope of IED and BREFsfor CE? How can industrial symbiosis be promoted? Experience of CE issues in IED permitting? What should IMPEL work on this topic?
There has always included something on the CE in BREFs. IED is flexible enough. IED is also being evaluated so can act in the revision if needed. The nine month limit for ETs in IED is not long enough – but longer periods are also a risk. Also one could use trial permits for limited time, e.g. with bigger ELVs for that period.
The themes are already there and can be addressed in BREFs, but this also depends on the sector – some easier to look into.
There is a need for a platform for information exchange – on permits issued, solutions, etc. This could help benchmark permits for the same installation between countries.
A problem with first generation of BREFswas lack of information, so were based on expert judgement. Today for some CE issues we don't have the data, so again may need an expert judgment approach! This would need a new process to avoid it taking many years.
Plenary:
Question: What is the key point to recommend for the IED evaluation on IED/BREFs to stimulate integration of circular economy in the performance of installations? [a change, an emphasis, clarification, etc.] What practical examples can you bring as evidence to the evaluation on this issue?
One action could be to look again at the specific role of BREFs.
Discussion also raised the issue of whether authorities monitor the results of the outcomes for the environment on IED implementation, such as waste and resources. An example was provided of air pollution changes, but resource use is a larger challenge to track. It was noted that there is a conference taking place in Paris on monitoring progress in achieving the circular economy.

New environmental crime linked to circular economy

Simonne Rufener (CH), Rapportuer: Vojtech Pilnacek (CZ)

Simonne Rufener (IMPEL) held the opening presentation where basic discussion questions were presented.

- List new environmental crimes. Which are the challenges for competent authorities? How the Inspection Authority strategy has to change to adapt to the new crimes opportunities offered by circular economy?
- Detection of environmental crime: Why businesses can take advantage if they do not comply with the rules of end of waste, by products, recycling activities? How to detect such crimes?

- Risk assessment: how to carry out and where to concentrate resources?
- What can be done in terms of compliance assurance and compliance promotion?
- Cooperation and collaboration among authorities: What tools can be used to promote collaboration and cooperation among authorities. Where - which stages of the recycling chain - cooperation is needed.
- What do you think the IMPEL project should focus on regarding this topic?

Nancy Isarin (IMPEL) had a short presentation about IMPEL "waste crime" projects.
- LIFE SWEAP project
- SPIDER WEB project
- WASTE FORCE project

Afterwards discussion was held on mentioned questions with following conclusions:
Statement: it is important to create a blacklist of priority “end-of-waste crimes” to focus the inspection. Prioritisation should be based on:
- Hazards
- Volume
- Financial motivation (EU subvention, business yield)

It is important to share information between stakeholders in enforcement organisations as well producers of EoW products. It was noted that the European Prosecutors network has a database of environmental crimes and this might be a place for such a black list.
An example was given of a business receiving public money for recycling, but it closed the plant as it was a fake activity. Also income is driven by amount of waste received, not on quality of the product from the treatment of the waste, so some operators do not care. This would undermine trust in secondary raw materials.”