

## Innovative bio-based products: Investment, Environmental Impacts and Future Perspectives

Results of a tender study

06 June 2018 | Crowne Plaza Brussels - Le Palace | Rue Gineste 3, 1210, Brussels, Belgium

#### **Programme**

	3		
Time	Programme		
09:00	REGISTRATION AND COFFEE		
09:30	Welcome, high-level statements		
	John Bell, Director of Bioeconomy, DG Research & Innovation, European Commission		
09:40	Opening Session		
	Moderator: Peter Woodward, Quest Associates		
09:50	The circular economy and the bioeconomy - Partners in sustainability		
	Mieke De Schoenmakere, Project manager, Green Economy, European Environment Agency		
10:05	Life Cycle Assessment (LCA) of seven innovative bio-based products		
	Li Shen, Assistant Professor, Energy & Resources, Utrecht University		
10:20	Some key methodological aspects related to the LCA case studies		
	Rana Pant, Team Leader, European Commission, Joint Research Centre, Directorate		
	Sustainable Resources - Bio-Economy Unit (D1)		
10:30	Mini-panel with:		
	Li Shen, Assistant Professor, Energy & Resources, Utrecht University		
	Rana Pant, Team Leader, European Commission, Joint Research Centre, Directorate		
	Sustainable Resources - Bio-Economy Unit (D1)		
	Rob van der Meij, Investment Manager, Capricorn Venture Partners		
	Udo Felten, Manager Product Related Global Environmental Sustainability and Affairs, SIG		
	Gerfried Jungmeier, Expert on Life Cycle (Sustainability) Assessment and Biorefineries,		
10.50	Joanneum Research Forschungsgesellschaft		
10:50	COFFEE BREAK		
11:20	Success stories of bio-based products in Europe, with insights on the bio-based sector		
	and the investment potential it offers		
44.25	Malene Sand Jespersen, Market Director, COWI		
11:35	The Winding Road to Success for Bio-based Products: Journey of the ins and outs for		
	CelluComp and its owners  Christian Komp Criffin Executive Director and CEO ColluComp		
11.45	Christian Kemp-Griffin, Executive Director and CEO, CelluComp		
11:45	Mini-panel with:		
	Malene Sand Jespersen, Market Director, COWI  Christian Komp Griffin, Executive Director and CEO of ColluComp		
	Christian Kemp-Griffin, Executive Director and CEO of CelluComp  Rob van der Meij, Investment Manager, Capricorn Venture Partners		
	<b>Udo Felten</b> , Manager Product Related Global Environmental Sustainability and Affairs, SIG		
	Gerfried Jungmeier, Expert on Life Cycle (Sustainability) Assessment and Biorefineries,		
	Germed Julignicier, Expert on the Cycle (Justalliability) Assessment and biorenneries,		

Joanneum Research Forschungsgesellschaft



	_			
Time	Programme			
12:05	Top emerging bio-based products, their properties and industrial applications			
	Paola Fabbri, Associate Professo	<u> </u>		
12:20	The Avantium approach for bio-	based chemicals, from ideatio	n towards flagships	
	Ed de Jong, VP Development at A	Avantium		
12:30	Mini-panel with:			
	Paola Fabbri, Associate Professo	r, University of Bologna		
	Ed de Jong, VP Development at A	Avantium		
	Rob van der Meij, Investment Manager, Capricorn Venture Partners			
	Udo Felten, Manager Product Related Global Environmental Sustainability and Affairs, SIG			
	Gerfried Jungmeier, Expert on Life Cycle (Sustainability) Assessment and Biorefineries,			
	Joanneum Research Forschungsge	esellschaft		
12:50	BUFFET LUNCH			
14:00	Session I: Environmental	Session II: Successes in	Session III: Prospecting	
	impact of innovative bio-based	mobilising finance for the	the Bioeconomy: What	
	products	development and	products are most	
	Moderator: Alex Williamson,	commercialisation of bio-	promising?	
	Bio Based World News	based products	Moderator: Paola Fabbri,	
		Moderator: Luke Upton, Bio	University of Bologna	
	In this session, the focus will be	Based World News		
	on the environmental		This session will present	
	performance of bio-based	In this session we will look at	and discuss the top 20	
	products through environmental	some of the different ways	innovative bio-based	
	Life Cycle Assessments (LCA).	in which market can be	products that have been	
	The novelty aspects of the LCA	reached, private finance can	identified as having the	
	methodology applied in the	be mobilized or profitability	greatest potential for	
	project, e.g. land-use change	can be achieved and hear	deployment in the next 5-	
	impacts, end of life modelling	from those companies and	10 years, with focus on the most relevant value	
	and comparison with fossil reference products will be	organisations with direct experience in these crucial	chains from key biomass	
	discussed.	dimensions of success.	intermediates.	
15:30	COFFEE BREAK	differsions of success.	intermediates.	
16:00				
16:00	Closing Session			
	Report from Parallel Sessions and Panel Discussion with:  Pob van der Meij Investment Manager, Capricorn Venture Partners			
	Rob van der Meij, Investment Manager, Capricorn Venture Partners			
	Udo Felten, Manager Product Related Global Environmental Sustainability and Affairs, SIG			
	<b>Gerfried Jungmeier</b> , Expert on Life Cycle (Sustainability) Assessment and Biorefineries, Joanneum Research Forschungsgesellschaft			
	Malene Sand Jespersen, Market Director, COWI			
16:50	Closing remarks	Director, COTT		
10.50	Ciosilia I ciliai va			

Gaia Fantechi, Head of Unit, DG Research & Innovation, F2 Bio-based Products and

Processing



#### Parallel Session I Environmental impact of innovative bio-based products

Moderator: Alex Williamson, Bio Based World News (BBWN)

Time	Programme
14:00 - 14:15	Introduction to the main modelling approach, impact categories and initial cradle-to-gate results illustrated for the case study of single-use drinking cups for cold drinks  Christian Moretti, Utrecht University
14:15 - 14:30	Determination of the of the fossil reference product and comparison of impacts Li Shen, Utrecht University
14:30 - 14:45	Modelling of direct and indirect land-use impacts and other non-PEF impact categories  Lorie Hamelin, Hamelinlab Consulting / COWI
14:45 - 15:00	End-of-Life scenarios for bio-based an fossil products - advanced modelling and effect on impact categories Linda Høibye, COWI
15:00 - 15:25	Panel discussion with speakers
15:25 - 15:30	Wrap up and closing

# Parallel Session II Successes in mobilising finance for the development and commercialisation of bio-based products

Moderator: Luke Upton, Bio Based World News (BBWN)

Time	Programme	
14:00 - 14:15	Presentation of study: key observations regarding risks and drivers on a) financing,	
	b) commercialisation	
	Lucas Bossard, COWI	
14:15 - 14:25	Presenting bio-based investment	
	Suzy Renckens, Bio-Based Industries Consortium	
14:25 - 14:40	25 - 14:40 Deciding on investments - the process	
	Rob van der Meij, Investment Manager, Capricorn Venture Partners	
14:40 - 15:15	Panel discussion with:	
	<ul> <li>Tuomas Mustonen, Paptic® bags</li> </ul>	
	<ul> <li>Pieter Imhof, BioBTX B.V.</li> </ul>	
	<ul> <li>Giulia Gregori, Novamont S.p.A.</li> </ul>	
	<ul> <li>Tuomas Hänninen, Lumir Oy</li> </ul>	
	<ul> <li>Jeremiah Dutton, Trifilon AB</li> </ul>	
	<ul> <li>Lucas Bossard, COWI</li> </ul>	
	<ul> <li>Suzy Renckens, Bio-Based Industries Consortium</li> </ul>	
15.15 - 15.30	OGA	



### Parallel Session III Prospecting the Bioeconomy: What products are most promising?

Moderator: Paola Fabbri, University of Bologna

Time Programme  14:00 - 14:20		moderator. I dota I appli, offiversity of botogra
Panel discussion with:  Paola Fabbri, University of Bologna Piret Kukk Fischer, Fraunhofer Institute for Systems and Innovation Research ISI Kelly Servaes, VITO  14:20 - 14:30 Q&A  14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with: Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with: Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU	Time	Programme
Paola Fabbri, University of Bologna Piret Kukk Fischer, Fraunhofer Institute for Systems and Innovation Research ISI Kelly Servaes, VITO  14:20 - 14:30 Q&A  14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with: Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with: Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU	14:00 - 14:20	Is Lignin the new oil?
Piret Kukk Fischer, Fraunhofer Institute for Systems and Innovation Research ISI  Kelly Servaes, VITO  14:20 - 14:30 Q&A  14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with:  Paola Fabbri, University of Bologna Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		Panel discussion with:
ISI  Kelly Servaes, VITO  14:20 - 14:30 Q&A  14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with:  Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		
<ul> <li>Kelly Servaes, VITO</li> <li>14:20 - 14:30 Q&amp;A</li> <li>14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with:         <ul> <li>Paola Fabbri, University of Bologna</li> <li>Martijn Vis, BTG Biomass Technology Group</li> <li>Martin Junginger, Utrecth University</li> </ul> </li> <li>14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects         <ul> <li>Paloma Mallorquin, BBI JU</li> </ul> </li> <li>15:00 - 15:20 Let's look into the future of bio-based products: what's up?         <ul> <li>Open discussion with:</li> <li>Davide Viaggi, University of Bologna</li> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul> </li> </ul>		
14:20 - 14:30 Q&A  14:30 - 14:50 Urban wastes: mainly a need of reduction or a great value? panel discussion with:  Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with: Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		· · ·
14:30 - 14:50  Urban wastes: mainly a need of reduction or a great value? panel discussion with:  Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00  Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20  Let's look into the future of bio-based products: what's up? Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU	14.20 14.20	<u> </u>
panel discussion with:  Paola Fabbri, University of Bologna Martijn Vis, BTG Biomass Technology Group Martin Junginger, Utrecth University  14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with: Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		· ·
<ul> <li>Paola Fabbri, University of Bologna</li> <li>Martijn Vis, BTG Biomass Technology Group</li> <li>Martin Junginger, Utrecth University</li> <li>14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects         Paloma Mallorquin, BBI JU</li> <li>15:00 - 15:20 Let's look into the future of bio-based products: what's up?         Open discussion with:         <ul> <li>Davide Viaggi, University of Bologna</li> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul> </li> </ul>	14:30 - 14:50	Urban wastes: mainly a need of reduction or a great value?
<ul> <li>Martijn Vis, BTG Biomass Technology Group</li> <li>Martin Junginger, Utrecth University</li> <li>14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects         Paloma Mallorquin, BBI JU</li> <li>15:00 - 15:20 Let's look into the future of bio-based products: what's up?         Open discussion with:         <ul> <li>Davide Viaggi, University of Bologna</li> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul> </li> </ul>		panel discussion with:
<ul> <li>Martin Junginger, Utrecth University</li> <li>14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects         Paloma Mallorquin, BBI JU</li> <li>15:00 - 15:20 Let's look into the future of bio-based products: what's up?         Open discussion with:         <ul> <li>Davide Viaggi, University of Bologna</li> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul> </li> </ul>		, , , , , , , , , , , , , , , , , , , ,
14:50 - 15:00 Emerging innovative bio-based products from BBI JU projects Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up? Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		
Paloma Mallorquin, BBI JU  15:00 - 15:20 Let's look into the future of bio-based products: what's up?  Open discussion with:  Davide Viaggi, University of Bologna  Fabio Fava, University of Bologna  Paloma Mallorquin, BBI JU		Martin Junginger, Utrecth University
15:00 - 15:20 Let's look into the future of bio-based products: what's up?  Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU	14:50 - 15:00	Emerging innovative bio-based products from BBI JU projects
Open discussion with:  Davide Viaggi, University of Bologna Fabio Fava, University of Bologna Paloma Mallorquin, BBI JU		Paloma Mallorquin, BBI JU
<ul> <li>Davide Viaggi, University of Bologna</li> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul>	15:00 - 15:20	Let's look into the future of bio-based products: what's up?
<ul> <li>Fabio Fava, University of Bologna</li> <li>Paloma Mallorquin, BBI JU</li> </ul>		Open discussion with:
Paloma Mallorquin, BBI JU		<ul> <li>Davide Viaggi, University of Bologna</li> </ul>
		<ul> <li>Fabio Fava, University of Bologna</li> </ul>
15:20-15:30 Q&A		<ul> <li>Paloma Mallorquin, BBI JU</li> </ul>
	15:20-15:30	Q&A