

A3.2 - INTERREGIONAL WORKSHOP ON “HOW TO STIMULATE SECONDARY RAW MATERIAL MARKETS” SUMMARY REPORT



DATE: 20th and 21st March 2018

**VENUE: Chamber of Commerce of Molise
Piazza della Vittoria, 1
Campobasso (ITALY)**

Project acronym: SYMBI

Project name: Industrial Symbiosis for Regional Sustainable Growth and a Resource Efficient Circular Economy

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1. INTRODUCTION

Chamber of Commerce of Molise organized and hosted the 3rd SYMBI Project Interregional Workshop. Entitled "How to stimulate secondary raw material markets", the workshop took place on 20th and 21st March 2018 in Campobasso (Italy).

It was realized within the A3.2 activity, as foreseen in the Application Form. In detail the document stated "CoC Molise will organise a 2 days policy workshop on how to stimulate the emergence of regional secondary raw materials markets, based on a input study that will prescribe targets to be set, pricing schemes, & operational & administrative requirements. All partners will participate, with members of their stakeholder groups & external experts".

2. THEME AND OBJECTIVES

The general purpose of the 3rd SYMBI workshop was to provide an in depth analysis on how to boost the development of regional secondary raw materials markets. The topic has relevance in the project context since secondary raw materials markets can support and foster the transition towards circular economy and industrial symbiosis.

In particular, the event aimed at facilitating the exchange of experiences/views and the acquisition of knowledge on how to steer the implementation of policy measures to promote the use of recyclables and secondary raw materials and support the emergence of related markets.

Workshops in SYMBI are designed as crucial moments to promote the interregional learning and capacity building process. Therefore the event was structured not only as a moment for the theoretical introduction of topics in agenda by experts, but even as an opportunity to interact and to share different information, expertise and ideas.

3. WORKSHOP AGENDA

Works were organized in the following three thematic sessions:

- **Session 1** - Regulatory measures to stimulate the use of secondary raw materials
- **Session 2** - Pricing for markets of secondary raw materials
- **Session 3** - Operational and Administrative requirements for the secondary raw materials markets

Below the Workshop agenda in detail:



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Industrial Symbiosis for Regional Sustainable Growth and a Resource Efficient Circular Economy

INTERREGIONAL WORKSHOP
“How to stimulate secondary raw material markets”
20th/21st March 2018
Chamber of Commerce of Molise – Piazza della Vittoria, 1 - Campobasso

MEETING AGENDA

DAY 1 -Tuesday, 20th March 2018

09:00 – 09:30	Arrivals and registration
09:30 – 09:45	Welcome Speech <i>Paolo SPINA - President of the Chamber of Commerce of Molise</i>
09:45 – 10:00	MODERATOR: EMANUELE BOMPAN Objectives and Overview
10:00 –12:45	<p>Topic 1</p> <p style="text-align: center;">Regulatory measures to stimulate the use of secondary raw materials</p> <p><i>This session will describe a number of potential policy interventions to boost economic activity in secondary raw materials markets. It will present best practices from waste management and the valorisation of recyclable materials and by-products for the manufacturing of new commercial products, and it will prescribe regulatory measures/targets for SYMBI regional authorities to stimulate the demand for recyclable materials.</i></p> <ul style="list-style-type: none"> • State of waste management and recycling process in Italy: valorisation of end-of waste and/or secondary raw materials. <i>Sergio BARONI and Federico FOSCHINI – HERAMBIENTE S.p.A.</i> • By products valorisation through the Industrial Symbiosis. <i>Laura CUTAIA – ENEA Italian National Agency for New Technologies, Energy and Sustainable Economic Development</i> • The experience and the role of the Chambers of Commerce supporting the Market for Secondary Raw Materials. <i>Marco CONTE - General Vice Secretary of UNIONCAMERE Italian Union of the Chambers of Commerce</i> • Environmental labelling to promote the Circular Economy. <i>Simone RICOTTA - SNPA /Arpa Toscana - Ecolabel – Ecoaudit Committee Member</i> • The Green Public Procurement (GPP) in Italy: as an enabler for stimulating the Circular Economy. <i>Patrizia DE LUCA - ISPRA Italian Institute for Environmental Protection and Research</i>
	<ul style="list-style-type: none"> - Interactive session of discussion and consultation - Wrap up: the main conclusions and findings from the interactive session will be presented <i>* Coffee break after the oral session</i>
12:45 – 14:15	Networking Lunch



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INTERREGIONAL WORKSHOP

“How to stimulate secondary raw material markets”

20th/21st March 2018

Chamber of Commerce of Molise – Piazza della Vittoria, 1 - Campobasso

MEETING AGENDA

DAY 1 -Tuesday, 20th March 2018

DAY 1 -Tuesday, 20 th March 2018	
	<p>Topic 2</p> <p>Pricing for markets of secondary raw materials</p> <p><i>This session will attempt to decode the evolving landscape of the secondary raw materials markets (SRMs), whilst presenting a series of pricing schemes that have been used by companies across all sectors to maximise their sales and profits, thus deducing the most appropriate ones to be applied to secondary raw materials.</i></p> <ul style="list-style-type: none"> • The Italian Framework: economic tools to further promote the transition towards to the Circular Economy and the use of secondary raw materials in the production processes. <i>Fabio EBOLI – MATTM Italian Ministry of Environmental, Land and Sea/Sogesid TA</i> • The functioning of the secondary raw materials markets: <ul style="list-style-type: none"> - How are prices for recyclables determined? - Pricing schemes for the secondary raw materials. <i>Fabrizio DI GREGORIO - CONAI National Packaging Consortium Valentina RÈ- RICREA National Steel Packaging Recycling Consortium</i> • Markets, Prices and Policies: focuses from the literature. <i>Maria Bonaventura FORLEO - University of Molise</i>
14:15 – 17:30	<ul style="list-style-type: none"> - Interactive session of discussion and consultation - Wrap up: the main conclusions and findings from the interactive session will be presented <p>*Coffee break after the oral session</p>



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Industrial Symbiosis for Regional Sustainable Growth and a Resource Efficient Circular Economy

INTERREGIONAL WORKSHOP

“How to stimulate secondary raw material markets”

20th/21st March 2018

Chamber of Commerce of Molise – Piazza della Vittoria, 1 - Campobasso

MEETING AGENDA

DAY 2 - Wednesday, 21 st March 2018

	<p>Topic 3</p> <p>Operational and Administrative requirements for the secondary raw materials markets</p> <p><i>This thematic session will provide practical insights about the barriers hindering the valorisation of secondary raw materials into production. This session will also present the opportunities drawn from the development of the secondary raw materials markets (SRMs). The key objective is to highlight the operational and administrative requirements for the functioning and operation of the regional SRMs, whilst presenting potential solutions to overcome the identified obstacles.</i></p>
09:30 – 12:00	<ul style="list-style-type: none"> • Regulatory and operational barriers to creating secondary raw materials markets. <i>Paola FICCO - Lawyer – Environmental legal expert</i> • Potential solutions to overcome the main barriers. <i>Paola FICCO - Lawyer – Environmental legal expert</i> • Case study. COLACEM S.p.A. - Strong ideas for a sustainable future. <i>Massimo GIACCARI - COLACEM S.p.A.</i> • Case study. FATER S.p.A. - Fater Diaper Recycling: Technical or Legal challenge? <i>Enrico DOLCE - FATER S.p.A.</i>
	<ul style="list-style-type: none"> - <i>Interactive session of discussion and consultation</i> - <i>Wrap up: the main conclusions and findings from the interactive session will be presented</i> <p><i>*Coffee break after the oral session</i></p>
12:00 – 13:00	Final remarks from the Workshop

4. PARTICIPANTS

First workshop day was attended by 64 participants. In the specific: n. 11 Partners, n. 4 Partners' stakeholders, n. 1 Moderator, n. 11 Speakers, n. 7 Chambers of Commerce of Molise staff and n. 30 Chamber of Commerce of Molise Stakeholders. Below the attendance list.

A3.2 - INTERREGIONAL WORKSHOP
“How to stimulate secondary raw material markets”

20th March 2018
 Chamber of Commerce of Molise, Campobasso (Italy)

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Second day was attended by 43 participants. In the specific: n. 11 Partners, n. 4 Partners'

stakeholders, n. 3 Speakers, 5 Experts, n. 7 Chambers of Commerce of Molise staff, n. 1 Moderator and n. 12 Chamber of Commerce of Molise Stakeholders. Shown below the attendance list.

A3.2 - INTERREGIONAL WORKSHOP
“How to stimulate secondary raw material markets”

21st March 2018
 Chamber of Commerce of Molise, Campobasso (Italy)

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SOME PICTURES







5. WORKS DESCRIPTION

Francesco Paolo Oriente, member of the Chamber of Commerce of Molise Council and responsible for activities relating to Circular Economy and Industrial Symbiosis, opened the workshop with welcome greetings. Below relevant points of his speech:

Circular Economy and Industrial Symbiosis themes are considered strategic and priority. They are supported by an increasing number of initiatives and interventions, both at European and national level. For example, the transition to the Circular Economy is a focal point of the EU Agenda and is one of the pillars of the "Europe 2020" strategy.

The transition to Circular Economy requires the commitment of several actors, such as policy makers, companies, consumers, universities, research institutes and trade associations. Everyone plays an important role of responsibility in order to foster of the so-called "circular maturity" in production and consumption processes.

Circular Economy and Industrial Symbiosis offer interesting scenario for companies in terms of economic, environmental and employment benefits: savings on supply and resources price, decreasing energy consumption and emissions, increasing productivity and turnover. Companies may even have new business opportunities and enter markets where sustainability is a crucial competitive element.

Chamber of Commerce of Molise, as a body institutionally involved in the promotion and development of the business system, wants to raise awareness and inform about opportunities from Circular Economy and Industrial Symbiosis. In particular, Chamber of Commerce wants to sustain companies, operating in favor of them and providing several supporting services and tools.

A recent tool managed by Italian Chambers of Commerce is the "Public Register of Byproducts". It was introduced with the Ministerial Decree 13th October 2016, n. 264.

Chamber of Commerce, with the SYMBI Project, intends to operate as a disseminating body of Circular Economy and Industrial Symbiosis culture, acting as an intermediate between business world and political one.

Works were moderated by **Emanuele Bompan** who **coordinated interventions** and managed interactive sessions, ensuring the timing respect according to the agenda and the adequate performance of the overall workshop. Mr. Bompan is an environmental journalist with a great

knowledge of Green Economy and Circular Economy. He is Editor-in-chief at “Renewable Matter”, Magazine of Bioeconomy and Circular Economy and Editor at the national newspaper “La Stampa” for the section “Climate, environment, lifestyle”.



1st THEMATIC SESSION – “Regulatory measures to stimulate the use of secondary raw materials”

The first thematic unit was dedicated to the analysis of best practices and potential measures able to stimulate the demand and the use of secondary raw materials.

Experts who took the floor in this session were: **Federico FOSCHINI** - Senior Environmental Policy Advisor for Herambiente Spa (Hera Group); **Laura CUTAIA** – Responsible of Resources Valorization Laboratory and Environmental Engineer – Researcher for ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development); **Marco CONTE** - Vice General Secretary and Administrative and Legal Area Responsible of Unioncamere (Italian Union of the Chambers of Commerce); **Simone RICOTTA** - Official of ARPAT Environmental Protection Agency of Tuscany and member of the Italian competent body for the EU Ecolabel; **Patrizia DE LUCA** - Technologist in service at Department for Evaluation, Controls and Environmental Sustainability of ISPRA (Italian Institute for Environmental Protection and Research).

FEDERICO FOSCHINI – “State of waste management and recycling process in Italy: valorization of end-of waste and/or secondary raw materials”

His presentation started with an overall description of state of the art of Municipal waste management in Italy. In particular he showed Municipal waste management trends for the period 2010-2016.

He introduced Hera Group, one of the largest Italian multi-utilities, mainly operating in the environmental sector (collection and management of urban waste, treatment of urban and industrial waste), in the water sector (aqueduct, sewage and purification) and in the energy sector (distribution and sale of electricity, gas and energy services).

Herambiente Spa, as part of Hera Group, is currently the biggest Italian operator in the field of waste treatment by number of plants and volume of waste treated. It is an industry benchmark throughout Europe.

Herambiente is investing for renewing its plants in order to minimize their environmental impact and, at the same time, increasing energy production and efficiency. For the future Herambiente is going to focus its attention and investments on recycling, recovery of material and energy savings.

Mr. Foschini illustrated two projects of Herambiente concerning Circular Economy. The first concerns the acquisition of Aliplast Group (leader in the collection, recycling and regeneration of plastic waste). Through this operation Hera is able to close the loop: from the collection and recycling of plastic waste left over from production to the regeneration of new plastic products. The second one instead refers to the restructuring of the plant in Sant'Agata Bolognese, where the company operates a composting site to enable the production of bio-methane. The purpose is to implement there a project where organic and green wastes will undergo an anaerobic biodispersion process and then they will be transformed into biogas to be subsequently purified in order to obtain bio-methane.

Other innovative small projects always linked to Circular economy were presented.

In the final part he described the European scenario for Circular Economy. A focus was dedicated to waste management performances and targets prescribed by European Union that every single State has to reach.

LAURA CUTAIA – “By products valorisation trough the Industrial Symbiosis”



She presented ENEA activity as body that operates in the field of energy, environment and new technologies to support the Country's competitiveness and sustainable development. She remarked ENEA mission "to develop new technological solutions to meet the societal challenges, fostering transition to a low-carbon economy".

She introduced ENEA Industrial Symbiosis platform for the matching between byproducts offer and demand. It is a network of several actors (companies, innovators, entrepreneurs, regulators, academics, regional government) based on the provision and sharing of geo-referred data which allows the identification of possible synergetic exchange of resources among multisectoral users. A special focus was dedicated to the platform methodology.

Another important tool promoted by ENEA is the Symbiosis Users Network (SUN), an Italian network of Industrial Symbiosis. SUN brings together 19 partners from universities, political institutions, research institutions, private companies, technology networks and local authorities. Through the collaboration on the industrial symbiosis theme between the various operators, both public and private, SUN is an opportunity to share experiences and problems and to study opportunities at the economic, territorial and social level on industrial symbiosis issue. Chamber of Commerce of Molise joined the network too.

ENEA is even a member of Eur-ISA, the European Industrial Symbiosis Association launched on November 2013, that aims at connecting the industrial symbiosis networks across European member states.

At the end of her speech she gave details on the "European Circular Economy Stakeholder Platform" that brings together stakeholders active in the broad field of the circular economy across Europe.

MARCO CONTE – "The experience and the role of the Chambers of Commerce supporting the Market for Secondary Raw Materials"

Mr. Conte opened his intervention specifying the historical commitment of Chambers of Commerce to the environmental thematic. Some examples are the management of environmental lists/registers (i.e. the Environmental Managers Register) and the application of innovative services application to gather information on companies environmental data. In addition, Chambers of Commerce have always operated as a link between the public administration and the business system and their associations, supporting SMEs in the accomplishment of fulfillments concerning environmental waste management.



He gave a brief chronological overview of initiatives implemented for supporting the development of a recovery market.

A relevant milestone was the National Decree 13th November 2016 n. 264 that reformed Chambers of Commerce system by introducing important administrative competence in the field of Circular Economy.

The over mentioned Decree introduced an important tool: the public list of byproducts (www.elencosottoprodotti.it). Chambers of Commerce are in charge for the institution and the management of a list of producers and users of byproducts. This public list works as a container for generalities of operators interested in selling or buying production waste to be reused within their activity. Producers and users can register to this list, specifying the typology of waste deriving from their business or the type of byproducts they are interesting in. It is important to remark that the registration in this list does not play as a requirement to legally qualify a residual as a by-product. It has a mere cognitive purpose to facilitate exchanges of byproducts, favoring the match between offer and demand.

Despite that, there are still obstacles to the full development of the recovery market. Companies have shown different attitudes towards environmental issues, depending on their size, their organization and their availability of financial and human resources. With respect to the implementation and interpretation of the environmental legislation and the "By-Products" Decree, the following situation has been recorded: in a legislative uncertain context, prudent companies consider their refuses as waste in order to avoid sanctions, while the most reckless have often carried out illegal operations.

In the transition to the Circular Economy, SMEs have to orient towards new business models. This step may present difficulties in terms of costs and production risks. Therefore it is necessary to implement supporting measures to facilitate the SME's implementation of circular and sustainable production and consumption models (i.e. incentives and environmental taxation). In addition, a review of European and national legislation is also required to simplify this transition and the shared definition of new governance models.

An action to be taken in order to initiate the "by-products" market is the relaunching of the Platform to match demand and offer according to the provision of the art.10 of the Regulation on by-products. Expanding the use of the platform for post-consumer recycled materials or for those deriving from waste recovery, as part of the program agreements and policies incentive that the Ministry of Economic Development and the Ministry of the Environment can stipulate with companies, bodies and associations on the basis of the provisions of the Green Economy Act (Law December 28, 2015, No. 221).



Chambers of Commerce can implement the following actions to support Circular Economy and Industrial Symbiosis processes: economic-statistical mapping of the territory; environmental round tables with different interlocutors to identify and share the conditions for implementing synergies; information/training for companies and local authorities on regulatory instruments and technological innovations for the development of the recycling market; identification of supply chains with common processes and problems and sharing of experiences.

SIMONE RICOTTA – “Environmental labeling to promote the Circular Economy”

The topic of his speech concerned the environmental labeling of products, with a focus on their function on the market and their role in promoting Circular Economy.

He presented three different type of voluntary environmental labeling according to the ISO technical standards: Type I Environmental labeling (ISO 14024:2018), Type II Environmental labeling - Self-declared environmental claims (ISO 14021:2016) and Type III Environmental declarations (ISO 14025:2006).

With reference to the Type I, he made a description of their characteristics: Voluntary labels based on a predefined multi-criteria system that consider the entire life cycle of the product, subjected to external certification by an independent body. Some examples are: EU Ecolabel, Blauer Angel, GOTS - Global Organic Textile Standard, Nordic Swan, Aenor Medio Ambiente and El Distintiu de garantia de qualitat ambiental.

Then he described Type II labels that report environmental self-declarations by producers, importers or distributors of products, without the involvement of an independent certification body. However they must contain non-deceptive and verifiable statements. They consist in the application of some terms such as: Compostable, Degradable, Energy recovered, Recyclable, Recycled content, Reduced energy consumption or Waste reduction.

Lastly he made a presentation of Type III Labels: ecological labels that report declarations based on established parameters that contain a quantification of the environmental impacts associated with the product life cycle calculated through an LCA system. They are subjected to independent assessment and presented in a clear and comparable form. An example is the "Environmental Product Declarations"(ISO 14025).

He made an in depth analysis of environmental labeling programs related to the content of recycled materials of product (ReMade in Italy, Plastica Seconda Vita, Recycled Claim Vita, Recycled Claim Standard, Global Recycled Standard) giving specific information about their application and requirements.



He spent a specific focus on the use of environmental product labels in green public procurement practices.

Environmental product labels are allowing the integration of Circular Economy principles among awarding criteria. Nevertheless it is necessary to predispose specific environmental certification schemes for secondary raw materials. Today ISO Type II and ISO Type III and other specialized labels are working as labeling systems that could be applied for the development of secondary raw materials markets.

PATRIZIA DE LUCA – “The Green Public Procurement (GPP) in Italy: as an enabler for stimulating the Circular Economy”

The Italian Law n.132/2016 established the “National Network System for the Protection of the Environment” (SNPA). It consists in all regional/provincial agencies for the environment and the Institute for Environmental Protection and Research (ISPRA). SNAP operates as a body for the national monitoring and control in the field of Environmental Protection, even providing technical assistance to Public Administrations.

The GPPs are Public Administration purchases that include Minimum Environmental Criteria (MEC). Considering the Public Administrations purchase power, their attitude can generate great effects on the market by reducing impacts on the environment and favoring Green and Circular Economy affirmation. Today EU recognizes that GPP has great potential in terms of economic policy instrument.

Italy has reached targets prescribed for GPP. A national Plan was adopted and it is already operative. Moreover GPP became mandatory and MEC are already applied to important expenditure volumes.

The new "Code for Public Contracts" (Decree No. 50/2016) has made GPP mandatory. Contracting authorities must include in tender documentation at least "technical specifications" and "contractual clauses" defined in the relating MEC.

She described the path followed to adopt MEC. MEC definition starts from the work made by a Technical Working Group that elaborate a technical document to be shared and discussed with trade association of economic operators. Then the National Committee PAN GPP approves the MEC. The MEC final document is adopted through a specific ministerial Decree.

MEC favor the sustainable use of natural resources and they facilitate the “circularization” of economy. GPPs represent a fundamental leverage to support the transition towards Circular Economy. They promote the dissemination of innovative solutions in materials, in the design of



products/services that allow to maximize their useful life and their reintegration into production cycles.

It is important to change Public Administration purchasing strategy. It is necessary to switch to a circular supply method based on the European waste hierarchy: reduce, reuse, recycle and recover. This implies that in the purchasing processes it is fundamental to identify needs to be satisfied and not the good/service to be purchased (For example: instead of renewing the car park, switch to a car sharing service).

Another remarkable need is to improve public procurement officers' skills.

SNAP has developed guidelines for GPP. This is an operational model for the internal organization of public bodies for the fulfillment of the regulatory obligation in relation to GPP. It can be applied by any public administration. The guidelines manual received a special recognition during the "Compraverde edition 2017" Award as the best GPP policy for the dissemination of GPPs commitments and models.

In the final part she made some example of circularity in MEC. In the specific she presented MEC related to office furniture and to personal computer purchase, hire and leasing.

After panelists' speeches and presentations an interactive session of discussion and consultation was held. This was a good occasion for participants that had the opportunity to take part to the discussion on topics presented for asking clarification and insights, for sharing opinion and experiences and for identifying priorities and challenges.





2nd THEMATIC SESSION – “Pricing for markets of secondary raw materials”

The second thematic section concerned the analysis of pricing schemes, strategies and policies that can stimulate the demand of secondary raw materials and so the development of the related market. In this unit of the workshop some measures, able to shield the secondary raw materials price volatility were even investigated.

Panelists of this second part of the workshop were: **Fabio EBOLI** - MATTM Italian Ministry of Environmental, Land and Sea/Sogesid TA); **Fabrizio DI GREGORIO** - CONAI National Packaging Consortium; **Valentina RÈ** - RICREA National Steel Packaging Recycling Consortium; **Maria Bonaventura FORLEO** - University of Molise.

FABIO EBOLI - “The Italian Framework: economic tools to further promote the transition towards to the Circular Economy and the use of secondary raw materials in the production processes”



Firstly he presented the document “Towards a Model of Circular Economy for Italy - Overview and Strategic Framework” jointly promoted by Ministry of Environment and Ministry of

Economic Development. This document defines Italy’s strategic positioning on circular economy, it describes the national vision and calls for a paradigm shift in Italy's economy. The document aims at supporting the implementation of the National Strategy for Sustainable Development adopted on the 22nd of December 2017.

Considering the complexity and the importance of the document, the Italian government organized a public consultation to collect contributions from different institutions, enterprises, experts and citizens who deal daily with the issue of circular economy. The aim is to develop with the next Government a Strategy and/or a National Action Plan as result of the shared and participatory process.

Dr. Eboli made a brief presentation of proposed Circular Economy indicators to be applied in order to measure the results and benefits of actions pursued or to be pursued. After the presentation of dataset available in the EU context, he showed the situation in Italy. A working group was set up (Ministry of Environment, Ministry of Economic Development, ENEA, external experts) in order to define a set of specific indicators.

The focus part of his speech was dedicated to economic instruments able to boost the transition to Circular Economy and the evolving of secondary raw materials market. Dr. Eboli presented the 1st document released by European Environment Agency that provided a description of “enabling factors” for Circular Economy. With reference to them he made a focus on economic incentives and finance. Then he showed economic instruments proposed by OCSE.

European Union stressed the importance of economic instruments even in the document that is elaborating as legislative proposal for the new waste package.

To conclude he made a recap about economic instruments, remarking their important role in boosting Circular Economy and the secondary raw materials markets. One of the most significant consists in applying a different tax system between primary materials and secondary materials.

FABRIZIO DI GREGORIO – “In which way could be determined the prices for recyclable materials?”



He introduced CONAI, the National Packaging Consortium, which operates without lucrative purposes. The consortium, established with a national law, brings together over then 1 million packaging companies and users and it manages all types of packages. The consortium self-finances through the "environmental fee" tool that compensates costs to separate and collect packaging waste.

He made a brief overview of recycling statistics in 2016. Italy and CONAI have reached the excepted targets. One of the best performance concerns plastic.

He presented how CONAI system works, focusing the role of each actor involved.

For an effective transition to Circular Economy it is necessary to change the management of materials flow. In order to clarify this statement, Dr. Di Gregorio presented the main requirements for the new plastic economy, highlighting the necessary action and strategies to be undertaken.

Recently CONAI introduced different environmental fees for plastic packaging on the basis of materials storability and recyclability. The aim is to encourage the use of more recyclable packaging, linking the contributory level to the environmental impact of the end of life/new life phases of plastic packaging.

VALENTINA RÈ - “Material stewardship - steel packaging. The Italian Steel Recycling Consortium”

She introduced the RICREA Consortium that brings together suppliers, importers and manufacturers of steel packaging. It was established by a national law and it is one of the six supply chain consortiums that make up the CONAI System. RICREA performs its institutional function by favoring, promoting and facilitating the collection and recycling of used steel packaging from domestic and business waste.

She presented some key figures about RICREA for the years 2015-2016-2017, for example total amount collected, total amount recycled, % packaging recycled compared to packaging consumption.

Recycling trend from 1999 to 2017 shows that a successful work was done (from 7% in 1999 to 75,3% in 2017).



She presented the organization of RICREA system by explaining all materials flows: production and consumption, separate collection, recovery and selection, recycling in steel mills up to the creation of new steel products. She explained the role of each actor involved.

The central part of her intervention concerned the financial mechanism in RICREA. Main revenues for RICREA are generated from environmental fees (environmental contribution of CONAI). The main costs faced by RICREA are the contribution paid to municipalities for waste collection.

The last part was dedicated to the presentation of environmental and economic benefits generated by RICREA system in the period 2005 – 2016, in terms of greenhouses gas avoided and raw materials saved.

MARIA BONAVENTURA FORLEO – “Markets, Prices and Policies: focuses from the literature”

She provided an overview of literature concerning Circular Economy conceptual and theoretical issues. Below her speech.

In general, only few studies are about practical applications and most part of definitions and interpretations mainly concern physical and material aspects. Moreover, researches refer to diverse disciplines and so they adopt different perspectives and approaches. The challenge consists in comparing different available results.

The issue of price schemes and secondary raw material markets is not yet well addressed. The most relevant problems concern the lack of information about direct and indirect effects on the economy and the difficulty to foresee several parameters that act simultaneously.

The use of recycled material can modify the primary materials demand, leading to a lower extraction of them, to a decreasing price volatility and a less dependence on primary materials imports.

Once a secondary raw-material market performs, the recycling can raise security in companies supply processes and reduce material costs.

The evaluation of the recycling process entails a comparison of different costs, e.g.: costs for disposal of waste, cost for recycling and cost for re-use.

According to literature evidences some sectors benefit from the transition to Circular Economy (the so called “winners”), but other may be interested by negative effects in terms of economic activities and employment (the so called “losers”).



It is important to face a challenge: to optimize the use of secondary raw materials despite uncertainty of quality and contamination of materials. Often some solutions are not cost-effective.

Many documents and reports are confident with business opportunities, job impacts and investments. The transition to Circular Economy entails greater investments to introduce new and advanced technologies (with a return period of about 5-10 years). Recycling field is labor intensive since it requires different and new skills. Last but not least the development of a secondary raw materials may arise new business opportunities or spread new business models.

Despite the technical feasibility of developing secondary raw materials markets, there are many challenge and barriers to be faced and considered. For example: lack of access to funding, lack of government enforcement & cooperation, missing definitions & standards etc.

Secondary raw materials markets are often considered by the supply side and never by the demand point of view. Moreover it is necessary to enlarge the study of these markets from the European perspective to the international scale.

In order to support the development of secondary raw materials markets (both on the supply side and on the demand one) and to make them profitable in the long period it is necessary a systematic change that includes innovation and technology, policies, society, business models and finance.

The pricing issues in emerging both at national level. For example, this topic is treated in the document "Towards a Model of Circular Economy for Italy - Overview and Strategic Framework".

To conclude there is still a lot of work to do. An adequate and comprehensive analysis concerning secondary raw materials markets, prices and policies is still missing.

Also at the end of this session an interactive discussion/consultation was held, in which many interested participants took part.





3rd THEMATIC SESSION “Operational and Administrative requirements for the secondary raw materials markets”

This thematic session proposed an examination of relevant regulatory and administrative barriers that still hinder the establishment of regional secondary raw materials markets. Moreover, this part of the workshop pointed out operational and administrative requirements for the functioning of regional secondary raw materials markets, even presenting potential solutions to remove the identified obstacles.

Speakers present in this session were: **Paola FICCO** - Lawyer and Environmental legal expert; **Massimo GIACCARI** - COLACEM SpA; Enrico DOLCE - FATER SpA.

PAOLA FICCO – “Regulatory and operational barriers to creating secondary raw materials markets” and “Potential solutions to overcome the main barriers”

Waste is an environmental concern but also a crucial economic problem.

Preventing the waste formation means to dissociate economic growth from the environmental impacts associated with it.

Circular Economy is not achieved by changing name to those that (at the current state of legislation) are waste. To put the resources back into circulation and restart the production process, we need a real cultural revolution that also involves a legislative change in the "waste" concept.

Today, according to the current Italian legislation, "waste" notion is wide and it includes "Any substance or object whose the holder discards or intends to discard or is obliged to discard. For the definition of waste the concept of "discarding" has relevance.

The verb "to discard" has to be interpreted considering the purpose of the European Directive 75/442 and according to the article 174, n. 2, of the Treaty on European Union.

For the Court of Cassation is relevant the intention of the waste holder/producer and not the intent of people interested in using the waste itself.

She introduced the legislative definition of "preparation for re-use" and "reuse" according to the art. 183, paragraph 1, of the Legislative Decree 152/2006.

Waste legislation consists of public laws and they cannot be modified by acts of private law. She pointed out the differences between byproducts and secondary raw materials. Finally, she presented the Italian law concerning the cessation of the waste status.

MASSIMO GIACCARI - Case study "COLACEM S.p.A. - Strong ideas for a sustainable future"

Colacem SpA is the third Italian cement producer. It is part of the Financo Group also active in diversified sectors.

The extraction of natural resources from mining sites is one of the major environmental impacts in cement production. Colacem SpA tries to limit it to its maximum thanks to the symbiosis with other industrial sectors.

A part of natural resources is still necessary in the production phase. For this reason a correct management of the extractive areas is fundamental with the environmental recovery that occurs simultaneously with the processing phases. It is possible, in part, to replace natural raw materials by using process materials that are scraps from other industrial sectors, with same



characteristics as natural ones. This good practice, in addition to reducing the use of natural raw materials, reduces waste materials flows in landfills.

He presented a list of scraps material from other productions processes that can replace primary materials.

Secondary Solid Fuels (SSF) are non-hazardous waste, specially selected and treated which allow to replace a part of fossil fuels. Italy is behind the most virtuous European countries for the energy recovery of waste.

In 2016, Colacem plant located Sesto Campano, thanks to the recovery of non-hazardous waste, replaced the 4% of natural raw materials and the 25% of fossil fuels.

A greater awareness of Circular Economy and Industrial Symbiosis meaning is needed. But not only in conferences and public events. All stakeholders must contribute to proper information to local communities. Often institutions themselves are misinformed.

ENRICO DOLCE – Case study “FATER S.p.A. - Fater Diaper Recycling: Technical or Legal challenge?”

Fater is the producer and owner of Pampers and Lines brands for Italy. Absorbent Hygiene Products (AHP) are a key environmental challenge – as they weight 3% of municipal solid waste and today they are either landfilled or incinerated.

Fater is working since few years on a new technology to recover materials from for post-consumer AHP (Absorbent Hygiene Products) waste.

Thanks to this innovative process they are able to obtain the following secondary raw materials: sterilized plastic, sterilized cellulose and sterilized super absorbent polymers.

Although this project presents technical challenges, legal/regulatory challenges as well are important. In fact on 15th March 2018 a AHP End of waste Decree was published by Italian Environment Ministry.

After panelists speech an interactive session was held for the interaction between attendees and speakers.



