



# **Lead Market: Bio-based products**

## **A demand side policy agenda**

European Commission

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- 1. Definition “Lead Markets”
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# Gliederung

Einleitung: Politischer Hintergrund; EU-Initiative und Zielsetzung

1. Definition „Lead Markets“
2. Definition „Biobasierte Produkte“ im Zusammenhang mit dem Bioraffineriekonzept
3. Bioraffineriekonzept als integraler Ansatz
4. Vorschläge zur Stärkung der Wettbewerbsfähigkeit biobasierter Produkte; institutionell
  - 4.1 Konsultationen innerhalb der „European Technology Platform“: SusChem, EuropaBio, ERRMA
  - 4.2 Fragebogen aufgrund der ETP-Konsultation: Technologiepotential und Marktpotential für biobasierte Produkte

Unsere Antworten:

5. Vorschläge zu politischen Maßnahmen der EU im Einzelnen:
  - 5.1 Standards und Labelling im Rahmen von Selbstverpflichtungserklärungen der Industrie
  - 5.2 Internationale Standards für Biokraftstoffe
  - 5.3 Öffentliches Auftragswesen
  - 5.4 EU-Gesetzgebung
  - 5.5 Kommunikation
  - 5.6 Internationale Zusammenarbeit
6. Schlussfolgerungen



# What do we want to achieve?

**We want the EU to become a lead market for new technologies, products & services that will create employment & growth in the EU & contribute to tackle some of our more important challenges (e.g. health, energy, sustainable production).**

## Setting up Commission Interservice Group on Lead Markets & Task Forces for pilot areas

- **e-Health;**
- **Construction;**
- **Textiles;**
- **Bio-based products;**
- **Recycling.**

# Bio-based products

- Interservice Task Force (ENTR, ENV, AGRI, TREN, RTD, MARKT, COMP) set-up in March 2007;
- Produced first outline of policy recommendations to support European lead market for bio-based products (taken account of input from ETP lead market consultation and inputs from services).



European Commission

Enterprise Directorate General

**Lead Market Discussion –  
Contribution by the EU-Working Group\*  
“Renewable Raw Materials” coordinated  
by the European Renewable Resources  
& Materials Association (ERRMA)**

**Edited by Dr. Achim Boenke (EC, DG Enterprise & Industry,  
Unit G.2 –Chemicals), Brussels, 14 May 2007**

# Definition of Scope of Bio-Based Products

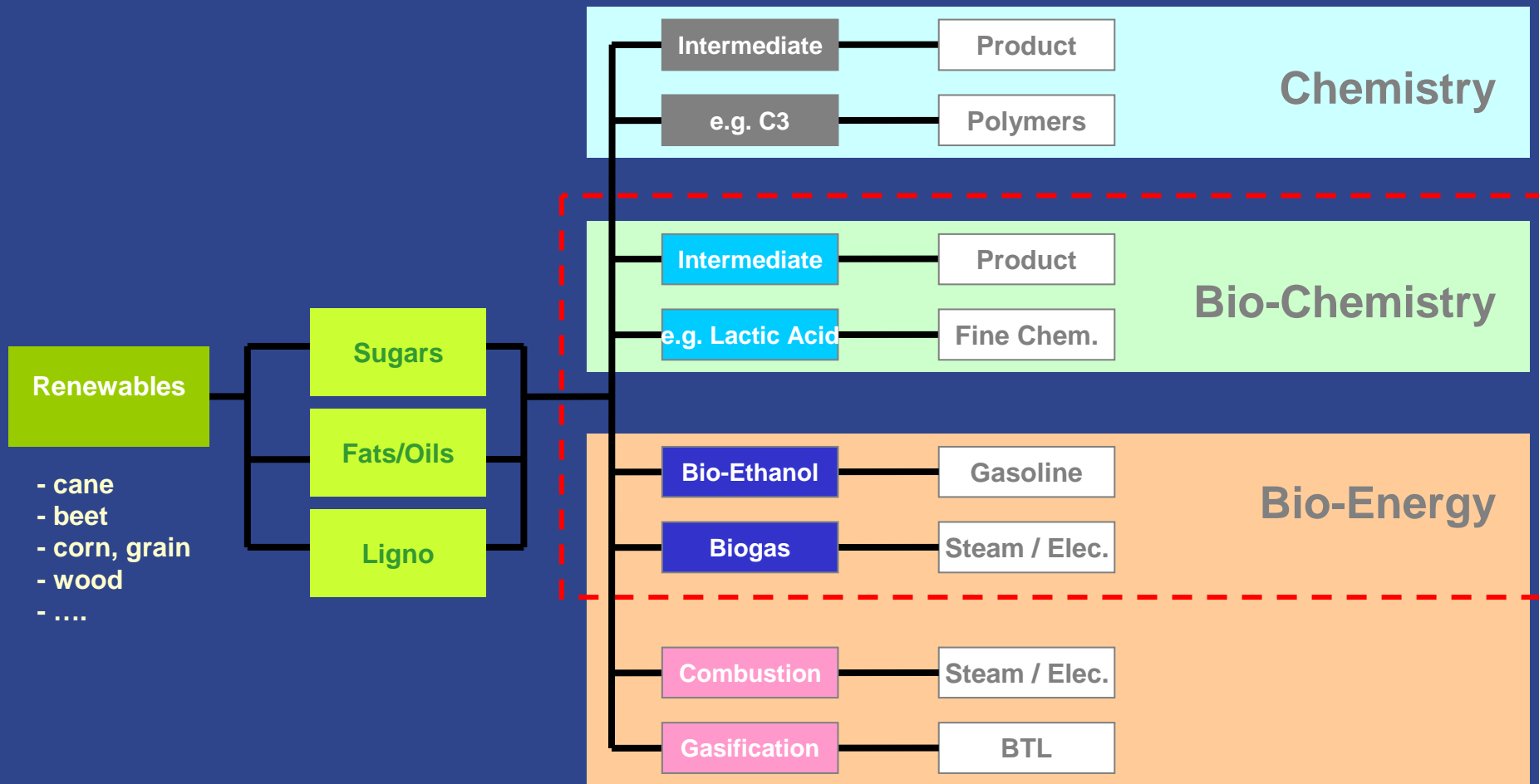
Bio-based products<sup>[1]</sup> refer to **non-food products (energy or industrial raw materials) derived from biomass (plants, crops, trees and biological waste from households, food, feed & animal production, etc.)**. Bio-based products may range from **high-value added (usually low volume) fine chemicals such as pharmaceuticals, cosmetics, food & feed additives, etc.**, to usually high volume materials such as **biopolymers, biofuels, etc.** It may include existing bio-based products, such as **paper and pulp, detergents, lubricants, construction materials, starch, sugar, or new ones, such as vaccines made from plants or second generation bio-fuels.**

<sup>[1]</sup>"Bio" refers to "Renewable biological resources" and **not** "biotechnology". While advances in life sciences and biotechnology are a major driver for optimising biomass production and for bio-product innovations, there are other technology drivers (chemistry, nanotechnologies, etc).



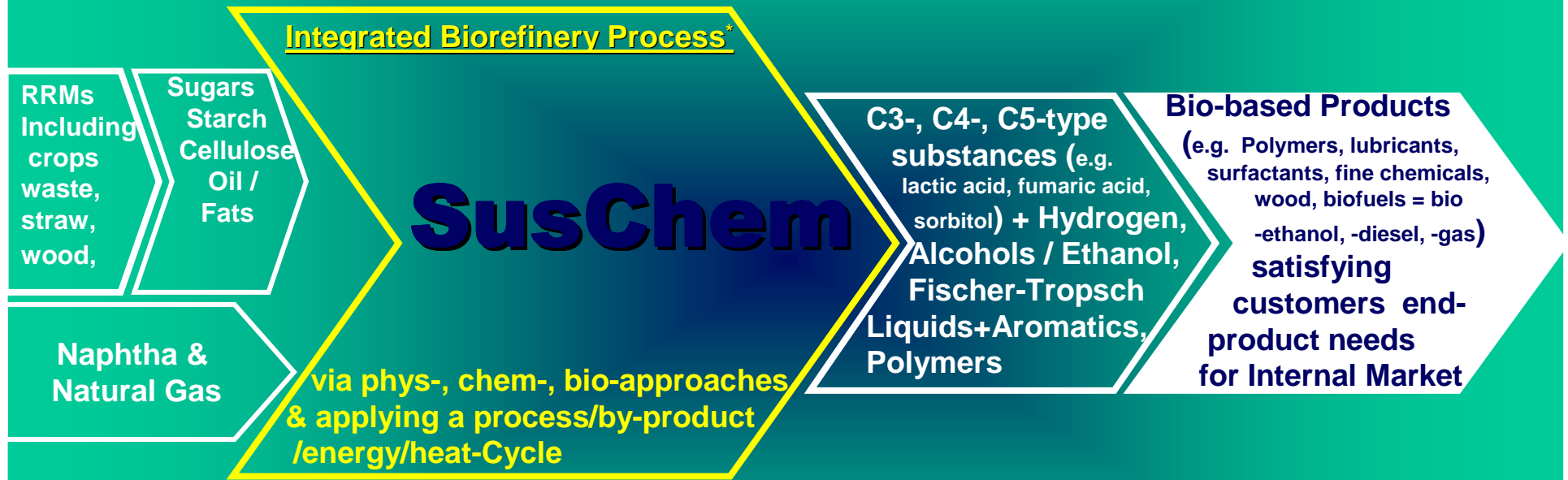
# Bio-Based Products Including Biofuels Towards A Lead Market

## Chemical Products & Bio-Energy have the same Raw Material Base



# Bio-Based Products Including Biofuels Towards A Lead Market

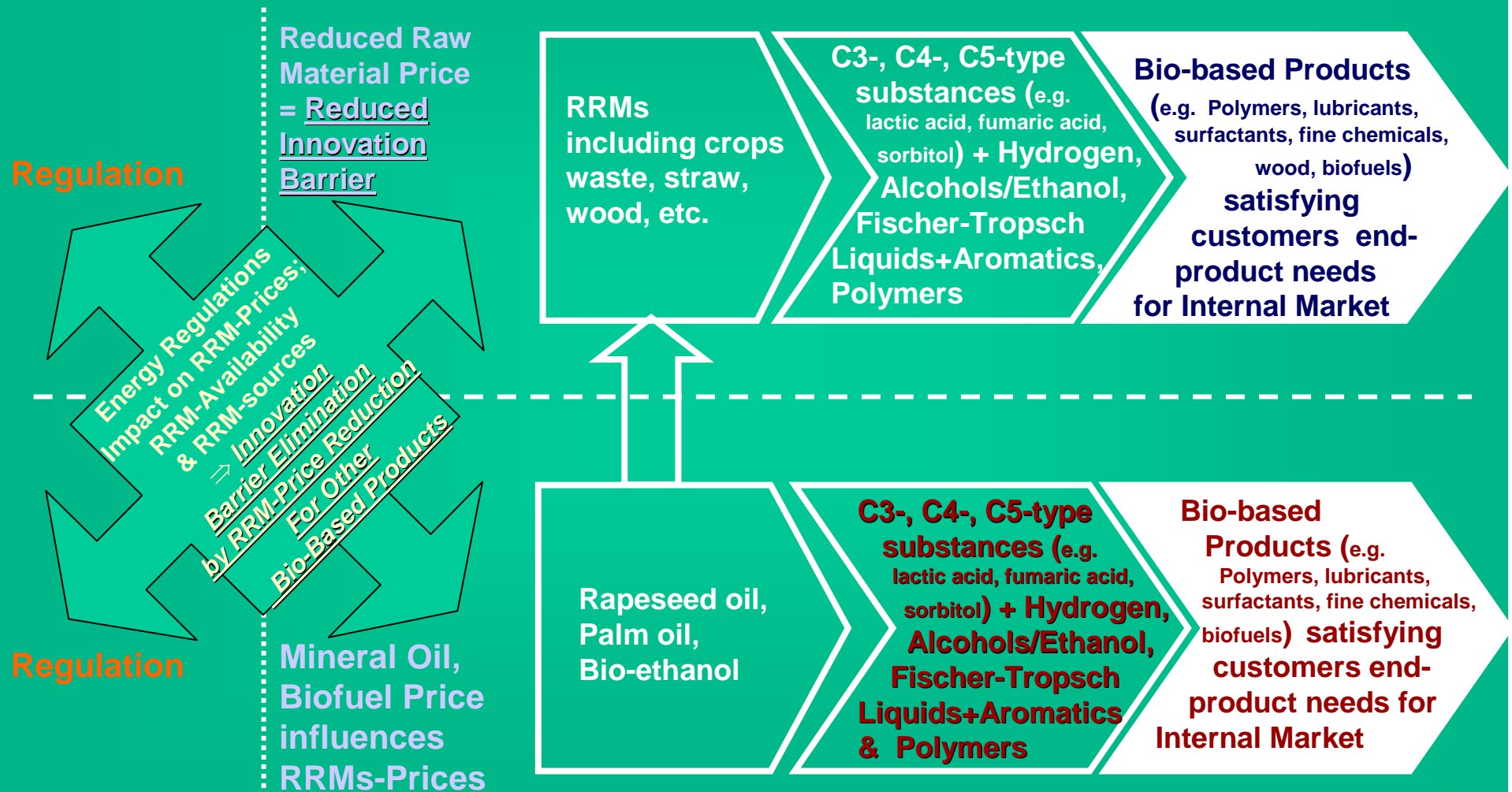
Overall, Comprehensive & Strategic Actions Along the Product Chain for an Internal Bio-Based Product Lead Market



\* See SusChem's Implementation Action Plan on an industrial collaborative research projects linked to the integration of the biorefinery concept and products into existing chemical production chains.

# European Policy Linked to Bio-Based Products Including Biofuels Towards A Lead Market

Overall, Comprehensive & Strategic Actions Along the Product Chain for an  
Internal Bio-Based Product Lead Market



# ETP consultation

- A questionnaire was circulated to all ETPs in July 2006;
- Questions included:
  - Potential of technologies to develop world class markets;
  - Need for improved business conditions:
    - Regulations;
    - Standards;
    - Public Procurement;
    - Intellectual Property;
    - Risk capital.

# Policy measures: STANDARDS; LABELS

- Industry self-commitment concerning biodegradable and compostable polymers exist since 2004.
- Standards for other product areas possible: i.e. for lubricants in forest and agricultural machines to boost use of biodegradable lubricants
- Need for internationally harmonised product standards for bio-based products that satisfy demand and needs of consumers and services

## Possible actions:

- Development of sustainability standards and labels (“bio-label”) based on harmonised and in-depth life-cycle assessment, building on work of “European Platform on Life Cycle Assessment”
- International harmonisation of standards, including for biomass raw material quality to ensure sustainable development in third countries
- Bio-based product standardisation task force integrating standardisation bodies and concerned industries, distributors and consumers
- “Bio-based products” as new product group within the Community Eco-label scheme (being reviewed) or a separate “bio-based product label” (like USDA Certified Biobased Product)

# Policy measures: PUBLIC PROCUREMENT

- Green public procurement (GPP) policies can boost markets for “sustainable” bio-based products
- GPP policies need to be based on LCA of products inc. production process and waste management
- Existing policies include
  - “Bioproducts Guidebook for Greener Procurement” of the French Agency for Environment and Energy management ADEME
  - The US “Federal Biobased Products Preferred Procurement Programme” (FB4P)

## Possible action:

- Develop EU wide GPP guidelines
- Set EU wide (voluntary) targets for the GPP of (specific) bio-based products

# Policy measures:

## LEGISLATION & SUPPLY MARKET INTERVENTION

- Bio-based product markets can be affected by a number of policy measures, in particular in the areas of agriculture, environmental, health, transport, energy, and industrial (sustainable development) policy
- Strategic approach towards an internal market for bio-based products
- need to be based on coherent, comprehensive and coordinated legislative short-to long-term actions, further streamlining and better targeting the existing ones
- Coordinated approach will need to cover full product value-chain, from renewable raw material to final bio-based product

Possible action could cover the areas of:

- Integrated pollution prevention and control (IPPC)
- Packaging and landfill restrictions, i.e. for packaging waste
- Promote biodegradable packaging
- All food service ware has to be either compostable or recyclable
- Supply market interventions such as CAP aid schemes, specific non-food crop schemes or those regarding availability of forest resources



## **Policy measures: COMMUNICATION**

- **Information to consumers about characteristics of bio-based products**
- **Public recognition of those who use bio-based products**
- **Obligation of public sector to announce when they are using bio-based products**





**Policy measures:  
R&D and INTERNATIONAL COOPERATION**

**International Cooperation**

**EU-US Summit 2007**

**Lighthouse Priority Project:**

**“Develop a science-based work plan for  
EU-US collaboration on innovative and  
eco-efficient bio-based products”**

# Conclusion

Consequently, an **overall, coherent & comprehensive action** is needed consisting of a **strategic approach towards an internal lead market for bio-based products integrating all existing activities that start from the renewable/regrowable raw materials (RRMs) & biofuels up to the final bio-based end-product by satisfying the required product capabilities for customers.** The strong interdependence between energy legislations & prices for RRMs must be recognised. This overall & comprehensive action needs to be **characterised by an intelligent & targeted mix of market forces & political frameworks building upon industry's own voluntary schemes, international standards, labelling including certification.** This needs to be accompanied by coherent regulations [\[Annex 1 & 2\]](#). Thus motivating industry & reducing innovation barriers, amongst others, an increase of RRM prices, reduced availability & use of **non-sustainable environmental activities in other countries.** Only, this will create sustainable growth & jobs.

### [Annex 1] The biopolymer case:

The production & use of biodegradable and compostable polymer products based on RRM can contribute to save fossil resources & reduce Green House Gas emissions. This product group is an innovative area for agriculture & industry & in the same time a concrete example of economic & environmental positive impact for soil & water. **The condition for bringing biodegradable & compostable polymer products into the EU- market is a clear understanding of biodegradability and compostability for the consumer. In order to give clear commitment of industry to follow EU- standards & neutral certification scheme, ERRMA had published an Industry Voluntary Agreement in form of self commitment which was officially recognized by DG Enterprise & Industry. To be successful a coherent accompanying adaptation by the existing EU-packaging Directive is urgently necessary. Hence, ERRMA therefore requests that biodegradability & compostability is to be proved mandatory by EN 13432 & based on the existing certification scheme.** Otherwise a dilution of these qualifying characteristics will occur. ERRMA requests that the commitment for the certification scheme according EN 13432 has to be the unique qualifying criterion for the access of biodegradable and compostable polymer products as it is in force in some EU-Member States.

## [Annex 2] The bio-lubricant case:

The production & use of bio-lubricants (based on  $\geq 50\%$  RRMs) can contribute to save fossil resources & reduce Green House Gas emissions, both in production & applications. This product group will form an innovative area for agriculture & industry & at the same time forms a concrete example for a positive economic & environmental impact in the areas soil & water because of their biodegradability. From a technical point of view modern bio-lubricants can reach the high performance levels needed in ambitious applications.

One condition for bringing more biodegradable lubricants into the EU-market is a clear understanding of the environmental benefits to the consumer. In order to show the clear commitment of industry the ERRMA working group is preparing a Voluntary Industrial Agreement in form of a self commitment. This includes a definition for a common understanding when using the term "Bio-Hydraulic Fluid". This product group has the biggest market share in comparison to other bio-lubricants. Bio-Hydraulic Fluids are compatible with the criteria from the European Eco-Label for Lubricants (EEL, 2005/360/EC). Nevertheless, these criteria need to be focussed to basic & consumer acknowledged criteria aiming at a sufficient & increasing market share within the European Union. The self-commitment should be considered as a start in the right direction to further boost the EEL. These efforts need urgently to be accompanied by a coherent market introduction/demonstration programme that is currently operating in a successful manner in one Member State. In Germany good experience with such an approach can be reported.

The self-commitment & the market introduction/demonstration programme must be accompanied by coherent legislation; e.g. public procurement, mandatory use of bio-lubricants in sensitive areas, etc..

**Working Group Meeting No 2, 16th October 2007, Brussels**  
**Renewable raw materials and their use in non-food industries**  
***“Biopolymers in packaging applications – market drivers  
and market barriers”***

Agenda

- 10:30h**      *Coffee and tea*
- 11:00h**      **Welcome & Introduction**  
(Andreas Schütte, President of ERRMA and Jürgen Ohlhoff, BMELV)
- 11:15h**      **Initiative of the European Commission: Lead markets/biobased products**  
(Dietrich Wittmeyer, General Secretary of ERRMA)
- 11:30h**      **Status quo of biopolymers in packaging applications in Europe**  
(Harald Käb, European Bioplastics, Chairman)
- 12:00h**      **Successful market introduction of biopolymers - Possibilities, potentials and barriers of biopolymers from the industries perspective**  
- **Statements from Industries**  
- **Francesco Degli Innocenti, Novamont**  
- **Christophe Rupp-Dahlem, Roquette**  
- **Isabelle Tharaud, SPHERE/BIOTECH**  
- **Stéphanie Guilbert, ENSA Montpellier/INRA**
- 13:00h**      *Lunch (Restaurant Poivre et Sel)*
- 14:15h**      **Possibilities and limitations of market introduction of RRM products under the EU legal framework**  
(Maciej Szymanowicz, GD Environment, European Commission)
- 14:45h**      **Evaluation & Discussion about market barriers, bottlenecks for industries and possible research/demonstration needs**
- 15:30h**      **Market introduction of biopolymers from the ministries perspective**  
– short statements from ministries
- 16:30h**      **Evaluation & Discussion – Definition of the best-practise political framework to establish a market for biopolymers**
- 17:15h**      **Conclusion**  
(Dietrich Wittmeyer, General Secretary of ERRMA)
- 17:30h**      **End**

# EUROPEAN COMMISSION ENTERPRISE AND INDUSTRY DIRECTORATE GENERAL Industrial policy and economic reforms Sustainable Development, Climate Change and Competitiveness

•Brussels, 5th September 2007  
•ENTR/B4/DD D(2007) 29053

- Invitation to participate at the
  - Stakeholders' Consultation meeting on the
  - Action Plan on Sustainable Industrial Policy
- Centre Borchette(CCAB), Rue Froissart 35 Room AB-4D
- September 17, 2007 10h-13h

•In the future, European enterprises will need to respond to the ambitious climate change and energy targets in a proactive and imaginative way. Key drivers for success of European businesses will be innovation, creation of lead markets and offering an adequate response to sustainability challenges such as climate change and resource efficiency. The Commission aims to accompany this process through a resolute industrial policy that builds on Europe's strengths in terms of sustainable technologies and product design and gives incentives to move further ahead. The intention is to turn environmental challenges into economic opportunities for EU industry, thereby reducing greenhouse gas emissions and achieving higher rates of efficiency in the use of energy and resources while improving competitiveness.

•Please confirm your attendance to Mrs. KANSKA (milena.KANSKA.@ec.europa.eu, +32 229 98793).

The purpose of this meeting with stakeholders and industrial associations is to present and gather reactions on the options that are currently considered for the action plan. The outcome of the meeting will complement the results of the on-going consultation published on Your Voice in Europe on the Sustainable Industrial Policy and the Sustainable Consumption and production Action Plans: [http://ec.europa.eu/yourvoice/consultations/index\\_en.htm](http://ec.europa.eu/yourvoice/consultations/index_en.htm), whose deadline is on 23/9/2007. You are also welcome to send us your position paper on the background document and give us your views on how best to achieve the objectives described above to the following e-mail address: EC-SCP-SIP-Survey@ec.europa.eu.

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Michel Catinat