MML Event -Report

1. Description of MML of BIOVOICES project

BIOPLASTICS representative	Lorena Affatato- Maria Gelli Michela Tassistro – Francesca Spano – Ilaria Schizzi
Event venue	Virtual Event – https://www.biovoices-platform.eu/registeredarea/mmls/viewMml/9850
Date	14 January 2021 – (2.30-5.30 PM)
Event organised in partnership with	Project BIOVOICES, BIO-PLASTIC EUROPE
Key organisational contact	For BIOVOICES Patrizia Grifoni–patrizia.grifoni@irpps.cnr.it For BIO-PLASTIC EUROPE Lorena Affatato-lorena.affatato@ipcb.cnr.it
Website	https://www.biovoices.eu/ https://bioplasticseurope.eu/ www.biovoices-platform.eu
Work package	WP6
Task number	T6.2

Title	"Plastica, Bioplastica, Riplastica o NoPlastica"
Sector/s	Bioplastics, biological sensors, waste management, education
Stakeholders attending	
Total number of participants, out of which	111
Business	15
Policy Makers	6
Civil society	9
Research	81
Countries addressed/involved	Italy

Challenges Addressed	E1 – Enhance local bio-economy strategies & action plans E2 – Boost local deployment B2 – Promote changes in purchase habits
Material created for the event	Public materials available on-line at: https://www.biovoices.eu/ www.biovoices-platform.eu Materials under the privacy legislation uploaded at: https://drive.google.com/drive/u/2/folders/1K1bLqT0O6hMrWxx2jVcZKWLVH53cAYAd

2. Rationale or Purpose of your MML: you could paste here the promotional material you used to attract attendees to your MML with additional information as required

Concept

Context: The high functionality and relatively low cost of plastic have facilitated its widespread use in everyday life. Plastics play a crucial role in the world economy and provide essential applications in many industries with increasing use in short-lived applications. However, plastics are not always designed to be reused or recycled at low cost. This implies that the relative models of production and consumption are increasingly showing their inefficiency. The health emergency due to the COVID-19 pandemic has led to significant growth in the use of single-use plastic packaging and products (such as gloves and masks). This situation re-proposes the need to discuss and address the problems associated with the use of plastics, the production of packaging, and how to encourage and enhance a virtuous cycle of plastic waste treatment.

80-85% of marine litter in the European Union are plastic material; specifically, only single-use plastic items represent 50%, and those related to fishing 27% of the total. Land pollution and soil contamination by plastic objects, from the largest to microplastics, can be significant as plastics can penetrate the marine environment (1https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904&from=EN). The exponential growth of plastic dispersed in the environment, is threatening our planet's survival, producing problems such as poisoning and damage to marine and terrestrial life, for humans and animals (https://www.earthday.org/campaigns/plastics/plastics-campaign). The EU Single-Use Plastics Directive (SUP) was approved in May 2019 to address these challenges. The directive introduces new restrictions on specific single-use plastic products; by 2021, the use of single-use plastics will have to be banned entirely and replaced with other non-polluting material. Under the new regulations, specific measures are introduced to reduce the use of the most frequently traceable products in marine environments. Member States have until 3 July 2021 to implement the directive into national legislation and to address the economic and social issues that the new legislation will produce. However, many issues relating to the production, consumption and disposal of plastics, both from fossil and biological sources, remain unresolved. There has been a rapid increase in compostable alternatives being promoted to replace disposable plastic items such as straws, glasses, plates and cutlery. It should be emphasised that totally or partially bio-based plastic products are not the only alternative to disposable products; the main problems are related to the end-of-life treatment of these materials, since industrial composters are often not equipped or willing to accept plastic materials other than flexible packaging such as shopper, bio-based or not, since the degradation time (established in the European EN 13432) is longer than their current

standards. Furthermore, there is currently no international standard specifying the conditions for the domestic composting of biodegradable plastics.

Objectives: This webinar aims to facilitate the discussion and collaboration among the quadruple helix stakeholders (research, industry, policymakers and civil society) to share and discuss the different opportunities that sustainable and innovative solutions that involve the use of plastics open. We also aim to discuss the path for the transition towards production, consumption and a virtuous cycle of recovery, combined with a more sustainable lifestyle. The webinar will also provide an opportunity for evidence-based knowledge exchange between the various operating institutions working at the forefront of the sector, researchers, entrepreneurs, and experts. with respect to implementation strategies and practices.

Discussion topics: To address the challenges mentioned above, the webinar, co-organised by the BIOVOICES and BIO-PLASTICS EUROPE projects, aims to stimulate the debate on four possible paths aimed at addressing fundamental issues such as: • prevention / minimisation of plastics (fossil or bio-based) • increase the recycling / reuse of fossil plastics • composting of bio-based plastic • recycle / reuse bio-based plastics • activate educational paths on the previous topics

Agenda

Agenda		
Modera: Patrizia Grifoni, CNR		
Chiara Pocaterra: APRE	*Spunti di discussione: il progetto BIOVOICES*	14:30
Mario Malinconico: Consiglio Nazionale delle Ricerche	*Spunti di discussione: il progetto Bio-plastic Europe*	14:40
Susanna Albertini, FVA	*Guidare la transizione verso stili di vita più sostenibili: il progetto Transition2BIO*	14:50
Lucia Gardossi, Univ. di Trieste, Cluster SPRING	*Ecodesign e sintesi di nuove bioplastiche per una circolarità efficace*	15:00
Coffee break		15:10
Modera: Lorena Affatato, CNR		
Piergiuseppe Morone, Ministero dell'ambiente	*La transizione verso una Bioeconomia circolare: il ruolo dei consumatori*	15:20
Loredana Incarnato, Univ. di Salerno	*Plastiche e packaging: il ruolo della formazione*	15:30
Matteo Sabini, Progetto Biobridges, APRE	*La plastica vista da consumatori, Brands e industrie Bio-based: alcuni spunti dal progetto Biobridges*	15:40
Fantina Madricardo, CNR	*Marine Litter: da problema a risorsa*	15:50
Marco Ricci, Consorzio Italiano Compostatori	*Il recupero del bio-rifiuto in impianti di compostaggio e di digestione anaerobica in Italia*	16:00
Francesca Ronchi, ISPRA	*Il comparto della pesca e le problematiche della transizione verso l'economia circolare*	16:10
Katya Carbone, CREA	*Biomateriali da scarti agroalimentari: casi studio, criticità e prospettive future*	16:20
Guido Bonati, CREA	*Terreni marginali e plastiche in agricoltura: due aspetti di sostenibilità ambientale*	16:30
Giovanni Sannia, Biocirce	*L'educazione pilastro fondamentale della strategia Europea per la Bioeconomia*	16:40
Emilio Bianco, Legambiente	*Imballaggi multi-materiale carta-bioplastica: il progetto Biocompack e la creazione di un network europeo*	16:50
Carmine Pagnozzi, Assobioplastiche	*Discussione e Conclusioni*	17:00

2. <u>Outcomes Per Challenge</u>- Knowledge & Insights expressed/gathered at the MML

Please use a separate box for each of the Challenges addressed: identify the 'Phases' of Development that were considered and the sectors represented. Record the viewpoints expressed by each of the four stakeholder groups represented and any consensus points.

B2 – PROMOTE CHANGES IN PURCHASE HABITS	Activate educational paths on the previous topics
Extracted from the speeches during the webinars	- Be **aware** of existing bio-based products and producers - Create a *core competency* - Are crucial new professional profiles with technical and economic expertise (re-design of biotechnological processes, preservation and use of renewable natural resources, zero waste solutions) which will be able to work within the future "bio-based" plastics - Universities should be seen holistically, including their three missions: • teaching and education; • research and creation of knowledge; • regional and social development. - Become an active player supporting the **cultural shift** towards sustainability - Identify the **skills** needed to train the future workforce - Coordinating high level educational paths involving universities and industries from local to the European level; an example is **PACKALLIANCE** www.packall.eu - Defining high educational paths with masters at local level such as: **1) Courses organised by Univ. of Salerno** ¬**MATESPACK** https://corsi.unisa.it/matespack, ¬Ph.D. of the Univ. of Salerno in "**Innovative Engineering Technologies for Industrial Sustainability – IETIS,** https://corsi.unisa.it/ietis **2) Courses organised by the Univ. of Naples Federico II**: ¬Biomolecular and Industrial Biotechnology (three years BS course) ¬Molecular and Industrial Biotechnology (two years MS course) ¬Industrial Biotechnology (three PhD years course) ¬BIOCIRCE – Bioeconomy in the Circular Economy (one year Master course in collaboration with: University of Milano Bicocca, Torino, Bologna and with Intesa San paolo, Novamont, GFBiochemicals and Lodi Science Park).

C3- REALISE STANDARDISATION	• increase the recycling/reuse of fossil plastics
Extracted from the speeches during the webinars	- Need for clarity when we speak about Bioeconomy and Circular Economy. Bioeconomy cannot be reduced to a part of the circular economy only – the two concepts are interlinked. ¬ Bioeconomy envisages a new growth engine for the next economy, thus opening innovative uses of biological resources for materials, energy, products and services in big key sectors of the European economy ¬ Circular economy interlinks with bioeconomy but may not fully capture this ambition. - Need to have more informative labels - Certified biobased plastics - Standards and certifications make evident the value of bioplastics, providing transparent information about the environmental advantages. - CEN (European Committee for Standardisation) developed some standards: ¬ Bio-based products vocabulary (EN 16575) - 2014 ¬ Bio-based carbon content in bio-based products and its determination (EN 16640:2017; EN 16785-1:2015; EN 16785-2: 2015) ¬ Requirements for Business to Business communication (EN 16848: 2017), ¬ Requirements for Business-to-Consumer communication and claims (EN 16935: 2017) ¬ Determination of biobased carbon content in plastics (ISO 16620-2:2015)
D2 – PROMOTE CHANGES IN PURCHASE HABITS	• increase the recycling / reuse of fossil plastics • composting of bio-based plastic • recycle / reuse bio-based plastics
Extracted from the speeches during the webinars	- Need to increase the common understanding of the terminology used - Educating consumers providing general knowledge on sustainability, and in particular on possible sustainable choices. - Make evident and discuss the potential positive economic and social impacts generated by the bioeconomy - Stimulating discussion, exchange of good practices and knowledge to face the challenges and take opportunities related to the **bioeconomy** - Identifying high impact strategies to promote the **circular bioeconomy** in Europe - Mobilising the different actors. For this purpose, it has been interesting the experience from some projects that organised a lot of Mobilisation and Mutual Learning workshops. These activities should continue with networks activities - Improve the collaboration with initiatives such as the **European Bioeconomy Network** - Facilitating networking and cooperation between the different actors

	- **Closing the technological gap** by promoting networking between Academy and Industry (participating in Technological Clusters) ¬ 21 Italian Universities are members of the National Technology Agrifood Cluster CL.A.N., a multi-stakeholder network of the key national players of the entire agrifood chain - a partnership of companies, research centres and institutions set up to promote sustainable economic growth, based on research and innovation in the industry and acting as a partner for Italian and European Institutions. ¬ 23 Italian Universities are members of the National Technology Cluster of "Green Chemistry" SPRING – Sustainable Processes and Resources for Innovation and National Growth, which has the objective of triggering the development of biobased industries in Italy, through a holistic approach to innovation, aimed at revitalising Italian chemistry in the name of environmental, social and economic sustainability.
D3 – INCREASE SUSTAINABLE FEEDSTOCK	• prevention/minimisation of plastics (fossil or bio-based) • increase the recycling/reuse of fossil plastics
Extracted from the speeches during the webinars	- Improve **developing** bioplastics - Develop **innovative materials** to foster and encourage deployment of innovative Bio-based and biodegradable materials - **Reuse** of paper's fibers - **Breaking down** and **reuse** of complex polymers - Define new **business models** incorporating circularity and sustainability to maximise materials' value along the entire value chain. - Ensure with safety protocols a safe use and end-of-life management on innovative bio-based plastics. - Supporting the birth of spin-off, start-up and Joint Lab - Introducing incentives for industries to adopt new solutions.

E2-BOOST LOCAL DEPLOYMENT	• composting of bio-based plastic • recycle/reuse bio-based plastics • prevention/minimisation of plastics (fossil or bio-based)
Extracted from the speeches during the webinars	- Aerobic digestion and anaerobic - incentives at the municipal level to improve the quality of the waste collection - Supporting economic actors in the implementation of new projects market-oriented - Develop corporate R&D ecosystems - Develop sectoral transition toward circular economy (e.g., fisheries sector) - A circular flow should be implemented in the use of tools such as POLYPROPYLENE boxes in the fisheries sector. - One crucial question is: What circularity for bio-based plastics durable and engineering applications? - Chemistry and biotechnology are crucial for plastics bio-based for engineering applications - Eco design and circularity: need for a systemic and integrated approach (including machine learning). - Improving the legislation on food contact material. - Need to improve norms and laws (e.g., laws about the management of fished marine litter. Some important laws and regulations are: ¬Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on port reception facilities for the delivery of waste from ships, ¬The law "Salva Mare" (Save the sea) ¬The new version of the article 184 ter of D.lgs n.152/2006, that is running with the L. 128/2019. ¬ Environmental labels and declarations (EN ISO 14020) ¬ EN 13432 "Requirements for packaging recoverable through composting and biodegradation" (2019) - Other laws and strategies: ¬ A European Strategy for Plastics in a Circular Economy

4. BIOVOICES partner's own perspectives & comments

Additional to those recorded above. Free text area – please include your additional comments

On the meeting overall? E.g. willingness of participants to contribute

- ✓ This workshop has been organised as a webinar. The invited speaker established an atmosphere of dialogue and cooperation also for continuing the discussion and sharing experiences. They expressed their willingness to have opportunities to share their experiences

On the challenges discussed? E.g. points that 'chime' with you/your organisation

- ✓ New interdisciplinary professional profiles enabling sharing a responsible process for the development of Bioeconomy and the implementation of a sustainable process for producing, using and managing plastics and bioplastics.

Any consensus points? E.g. a point that BIOVOICES can drive forward such as common vocabulary

- Most of the consensus points have been around the need for education programs supporting sustainability's cultural shift. It should include institutional education and lifelong learning activities, involving different actors.

Any lessons learnt for shaping/managing future MMLs? E.g. invite more people in expectation of 'no shows'

-

What worked:

- ✓ Invite experts to share their experiences and good practices.

What can be improved/Recommendations:

- ✓ Engaging more and more Policy makers on the discussed topics, as their decisions and actions can strongly accelerate any other stakeholders' virtuous behaviour.

5. Qualitative Interviews (QIs)- to improve quality of outcome data submitted

N/A

6.Evaluation of the Meeting – feedback from participants

The speakers considered an important showcase for their work and their activities and some of them exchanged their contact info for discussing and sharing their experiences.

7. Impact Report - what are the top-level points to be taken from your MML to be considered for inclusion in the BIOVOICES good practice guides for driving the bio-based sector forward?

The good practice guides (policy briefs) (D6.3) will be organised according to each of the four stakeholder groups of the quadruple helix – note that the points may be the same/similar for each group. Please endeavor to contribute at least three points from your experience of this MML.

- Definng educational pathsby promoting networking between Academy Industry (participating to Technological Clusters) and also policymakers and civil society to overcome the knowledge and technological GAP on bioplastics.

- Improving norms and laws is crucial for defining and implementing sectoral and local action plans. The fishery clearly represents an example.

- Improving collective awareness of the different actors implies the need of Bio-based products vocabulary for improving a mutual understanding of pros and cons in the adoption of the different kinds of plastics, according to the specific uses.

- Using standards, clear products' and environmental labels are crucial for facilitating all to be oriented and to improve trust for bioplastics and for a correct use of plastics.

8. Publishable overview of results

The presentations of the speaker invited in the webinar (see the Agenda (before), the pictures and the video of the webinar are available at the following link: https://www.biovoices-platform.eu/registeredarea/mmls/viewMml/9850