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Report on the results of the
4th DYNAMIX Policy Platform:
“An ambitious Circular Economy Package for
Europe: realising the social, economic and
environmental benefits of resource
efficiency in Europe”
Brussels, 13-14 April 2015

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<http://dynamix-project.eu/4th-dynamix-policy-platform>

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DYNAMIX PROJECT PARTNERS



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1 Introduction

The 4th DYNAMIX Policy Platform, jointly organized with the POLFREE project consortium, entitled “An ambitious Circular Economy Package for Europe: realizing the social, economic and environmental benefits of resource efficiency in Europe”, took place in Brussels on 13-14 April 2015.

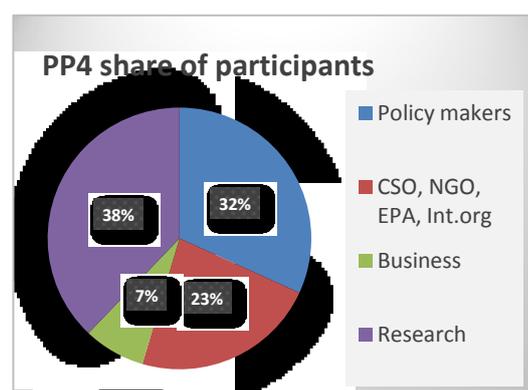
By bringing together high-level experts and research findings from two major European research projects on resource efficiency, DYNAMIX and POLFREE, the 4th Policy Platform aimed (1) to generate a high level expert discussion around a new Circular Economy Package, and (2) to work on policy recommendations to support the European Commission for a more ambitious Circular Economy Package.

The European Union has committed itself towards adopting a circular economy, which can translate in environmental, economic and social benefits. The previous version of the Circular Economy Package has been recently withdrawn by the European Commission, aiming to replace it with more ambitious legislation in 2015. The new Circular Economy Package, currently under discussion, therefore presents a unique opportunity to explore the shortcomings of the old package and provide recommendations for the new, more ambitious one.

The aim of the 4th Policy Platform was to present and discuss evidence and results of these two major European research projects on resource efficiency and take a step further by generating a discussion around a new ambitious Circular Economy Package. During the different keynote presentations, interactive working-groups and panel discussions, participants were actively engaged in the discussion of what a more ambitious package should look like, what kind of policies should be considered and what may be the socio-economic opportunities derived from it.

The main outcome of the conference is a set of policy recommendations for the new Circular Economy Package. These recommendations will be based on the suggestions of participants of the Policy Platform, and will be summarised by a validation group of the DYNAMIX and POLFREE projects after the event.

In total, there were 70 participants at the Policy Platform. This included participants from 13 EU Members States, working for EU policy units and national governments, research institutions, industry, civil society organizations, Environment Protection Agencies, and international organizations. Graph 1 shows the distribution of the participants according to their respective stakeholder groups.



Graph 1: Distribution of participants according to their stakeholder groups

This report will give an overview of the presentations, plenary and panel discussions as well as of the various interactive group work sessions during the Policy Platform. All the presentations and relevant material from the Policy Platform can be found on the DYNAMIX website (<http://dynamix-project.eu/4th-dynamix-policy-platform>).

2 Opening: Resource policy and circular economy

Wanda Gaj (DG Research & Innovation) opened the Policy Platform. As Policy Officer of the DYNAMIX project, she welcomed all participants and introduced the issue of formulating a new, more ambitious Circular Economy Package in the European Commission. She stressed that the intention of the new European Commission is to develop a more comprehensive Circular Economy Package that goes beyond focussing exclusively on waste. Ms Gaj then wished the participants interesting and fruitful discussions, and mentioned that recommendations for the new Circular Economy Package emerging from this meeting should be submitted to the European Commission.

Subsequently, the DYNAMIX and POLFREE projects were introduced:

Martin Hirschnitz-Garbers (Ecologic Institute, Germany) presented the current status of the DYNAMIX project 'Dynamic policy mixes for absolute decoupling of economic growth from EU resource use and environmental impacts'. He reported that promising policies based on key drivers for resources efficiency and inefficiency have already been identified in the project. Mr Hirschnitz-Garbers highlighted that the general aim of the project is to assess the impact of these policy mixes in the medium and long term through interaction with relevant stakeholders. He then stressed that a key insight of the project is that policy mixes should be chronologically sequenced to enable the policy makers to select different pathways to respond to future developments. Projections of future global demand for raw materials and resources and the associated impact of extraction, use and disposal of these resources threaten planetary boundaries.

Paul Ekins (University College London, UK) presented an overview of the POLFREE project 'Policy Options for a Resource Efficient Economy'. He stressed the importance of redefining resource efficiency from the prominent engineering concept, to a more complex and multi-dimensional approach that takes into account the entire value chain of raw materials. Mr Ekins made the point that the current approaches to resource efficiency face a web of constraints. Consequently, complex policy mixes are required to tackle these problems. Mr Ekins reported that the POLFREE project has tried to identify concepts, policies and business models that tackle this web of constraints and to investigate model scenarios simulating the proposed different pathways. The framework conditions are extremely important because the EU depends on institutions at the global level. Mr Ekins further stressed that the key aim of this Policy Platform is to understand policy mixes, and gain greater insights into the options policy makers have. The Policy Platform should focus thus on the development of recommendations to support the European Commission in the preparation of a revised Circular Economy Package.

3 Session 1: The Circular Economy Package: current challenges in resource policy and the socio-economic impacts

The central objective of the first session was to introduce participants to the key issues and challenges of the withdrawn version of the Circular Economy Package, outline possible socio-economic impacts of the adoption of a more ambitious circular economy, and explore the features that a revised, more ambitious Circular Economy Package should incorporate. The session opened with a series of keynote speakers and was concluded by a plenary discussion.

Keynote presentation:

Dominic Hogg (Eunomia)

“Circular Economy beyond waste: a more comprehensive view on Resource Efficiency”

Session 1 was opened by **Dominic Hogg**, Chairman at the UK environmental consultancy Eunomia, who was also in charge of the impact assessment of the previous version of the Circular Economy Package. In his presentation, Mr Hogg focussed on the main legislative elements of the existing Circular Economy Package and highlighted problems that should be addressed in the revised version. At first, Mr Hogg introduced that the legislative proposal of the first Circular Economy Package focussed principally on increasing the binding targets expressed in the main EU Directives on waste, namely the Waste Framework Directive (2008/98/EC), the Landfilling Directive (1999/31/EC) and the Packaging Waste Directive (94/62/EC).

Mr Hogg then identified the following problems of the withdrawn version of the Circular Economy Package. Firstly, the previous Package allowed different methods and measurement tools to monitor the progress towards the waste management targets, hindering the possibility to benchmark achievements against a common baseline for the different Member States. Similarly, the Package did not indicate a common method to measure and monitor landfilling of waste. Secondly, the section on Municipal Waste lacked a clear measurement of recycling. Mr Hogg stressed the importance of not only focussing on recycling in the revised version of the package, but also on the reuse of materials and products, as well as preventative measures in areas such as food waste.

In the second part of his presentation, Mr. Hogg highlighted that the first challenge to be addressed in the revised Package concerns the diversity of EU Member States in terms of consumption level, differences in definitions and measuring tools, and different framework conditions to translate the Package into action. He suggested that the new package should focus on a variety of issues that characterize the circular economy, and investigate which measures the EU could use to stimulate this transition. In particular, Mr Hogg suggested some measures that should be included in the revised version of the Circular Economy Package. These are: the inclusion of binding waste prevention targets and targets for C&D waste, the adoption of concrete means to address marine litter, a more specific focus on preparation for reuse targets, and measures to increase the demand for recycled materials, thus creating of the right market conditions for recycled materials. Mr Hogg also mentioned the importance of including policies to stimulate inner circles of the circular economy, such as more attention to Eco-Design, Extended Producer Responsibility schemes and resource taxation. These steps should help particularly to encourage businesses to use less materials, increase the use of recycled materials, and encourage the production of long-lasting

products that can be reused. In his conclusions and outlook, Mr Hogg highlighted some issues to reflect upon during the preparation of the revised Circular Economy Package. This included issues concerning the reliability of a raw material tax and commodity prices and the need to establish the right incentives to drive Europe towards a circular economy.

Keynote presentation:

Annick Carpentier (Eurometaux)

“A circular economy model for Europe: perspectives from the business sector”

Annick Carpentier, Sustainability Director at the European Association of Metals (Eurometaux), gave a presentation on the business perspective on the Circular Economy Package, particularly from the non-ferrous metal industry. At first, Ms Carpentier argued that each supply chain faces different challenges and opportunities. The non-ferrous metals industry has great potential to address the circular economy, because such metals can be recycled without losing their properties. Furthermore, non-ferrous metals are fundamental components in renewable energy sources, low-carbon transport, sustainable buildings, efficient communications, resource-efficiency packaging and healthcare components. Ms. Carpentier made the point that is necessary to move from a ‘waste’- to a ‘resource’ management perspective, especially to secure a cost-effective access to secondary raw materials. According Ms Carpentier, this should be based on three principles: recovery of materials, quality recycling, and management of synergies along the entire value chain. This suggests that an innovation of the entire system is needed, particularly in terms of recycling flows.

Ms Carpentier also made the point that the new Circular Economy Package will need to address several challenges to increase the circularity of metals in the European economy, and proposed some potential solutions. At first, there is a strong need for more sustainable sourcing and access to crucial raw materials, and for decreasing dependencies of such resources from non-EU countries. This problem could be addressed partially by supporting quality recycling within EU. Other barriers and potential solutions concern: 1) the lack of effective regulation of hazardous substances, that could be tackled with a more risk based approach; 2) the overcoming barriers to industrial symbiosis, which would need the right framework conditions to ease material transportation from different industrial plans; 3) the need to implement recyclability within product design, e.g. through general EU regulatory requirements; 4) the need to improve consistency of product policies, e.g. through a coherent EU product policy framework; and 5) the need to guarantee material recovery after product reuse and repair, e.g. through the establishment of recycling standards. Ms Carpentier then highlighted, in concordance with Mr Hogg, that the revised Circular Economy Package should consider the harmonization of definitions, targets and calculation methods, tackle the quality of collection and sorting schemes throughout Europe, and finally consider the technological challenges that increasingly complex products pose in the recycling phase.

Keynote presentation:**Paul Ekins (University College London, UK)****“Socio-economic opportunities in Europe for a more comprehensive Circular Economy Package”**

Paul Ekins, professor at the University College London, gave a presentation on the possible socio-economic impacts of a more comprehensive Circular Economy Package. Mr Ekins explained insights from macroeconomic modelling, suggesting that environmental taxes and green fiscal reform can result in increased employment. Of course, these results are always dependent on the robustness of the model structure, plausibility of input assumptions, and the quality of data. Mr Ekins made the point that it is important for economic modelling to incorporate future resource constraints and damage costs resulting from climate change. If models are based on a business-as-usual baseline assumption of a benign future, they can be deeply misleading. The UNEP 2011 Green Economy Report (Chapter 23) suggests that we can improve the quality of the environment at effectively zero cost, while the Cambridge econometrics E3ME model that was referenced in the circular economy communication of the European Commission, clearly suggests negative impacts on economic growth arising from unabated climate change impacts in the future. Mr Ekins subsequently summarized the findings of these studies as follows: absolute decoupling of material consumption is possible and can have a positive effect on the EU28 GDP by promoting research and development investment, reducing EU dependency on raw material imports, and boosting household incomes by introducing taxes on raw materials (which consequently reduce taxes in other sectors, such as labour). In other words, there is no evidence from macroeconomic modelling that environmental tax reform (ETR) or green fiscal reform (GFR) will have negative effects on the labour market. Mr Ekins suggested that, although initially taxes on environmental pollution and resource use will induce costs for firms, increasing resource productivity can save firms money, result in modest improvements in the labour market, and open new pathways to innovation and new markets that could benefit Europe’s international competitiveness.

Plenary discussion

After the three keynote presentations, the participants of the Policy Platform had the opportunity to ask questions to be discussed with the keynote speakers:

A central point raised by participants was the concern that the revised Circular Economy Package would again be focussing too much on recycling rather than waste avoidance and reuse. Participants argued that the revised Package should aim at moving up the waste hierarchy and promoting reuse, waste minimization and waste prevention, this clearly going beyond disposal, recycling and energy recovery. The new Circular Economy Package would constitute an opportunity to act as trigger for such a shift.

Creating jobs will be an important theme in the new package and in line with the current Commission’s agenda. However, participants of the Policy Platform raised the concern that there needs to be more clarification on which kind of jobs will be and should be promoted by the package. By promoting resource efficiency, reuse and recycling, the decreased demand for virgin metals could result in a loss in employment opportunities, for instance in the mining sector. However, this could be countered by increased job opportunities in the waste management sector. This insight

highlights that there is the need for training and education schemes to enable citizens to acquire new skills.

Resource taxation is a potential solution, but there will be potentially a strong opposition and lobbying force of interest groups, both on the national and EU level. Furthermore, macroeconomic benefits of a possible reinvestment of these tax revenues would have a time lag. Overall, such measures will face a great resistance from firms and consumers. This has to be countered through clear incentives schemes tailored on the specific stakeholder groups.

Throughout the discussion, it also became clear that shared definitions of waste (e.g. when an end of life product should be considered waste, rather than a resource), as well as a uniform measurement mechanism, are essential for setting targets in the revised Circular Economy Package. Furthermore, participants raised the issue that general indicators alone are not enough, and macroeconomic modelling should be supported by specific and sectorial indicators. Moreover, using a mix of qualitative and quantitative indicators would be beneficial to model the situation in different countries and sectors more accurately.

Finally, it was argued that it needs to be kept in mind that greater resource efficiency of the economy must be a central aim in the European Union, as Europe is far too dependent on the import of resources and raw materials.

4 Session 2: The Circular Economy Package – Quo vadis resource policy?

Session 2 focussed on possible future trajectories for European resource policy and the revised Circular Economy Package. In this session, inputs were provided by a Member of European Parliament and representatives of three national government ministries (Italy, France and Germany). This enabled a reflection on different EU Member State perspectives and expectations.

Keynote speaker

Claude Turmes, Member of the European Parliament

“Reloading the Circular Economy Package: EU implications and challenges of embracing more ambitious targets”

Claude Turmes, Member of the European Parliament, provided insights into the political realities of formulating policies at the EU level. He argued that the successful adoption of a revised Circular Economy Package will depend on a ‘window of opportunity’. He suggested that the scientific community needs to have a limited, but robust set of key messages that can be translated into policy action. In this context, Mr Turmes encouraged the participants to contribute to the outcome of this Policy Platform with a limited number of strong political messages to be easily transferred to the political community.

Concerning the content of the Circular Economy Package, Mr Turmes stressed that energy and resource efficiency will be central topics. Furthermore, he suggested that communities, cities and regions have to play a central part in the revised Package. He also suggested that winners and losers of the adoption of measures, which penalise the extensive use of virgin raw materials (e.g. society and environment on the one hand, and energy intensive industries on the other hand), should be clearly identified. In this way, it would be possible to create the basis for a political willingness with a strong narrative.

Furthermore, the new package should focus on food waste and product policies (e.g. labelling and fine-tuned Eco-Design), material protocols and transparency of supply chains, and taxation. Mr Turmes also mentioned that attention should be paid to extensive lobbying by the incineration industry, which risk running into overcapacity of incineration plans derived from an increase in recycling rates. In addition, and in accordance with previous presentations, Mr. Turmes concluded that there is a need for availability of reliable data on the costs and benefits of instituting resource efficient technologies and practices. This could finally enable bankers to understand risks and provide opportunities for credits.

National perspectives:**“Reloading the Circular Economy Package: Member States perspectives and expectations”****Keynote speakers:**

- **Aldo Ravazzi Douvan, Ministry of Environment- IT**
- **Sylvain Chevassus, Ministry of Ecology, Sustainable Development and Energy - FR**
- **Andreas Jaron, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety- DE**

Aldo Ravazzi Douvan, from the Italian Ministry of Environment, presented the Italian experience with the Circular Economy Package. He stressed the importance of the 3 R approach (reduce, reuse, and recycle) as well as resource efficiency and the circular economy. In Italy, the 3 R approach is supported by ISTAT, CONAI (Waste Packaging), energy and Eco-Design initiatives, the traditionally high fuel taxation, regional taxes on extraction of material from caves and riverbeds, REACH Regulation on chemicals, green procurement, and WEE. The 2014 Italian EU Presidency has further focussed its efforts to shift the focus from solely being on waste issues, to the 7th EAP and EC Circular Economy Communication, and to integrate the environment into the European Semester process. Mr Douvan made the point that the new Circular Economy Package needs to be strengthened by finding more support from the business community, but also by the ministries of economy and finance. He expressed the hope that the narrative of a circular economy could be a constructive re-reading of sustainable development concept. Mr Douvan concluded that for the circular economy to become a reality it is crucial to strengthen measurement methods (e.g. as provided by UNSEEA, OECS, Eurostat). The scientific community could facilitate the transition towards a more circular economy through a more policy-orientated approach and giving clear recommendations.

Sylvain Chevassus, from the French Ministry of Ecology, Sustainable Development and Energy, talked about the transition towards a circular economy in France. The 2013 National Environmental Conference, which involved many stakeholders, resulted in a circular economy chapter in the draft bill on energy transition for green growth, “Combat waste and promote circular economy: from design of products to their recycling”. This draft included a target to reduce landfill by 50% by 2025 and introduce labelling initiatives to better inform consumers about the recyclability of products (Triman logo). Mr Chevassus stressed that, in France, the involvement of relevant stakeholders has a high priority. This takes place in the context of yearly conferences, the national council of industry and national industrial plans, programme of investment, competitive clusters (territorial), local authorities and regional CE strategies. French expectations of the revised EU Circular Economy Package include an expansion in scope and ambition, better integration of a resource productivity, non-binding targets (EREP GDP / RMC indicator) monitored by the European Semester, an amendment of the Eco-Design and waste framework directives, further development of the life-cycle approach to product policies (including Extended Producer Responsibility), and more focus on waste prevention.

Andreas Jaron, from the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, gave a presentation on the reception of the previous Circular Economy Package in Germany and expectations for the new package. First, Mr Jaron highlighted the common linguistic confusion between resource efficiency (the rational/ economic use of resources) and the

circular economy (A perspective that takes into account the entire cycle of resource use, seeing waste as a resource that can feed back into economic activity). Germany has the central aim to decouple economic growth from environmental impacts. Although the legislative proposal of the first Circular Economy Package has been withdrawn, the Commission Communication is still on the table and will act as a basis for the new proposal. Although the withdrawal was not a good political sign, Mr Jaron argued, we should see this as an opportunity to address the shortcomings of the first package. The withdrawn package did not include sufficient targets and calculation methods for impact assessments; there was also a lack of communication with the EU Member States, resulting in unpractical and unachievable targets. Furthermore, the withdrawn package was legally insufficient, did not offer adequate tools to comply with targets, and did not respect subsidiarity. It included the double political postulation of having one uniform calculation method and increasing the target from 50% to 70% (realistic would be 30%, in his opinion). Mr Jaron made the point that indicators are a tool to measure changes, but not a tool to achieve goals. He suggested that one should rather be thinking in terms of duties (Public-Private-Partnerships PPP and Best Available Technologies BAT), knowledge transfer, support, incentives and sanctions. Moreover, he pointed out that the central issue will be how the circular economy will be financed. Waste management could be financed by charging waste generators, building a market in secondary resources, initiating Extended Producer Responsibility schemes, and introducing subsidies from general taxes. Mr Jaron concluded his presentation by highlighting which characteristics the revised Package could take from the German example: a better, practical, achievable proposal that takes into account situations in different Member States; an inclusion of clear definitions, PPP duties, a focus not only on amount but also quality of recycling; a better strategy for critical raw materials, restrictions on landfilling, measures to promote waste prevention, improved knowledge transfer and clear support mechanisms through incentives and financial instruments.

5 Session 3: Policy Mixes to boost resource policy: lessons learned from DYNAMIX and POLFREE projects

Session 3 of the event provided an overview of concrete results of DYNAMIX and POLFREE on policy mixes covering different resource sectors. In addition, an interactive session allowed participants to receive more in-depth knowledge on policy mixes in 5 sectors developed in the two projects, and to provide feedback and suggestions.

Keynote presentations:

“Overview on resource efficiency policy packages: general results of DYNAMIX and POLFREE”

- **Martin Nesbit, IEEP (DYNAMIX)**
- **Henning Wilts, Wuppertal Institute (POLFREE)**

Some general results on policy mixes from the DYNAMIX and POLFREE projects were introduced in the following two presentations.

Martin Nesbit, from IEEP, presented the development of policy mixes undertaken in the DYNAMIX project. The development of policy mixes followed the schematic of identifying relevant drivers of production and consumption, including relevant behavioural and governance aspects driving or blocking change to more sustainable resource use (including paradigm change). Then, additionally the policy mixes were designed to cover and reflect the diversity of instruments (economic, regulatory, information-based), while taking into account potential risks of negative impacts elsewhere (substitution and geographical leakage). He argued that there needs to be a paradigm change to achieve resource efficiency and absolute decoupling. For instance, acceptability of policy measures can be supported by consultation and participation, recycling revenues, concessions to target groups, and framing policy in the context of a wider transition. Mr Nesbit argued that, generally, there is a trade-off between acceptability and efficiency. This needs to be further explored by qualitative assessment.

Henning Wilts, from Wuppertal Institute, first introduced the key question that the POLFREE projects attempts to answer: What policy framework is needed to boost resource efficiency and how can this be formulated and implemented? He then stressed that the key characteristics of such a policy mix are consistency, coherence and credibility. Mr Wilts then reviewed the key trade-offs that a policy mix faces: the more ambitious the instrument, the lower the immediate profitability for actors involved; predictability vs. flexibility; and specificity vs. depth. The POLFREE project focuses on exploring different policy mixed through macro-economic modelling.

“Policy Stations”: Presentation of policy mixes on different resources

- 1) Land use and food policy mix (Martin Nesbit, IEEP, Belgium)
- 2) Metals and other materials policy mix (Tomas Ekvall, IVL, Sweden)
- 3) Overarching policy mix (Martin Hirschnitz-Garbers, Ecologic Institute, Germany)
- 4) Waste and materials (Teresa Domenech, UCL, UK)
- 5) Energy (Paul Drummond, UCL, UK)

After the general introduction, participants took part in an interactive group work, based on the World Café format. In total, 5 policy mixes stemming from work undertaken in the DYNAMIX and POLFREE projects, and focusing on different resources, were presented at so-called ‘Policy Stations’. In total, participants could discuss at 3 policy stations, with each round having a similar format: After a 10 minute presentation, participants were involved in an interactive discussion on lessons learned. A rapporteur was responsible for recording key ideas and concerns, clustering them on moderation cards, and then presenting them to the whole audience of the Policy Platform in the plenary discussion at the end of the session.



Participants at the ‘energy’ and ‘land use’ policy stations



Participants at the ‘waste’ and ‘metals’ policy stations

1) Land use and food policy mix (DYNAMIX Project)

Martin Nesbit (IEEP) gave a presentation on different policy mixes targetting land use as developed in the DYNAMIX project. He referred to the double objective of decreasing the land footprint at the global level, that is due to European consumption of food and bioenergy, and reducing the environmental impacts that are related to agricultural land use / production in the EU. However, he stressed, creating linkages between policies focussed on consumption and production is a challenge. Mr Nesbit suggested that a policy mix addressing this should include the following:

Production:

- More environmentally effective Common Agricultural Policy;
- Improved nitrogen management, including revised targets under the National Emissions Ceilings Directive;
- Stronger pesticide reduction targets, and provision of guidance to farmers on integrated pest management;
- Promotion of Payment for Ecosystem Services programmes financed by private actors; and
- Setting targets for net carbon emissions from the land use sector.



Consumption:

- A targeted information campaign on changing diets, and on reducing food waste;
- The development of food redistribution programmes; and
- VAT on meat products.

Notes from the discussions generated at the policy station on land use and food

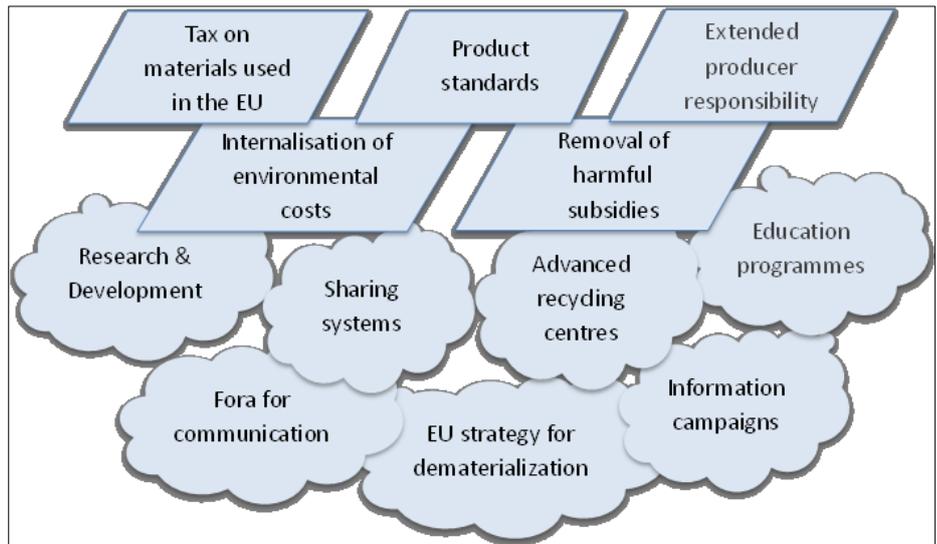
In addition, a range of accompanying measures, including information measures, R&D, regulation should be envisaged.

Two policy examples were introduced: a tax on meat products, and the setting of GHG targets for land use. Robin Vanner, from PSI, was the rapporteur for this Policy Station. He mentioned that there was a lively political discussion about the possibility of a meat tax. There is wide-spread concern about the public acceptability of such as tax, since a large majority of citizens in EU Member States are meat consumers. A potential solution to this would be to raise awareness for the health benefits of eating less meat. However, there are different types of meat and meat production that have different effects on land use and health and this also needs to be taken into account. Moreover, Mr Vanner reported that the possible regressive effect on the lower-income section of society is a major concern. Also, a tax on meat products might have economic effects such as reducing meat exports of the EU. These issues would have significant political implications, which would make a unified approach by all 28 EU Member States very difficult. Mr. Vanner mentioned

that one participant suggested that framing the meat tax as a penalty for the environmental footprint of a product could result in greater public acceptance.

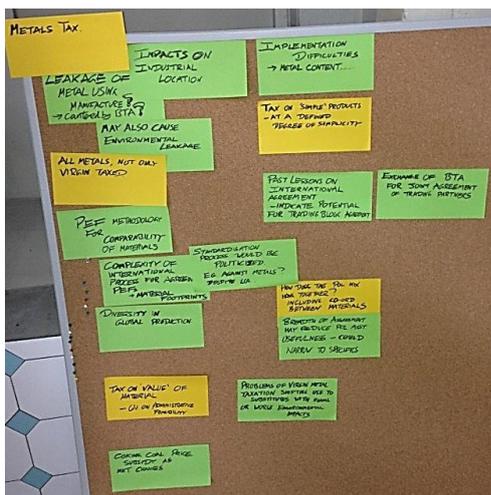
2) Metals and other materials policy mix (DYNAMIX Project)

In the second Policy Station, Tomas Ekvall, from IVL, presented the policy mix focussing on metals that has been developed within DYNAMIX project. The main target of this policy mix is to reduce the use of virgin metal in the EU, without a significant increase in the use of other resources or environmental impacts. Consequently, the key objectives of the policy mix concern an increase in metal recycling, an increase in material efficiency, and the substitution of metals with other materials when feasible. Mr Ekvall then introduced a proposal for a policy mix that consists of 12 measures to incentivize increased resource



efficiency (see Figure to the right.

Key measures from DYNAMIX policy mix on metals



Notes from the discussions generated at the policy station on metals

Christian Hudson from Ecologic Institute, rapporteur of the Policy Station on metals, resumed the main points emerging from the different working groups discussions. Mr Hudson highlighted that the implementation of tax on environmental externalities, and the enforcement of product standards, will pose some practical challenges for their implementation. He highlighted that some practical issues might hinder the implementation of a tax on metals, such as the difficulties of measuring exact quantities of raw materials in products. Although the proposed tax focussed in products of a defined degree of simplicity (such as metal pipes), the discussions at the Policy Station revealed that there is a need for agreeing on a methodology to assess the environmental footprint of a product, and face the challenges of accounting for the variety of production methods. Mr Hudson further elaborated that the cross-border trade issues were also a major concern of participants in the discussions. Finally, a tax on virgin metals could increase the use of substitutes with worse environmental impacts, or hazardous materials that could result in significant safety issues.

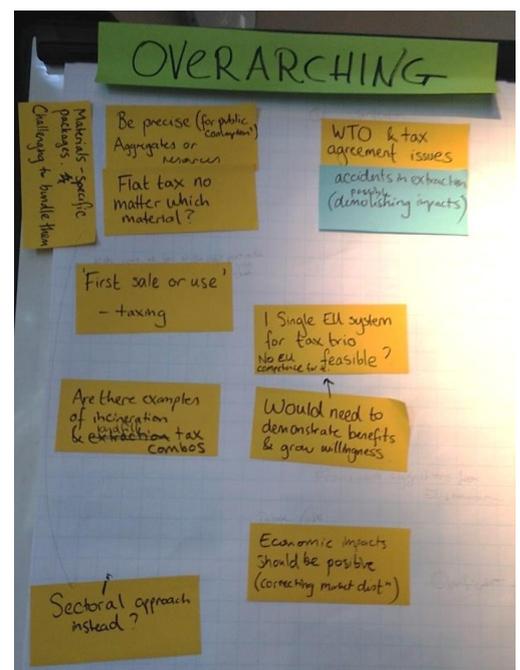
3) Overarching policy mix (DYNAMIX Project)

This Policy Station, presented by Martin Hirschnitz-Garbers from Ecologic Institute, focussed on the systemic overarching changes that are needed for the absolute decoupling of economic growth from resource use and environmental impacts in the EU. He explained that the unsustainable patterns of consumption and production result from a complex web of drivers including population growth, rising affluence, decreasing production prices, an increasing pace of innovation, increasing consumer choices, the expansion of trade, infrastructure design and social norms, as well as advertising and consumerist values. To address this, Mr. Hirschnitz-Garbers presented an overarching policy mix which included the following measures:

- Circular Economy tax trio (combination of virgin materials tax, landfill tax and waste incineration tax), to reduce raw virgin resources extraction, encourage recycling and internalize externalities.
- EU-wide introduction of so-called feebate schemes (a common framework for bonus-malus schemes, which incentivise purchase of environmentally beneficial products, and penalise purchase of environmentally detrimental products across the EU for specific products/product categories). These would foster a shift in consumer demand towards low emissions and environmentally friendly products, and consequently encourage producers to develop and supply more environmentally friendly products. Feebate schemes should be combined with green skilling to prepare for shifts on labour market.
- Enabling a shift from consumption to leisure (encouraging reduced working hours), in combination with green skilling and a revision of labour taxation systems to support low income households.

Key points of the discussion following the presentation were presented to all participants by Martha Bicket, from Policy Studies Institute of the University of Westminster. She recounted that a point of debate was that a tax on raw materials would have to take into account specific value chain characteristics and be specific to the sector and type materials used. The central aim of such a tax should be to correct market distortions, by reflecting the environmental cost in the market price. However, Ms Bicket also reported that participants were concerned about issues concerning the compatibility with World Trade Organization and existing tax agreements. Furthermore, the feasibility of EU-wide tax on raw materials is questionable, due to a lack of consensus between Member States.

Bonus Malus schemes were another central theme in the discussions following the presentation of the overarching policy mix. Ms Bicket explained that bonus-malus issues could either be treated in form of a penalty or taxation, but that in both cases transparency is extremely important. Examples of bonus malus schemes in France and Germany



Notes from the discussion at the overarching policy mix station

environmental impact of energy required in the production and recycling processes. Leasing and Extended Produced Responsibility schemes were discussed as a possible measure to incentivise better design and re-use. However, Mr. Wilts also stressed the importance of monitoring schemes and the difficulty to measure reuse and waste prevention that constitute major challenges to be overcome.

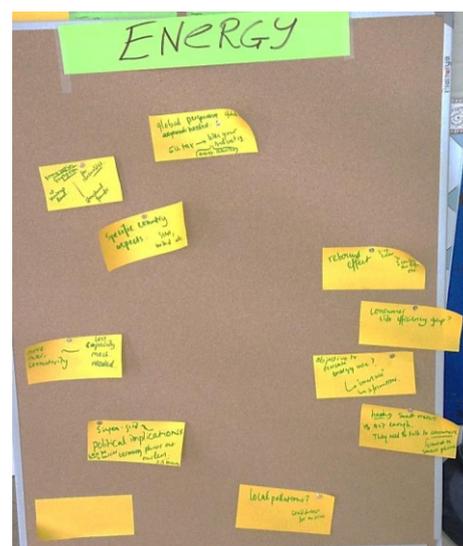
5) Energy policy mix (POLFREE Project)

This Policy Station, presented by Paul Drummond, from University College London, focussed on policies for a more resource efficient electricity production and distribution in Europe. The policy objectives include: decarbonisation, matching generation and consumption and production, preventing high-carbon lock-in and managing energy security and affordability. Mr Drummond highlighted the key features of the proposed policy mix include as follows:

- Reformed EU ETS that produces more predictable prices and is based on full auctioning and border tax adjustment to prevent carbon leakage. This will have the future effect of fuel switching in the short-term and investment in low carbon energy generation in the longer-term.
- Reformed RES-E Support Mechanisms that give rise to the producer-consumer.
- A 'Super-Smart' grid to increase EU Member State interconnections, with substantial deployment of smart meters and associated control mechanisms and tariffs. This will improve energy security, enhance affordability and system resilience.

The rapporteur of this Policy Station reported the main points emerging from the discussions to whole audience. At first, although the super grid has many benefits, this would also have political repercussions. For instance, German citizens might not accept to be connected to a super grid with high percentages of nuclear power.

Secondly, participants raised the issue of the rebound effect, meaning that citizens might increase their electricity consumption since it comes from renewable sources. Therefore, there is a need for more consumer-targeted measures in addition to smart meters to change consumption patterns and counter this rebound effect.



Notes from the discussions generated at the policy station on energy

First reaction from two policy-makers to the results of the discussions at the Policy Stations:

- **Carina Vopel, DG ENV**
- **Aldo Ravazzi Douvan, Italian Ministry of Environment**

Following the reported outcomes from the Policy Stations, two policy makers reflected on the discussion on different policy mixes that can support Europe to achieve a greater level of resource efficiency, and related this to the new Circular Economy Package.

In her intervention, **Carina Vopel** from DG Environment of the European Commission, highlighted some key challenges and provided some insights on the progress of the Commission towards the formulation of the new Package.

Ms Vopel pointed out that the Circular Economy Package is part of a broader agenda, and it will be of great importance to explore how the objective of improving resource efficiency can be tackled at different levels, from the local to the global scale.

Ms Vopel highlighted that the first big challenge is the complexity and diversity of approaches towards waste management in the different Member States. Different definitions and measurement methods concerning produced and processed waste hinder the adoption and proper implementation of common quantitative indicators. Secondly, targets alone are not sufficient to achieve changes, but need to be translated into concrete actions. Thirdly, there are many interests in Europe to stick to the business as usual model. Thus, it is necessary to overcome the resistance of different stakeholder groups, driven by different interests, in order to enable the transition towards a more resource efficient economy.

Ms Vopel then focussed on the new Circular Economy Package. At first, she emphasised that the action plan from the current strategy has not been entirely withdrawn, and will be reprised in the new Circular Economy Package. She then pointed to the importance of providing strong political guidance to EU Member States, but also to ensure collaboration between different Directorate Generals at the European Commission, and the inclusions other stakeholder groups, in order to guarantee the successful implementation of the package.

Ms Vopel then presented some insights into the contents of the new Circular Economy Package. The Package will consist of a communication and a technical implementation section. It will be in line with the objectives of the old Package, but will have a stronger focus on the potential of the digital economy, the potential of eco-innovations in product design, and the development of markets for high quality recycled materials. Concerning waste management, she stated that the new Package will not aim at increasing the available capacity for the incineration of waste, but will rather have the objective of promoting a more efficient utilization of existing plants. She also informed participants that the Commission is currently working on the operational measures for the Package. In order to incorporate inputs from different stakeholders, the Commission is also organising an open consultation process, starting in May 2015. In addition, the Commission will organize a Circular Economy Conference in June 2015¹. In her conclusion, Ms Vopel stated that the new Circular

¹Circular Economy Conference will be held in Brussels on 25 June 2015, more information at http://ec.europa.eu/environment/circular-economy/index_en.htm

Economy Package can initiate positive change, but a wider paradigm shift in our perception and use of resources is also needed.

After Ms Vopel, **Aldo Ravazzi Douvan**, from the Italian Ministry of Environment, expressed his reflections on the variety of contents and ideas presented within the day.

First, Mr Ravazzi Douvan pointed out his concerns regarding the rebound effect in hampering the efforts towards a more resource efficient economy. Then, Mr Ravazzi Douvan stressed that taxing and pricing mechanisms are key to addressing resource use. Incorporating the cost of negative externalities into the price mechanism, through taxes for instance, could have substantial positive effects on the behaviour of producers and consumers. Yet, the introduction of such measures can be very difficult, especially in terms of acceptances. Thus, it is crucial to propose transition and compensation measures to increase acceptance and overcome resistance, especially from the business sector.

Furthermore, he mentioned that other ideas that were discussed, such as advertising for resource efficient products or a tax on meat or fat, are very interesting, but seem difficult to implement. He made the point that there is a need for new proposals for transition and compensation measures that will enable companies to perform this transition. Mr Ravazzi Douvan suggested that measures such as taxes on polluting activities could provide the revenues to finance such activities. Similarly to what was mentioned by Ms Vopel, Mr Ravazzi Douvan highlighted that a close cooperation between the 28 EU Member States will be central to the success of the Circular Economy Package, and that it would be necessary to consider the linkages between the Circular Economy Package and two other major reports: the Millennium Development Goals and the SDGs report. Finally, Mr Douvan concluded by stating that it is the role of the research community to be ambitious and formulate visions for the future that might not seem practicable now, but could become possible if we make substantial changes.

6 Session 4: Towards a more ambitious and resource efficient Circular Economy Package

Day 2 of the Policy Platform focussed on the development of recommendations for the new Circular Economy Package, and included a presentation summarizing key points of day 1, an interactive group work, a plenary session open to the whole audience, and a panel discussion.

Paul Ekins gave an overview of the main issues discussed on the first day of the Policy Platform. He stressed that as researchers we do not have any option but to be ambitious in making policy makers aware of different possible pathways. Mr Ekins stressed that the Circular Economy Package will face challenges in terms of feasibility and acceptability – but systemic change needs to start now. He argued that it is of extreme importance to decide what needs to be done to achieve ambitious targets for 2050, and suggested that a reduction in GHG emissions and land use is essential. He suggested that, in this context, it is necessary to have the counterfactual in mind and explore all possible policy pathways.

According to Mr Ekins, four main themes have emerged in the discussions of the previous day:

- Importance of prices: the market prices are volatile and missing externalities, this has to be explored with having the economic competitiveness of Europe in mind;
- Extended Producer Responsibility: a method to retain the value of materials and shift the responsibility of the end-of-life treatment from the consumer to the producer.
- Lack of robust data: we need to be able to measure if we are going in the right direction and turn this into information for producers, consumers and policy makers. Here, we face challenges concerning different definitions, of what for instance constitutes waste, and methods of measurement.
- Need to review the waste legislation and decide how to take steps to a more circular economy: Mr Ekins suggested that central to this will be finding a way to prevent materials from becoming waste and retaining their value.

Interactive group work: Working on recommendations for the new Circular Economy Package

The participants of the Policy Platform worked on recommendations for the renewed Circular Economy Package in an interactive group work session. This took place in a ‘Consensus Group Work’ format. The question that participants were working on was:

“Which policy fields, policy objectives and policy mixes should the renewed Circular Economy Package include?”

The participants worked in 10 table groups, with up to 6 participants per table. First, the participants were asked to take part in a silent individual brainstorming exercise (BrainWriting) for 5 minutes, with the objective that each participant comes up with 2-3 recommendations and writes them on small moderation cards. These were then presented and explained to the table group in a session that lasted 20 minutes. In the following 35 minutes, each table group was asked to discuss and

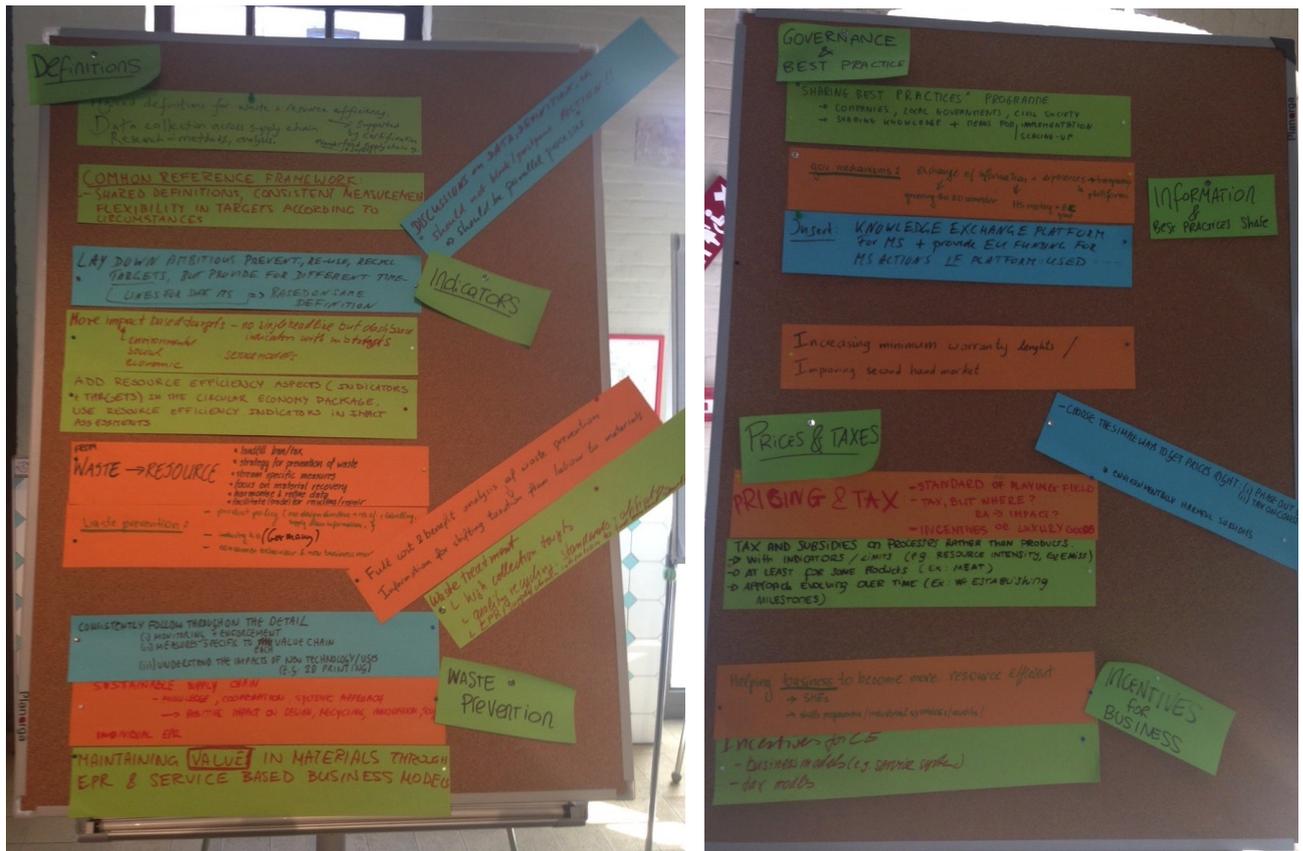
cluster the recommendations and develop new ones. Finally, each table was asked to prioritize 2-3 recommendations to be presented in the plenary discussion and write them on long moderation cards. The structured and timed workflow of brainstorming, collection, discussion, clustering and prioritization had the aim of channelling the input of all Policy Platform participants into key recommendations that will be presented to the Commission.



Interactive group work on recommendations for a Circular Economy Package in Europe

7 Session 5: Recommendations for a more ambitious Circular Economy Package

Session 7 started with the harvesting of recommendations developed in the interactive working groups. The moderator invited participants to present their results in the plenary session, and clustered the long moderation cards on a flip chart. Follow up questions were asked to clarify ideas. Each cluster of ideas was given an overarching theme title.



Recommendations were collected and clustered during the plenary session

The following table summarizes the recommendations developed by the participants of the Policy Platform, clustered around different themes:

Theme	Recommendations
DEFINITIONS	<ul style="list-style-type: none"> Agreed definitions for waste to support resource efficiency – supported by certification. For example: food supply chain, safety Data collection across supply chain: research methods, analysis Common Reference Framework: shared definitions, consistent measurement, flexibility in targets according to circumstances Discussions on data, definition etc. – should not block or postpone action!!

Theme	Recommendations
	Should be parallel processes
INDICATORS	<ul style="list-style-type: none"> • Lay down ambitious prevention, re-use, recycling <u>targets</u> (based on same definition), but provide for different time-lines for different Member States • More impact based targets (environmental, social, economic) – no single headline, but dash board indicators with sub-targets • Add resource efficiency aspects (indicators plus targets) in the Circular Economy Package. Use resource efficiency indicators in impact assessments • From waste to resource: <ul style="list-style-type: none"> ○ landfill ban/tax; ○ strategy for prevention of waste; ○ stream specific measures, focus on material recovery; ○ harmonize and refine data; ○ facilitate (trade) for reducing/repair. • Waste prevention: <ul style="list-style-type: none"> ○ product policy (eco design directive, resource efficiency, labelling, supply chain information); ○ industry 4.0 (e.g. in Germany); ○ consumer behaviour and new business models. • Full cost and benefit analysis of waste generation, information for shifting taxation from labour to materials • Waste treatment: <ul style="list-style-type: none"> ○ high collective targets; ○ quality recycling, standards and certification; and ○ EPR + supply chain information to find mutual benefits
WASTE PREVENTION	<ul style="list-style-type: none"> • Consistently follow through the detail: monitoring and enforcement, measures specific to each value chain, understand the impacts of new technology uses (e.g. 3 D printings) • Sustainable supply chain: knowledge, cooperation, systemic approach, positive impact on design, recycling, innovation, sourcing, individual EPR • Maintaining value in material through EPR and service based models
GOVERNANCE AND BEST PRACTICE/ INFORMATION AND BEST PRACTICE SHARE	<ul style="list-style-type: none"> • Sharing best practices programs: <ul style="list-style-type: none"> ○ companies, local governments, civil society, ○ sharing knowledge and means for implementation and scaling up • Governance mechanisms: <ul style="list-style-type: none"> ○ exchange of information, experiences – transparency and platforms, ○ greening the EU semester, MS and EC meetings • Knowledge exchange platform for MS, and providing EU funding for MS actions if platform is used
PRICES TAXES ADN	<ul style="list-style-type: none"> • Tax and subsidies on processes rather than products: <ul style="list-style-type: none"> ○ with indicators/ limits (e.g. resource intensity, CO² emissions); ○ at least for some products (example meat); and ○ approach should evolve over time (i.e. establishing milestone). • Pricing and taxes: <ul style="list-style-type: none"> ○ standard for level playing field; ○ tax, but where, and which impact?

Theme	Recommendations
	<ul style="list-style-type: none"> ○ incentives or luxury goods. ● Choose the simple ways to get prices right: <ul style="list-style-type: none"> ○ Phase out EHS (environmentally harmful subsidies); ○ Tax on construction material; ○ Increasing minimum warranty lengths, improving second hand markets.
INCENTIVES FOR BUSINESSES	<ul style="list-style-type: none"> ● Helping businesses to become more resource efficient: e.g. SMEs, skills program, industrial symbiosis, audits, etc. ● Incentives for Circular Economy: business models (e.g. service systems, tax models)
FUNDINGS	<ul style="list-style-type: none"> ● Ensuring consistency between funding and environmental EU priorities (clear ambitions) ● Include Circular Economy into the new multi-annual financial funding (MMF) ● Public procurement with take-back schemes, whole life cost and incentives for innovation ● Products information: promote a 'blaming the bad approach' (ex.: negative labelling/transparent labelling on production processes, e.g.: mentioning pesticides, fertilizers used)

Based on these themes and topics, the DYNAMIX and POLFREE teams will develop a set of recommendations for the new Circular Economy Package that will be forwarded to the European Commission and distributed among the broader stakeholder community.

Panel discussion on recommendations for a more ambitious Circular Economy

Package

- **Ariadna Rodrigo (Friends of Earths Europe, Belgium)**
- **Karl Edsjö (Electrolux, France)**
- **Prof. Paul Ekins (UCL, UK)**
- **Martin Hirschnitz- Garbers (Ecologic Institute, Germany)**

The Policy Platform was concluded by a panel discussion with four panellists, who reflected on the recommendations for a more ambitious Circular Economy Package developed by the participants:

Ariadna Rodrigo, from Friends of Earth, referred to the good collection of ideas that was produced at the Policy Platform. She stressed that making a clear link between waste and resource efficiency in policy will be key to successful changes. She argued that the fact that the European Commission is currently only developing one indicator on resource efficiency raises concerns about taking into account complexities and differences between different Member States. The aim should be, she suggested, making feasible, practical, and therefore implementable, policy mixes. As often highlighted during the 4th Policy Platform, a key factor will be to be ambitious in tracing the pathway for a more resource efficient society. Ms Rodrigo also expressed her concerns that the approach taken will be too focussed on the short-term. She argued that the Commission's narrative is largely focussed on growth and jobs. Therefore, the renewed CE package will need to show how waste recycling can contribute to growth and jobs in order to be politically accepted.

Furthermore, she highlighted that the role of the local initiatives and individual citizen is crucial to develop a circular economy. Thus, there needs to be more support for local and private initiatives of citizens that are active in the area of waste prevention. Friends of the Earth have published an interesting report exploring cases of local initiatives and their potential replication. Ms Rodrigo argued that central factors for successful local initiatives are a well-organized, active citizenship and benefits for citizens. Good examples for this are the repair cafés in the Netherlands, and renting shops in Berlin. However, so far there have been great difficulties to connect these 'local success stories' to the EU policy machinery.

In this context, the Association of Cities and Regions for Recycling and sustainable Resource management (ACR+), an international network representing approximately 1400 municipalities, has recently launched a specific Working Group on Circular Economy called the "Circular Europe Network". Through the Circular Europe Network, ACR+ will gather, analyse and exchange information on efficient circular economy strategies implemented by cities and regions, define priorities and delivering methodological tools and access to good practices on those priorities, and thus bring the voice of regional and local authorities in shaping a European circular economy.

Karl Edsjo, from Electrolux, presented the perspective of a single business on the Circular Economy Package. He argued that resource efficiency is a very prevalent term for a manufacturer like Electrolux. If the price mechanism is working, it is very effective. However, resources that undervalued or not valued on the market need to be considered as well. He suggested that in these cases directives and legislation on waste play a key role. He also reported that it is a strong concern for many businesses to create an equal playing field. In the electronics industry, for instance, most waste is collected by providers, but the waste processing for WEE has to have more equal quality standards to prevent unfair competitive advantages. Mr Edsjo suggested that this is also true for Extended Producer Responsibility schemes. However, the Extended Producer Responsibility is currently not a collective responsibility and thus a complex instrument to put in practice.

Moreover, Mr Edsjo suggested that EU Member States play an important role in supply chain integration, since there are many small companies focussing on recycling/secondary raw materials. He further stressed that funding is needed to help these companies to find, collaborate with each other and exchange good processes.

Furthermore, Mr Edsjo made the point that we have to think about making a better link to policies on climate change, because if we would address carbon in a meaningful way, this would strongly impact on resource policy and management. However, taxes on emissions would push a lot of industry out of Europe, but the cost of embedded energy would be a more fair treatment of production inside and outside of Europe.

Martin Hirschnitz-Garbers, from Ecologic Institute, highlighted the problematic of being stuck between the need to integrate the current political context and, at the same time, the need to be more ambitious in our transition ideas. Counterfactuals that are explored in research needs to be carefully chosen, in order to highlight the need for change, but still maintain an overall positive narrative. He explained that against this background the DYNAMIX project explores the chronological packaging of policy mixes as options to open different future pathways and thereby retaining flexibility as to emerging trends and developments. He stressed that we should start by developing clear indicators and measurement definitions, but this should not delay action too much.

Mr Hirschnitz-Garbers concluded that, although pathways that research suggests seem unfeasible now, these might be feasible in the future. Therefore, there is a need to propose ambitious pathways while retaining the flexibility to respond to future developments.

Paul Ekins, from University College London, explained that the European Commission is in a very difficult position, since the traditional model of perceiving EU Member States to be broadly at the same level and setting common targets, is difficult to implement. He suggested that we need to deliver something that is universal for the whole EU and, at the same time, allows flexibility for Member States with different circumstances and framework conditions. Subsequently, Mr Ekins highlighted that the polluter pays principle might still be a useful way to frame the fees, charges, and tax discussion. Waste prevention, however, is even more difficult to measure. Thus, Mr Ekins suggested, we need to understand how best practices are transferred between Member States.

Mr Ekins illustrated through the UK example that real behaviour change in how individuals collect their waste is possible, since UK recycling rates have increased from 10% to 40% over the last 10 years. However, he stressed that there still is need to move away from a tax-funded waste management industry (that is, consumer funded) to Extended Producer Responsibility. The UK shows that short-term targets and policy cycles can still be effective, if there is an overarching long-term objective, such as, in the case of the climate change, GHG reduction targets of 80%.

Mr Ekins concluded his speech with the statement that growth and jobs will remain central objectives of the European Commission. Therefore, he argued, one needs to show that innovation and resource efficiency could make a reasonable contribution to this objective – and, in addition, generate social and environmental benefits.

Conclusions

Dr. Martin Hirschnitz-Garbers (Ecologic Institute, Germany)

The 4th Policy Platform was concluded by Mr Hirschnitz-Garbers, who thanked all the participants for their contribution to the 1.5 intense days of work, and made several announcements:

1. A set of recommendations based on the outcomes of the Policy Platform will be summarized by a validation group from the POLFREE and DYNAMIX consortia, and delivered to the European Commission for revising the Circular Economy Package.
2. All the presentations from the 4th Policy Platform, as well as the recommendations and the present report will be available on both DYNAMIX and POLFREE projects websites:
<http://dynamix-project.eu/4th-dynamix-policy-platform>
<https://www.ucl.ac.uk/polfree/>
3. DYNAMIX and POLFREE projects will organize the joint Final Conference in Spring 2016.