Deutscher Bio-Raffineriekongress 2009

Biobasierte Produkte und Bioraffinerien

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Session I

Strategische Entwicklung, Nachhaltigkeit und Innovationsanreize

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EU Lead Market Initiative

im Rahmen der

“European Technonolgy Platform for Sustainable Chemistry”

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Die Rolle der European Technology Platform for Sustainable Chemistry

"The European Technology Platform for Sustainable Chemistry is an ambitious initiative to revitalise chemistry and biotechnology innovation in Europe. It aims to strengthen the sustainability and competitiveness of the European chemical, biotech-based and associated industries, and contributes to meeting the Lisbon objectives for Europe.

We are very pleased to present this vision document. We are confident that it provides solid guidance in setting the strategy for sustainable chemistry research, and in creating a supportive framework for chemistry and biotechnology innovation in Europe.

This document has drawn contributions from a wide set of stakeholders, which is proof of the support and the high level of expectations and commitment to the success of this endeavour."

P. Elverding
President
Cefic - European Chemical Industry Council

F. Sijbesma
President
Europabio - European Association for Bioindustries

Vision von SusChem

The European model of society requires a competitive industry as a basis for growth and jobs, while maintaining its commitment to social and environmental sustainability. The European Technology Platform for Sustainable Chemistry demonstrates the great potential of industry to contribute to the broader policy agenda.

This vision paper is a commendable illustration of the joint stakeholder efforts. It forms a solid basis for the forthcoming Strategic Research Agenda to help Europe become the leader in key scientific and technology areas.

I consider myself a stakeholder in the success of this platform, both as a European citizen and as the European Commissioner for Research.

Janez Potocnik
EU Commissioner for Science and Research

The European Technology Platform for Sustainable Chemistry seeks to boost the competitiveness of the European Industry by strengthening chemistry, biotechnology and chemical engineering research and development in Europe. It is a joint initiative of Cefic and EuropaBio, and was facilitated by the European Commission.

Our vision for the European Technology Platform for Sustainable Chemistry is that:

1. The European chemical and associated industries will remain competitive based on technology leadership and innovation.
2. Mastering the molecular scale (as in nanotechnology and biotechnology) will yield new generations of products with enhanced properties leading to new applications in many industrial sectors.
3. Better use of chemistry and biotechnology will enable increased eco-efficiency of the industry.

Socio-economic challenges

Our energy mix is currently dominated by the consumption of fossil fuels. The vast majority of oil and gas is for energy for transportation, heating. Only a relatively small part is utilised as chemical feedstock.

Renewable raw materials could help secure long-term energy – (and raw materials) supply - and reduce carbon dioxide emissions.

The role and importance of Renewable Raw Materials (RRMs) – Sustainable Chemistry – SusChem – Innovation - European Policy Aspects

The Competitiveness Council in December 2006 agreed to launch an initiative as a new policy approach aiming at supporting the development of markets with high economic and social value, in which European companies could develop a globally leading role.

Future policy of EU Commission for strengthening "Bio-based Products" in the frame of the EU initiative „Lead Markets" Overall concept including the proposals and contributions of ERRMA

Definition of Lead Markets

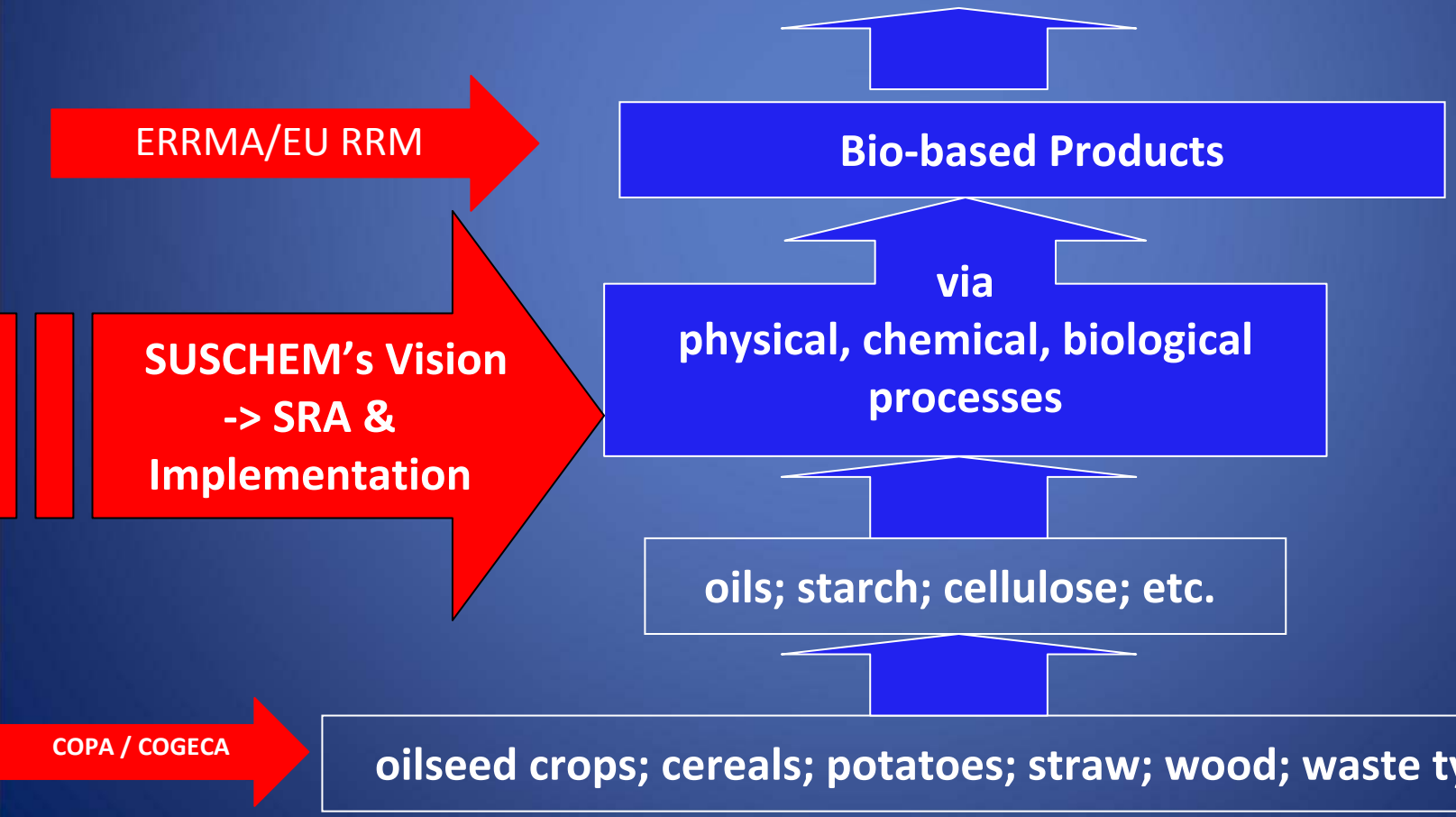
We want the EU to become a lead market for new technologies, products & services that will create employment & growth in the EU & contribute to tackle some of our more important challenges (e.g. health, energy, sustainable production).

Definition of biobased products

In the Lead Market Initiative, bio-based products refer to non-food products derived from biomass (plants, algae, crops, trees, straw, marine organisms and biological waste from households, animals and food production). Bio-based products may range from high-value added fine chemicals such as pharmaceuticals, cosmetics, food additives, etc., to high volume materials such as general bio-polymers or chemical feedstocks.

Renewable Raw Materials (RRMs)

Benefits: Increased competitiveness thanks to:
Increased quality of life; lower energy demand & consumption; improved soil, water,& air quality; material/product performance; use of local resources



Our Contribution

Policy measures: STANDARDS, LABELLING, CERTIFICATION

- 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

Policy measures: STANDARDS, LABELS, Certification

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

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: COMMUNICATION

EU market Introduction Programme/Demonstration Projects:

EU market introduction programmes intended to flank industry self-commitments based on standards, certification schemes and labels are effectives means for communication and therefore better market penetration for biobased products.

The EU „Competitiveness and Innovation Framework Programme“ (CIP) should offer such flanking measures in accordance with the 7th EU-Research Framework Programme.

To start a coherent and overall approach the cooperation with „the European Technology Action Plan“ (ETAP) from GD Environment, the „European Action Plan“ (EAP) for investment and research and in future the „Executive Agency for Competitiveness and Innovation“ (EACI) as well as the LIFE programme is necessary.

Policy measures: COMMUNICATION

In more detail:

Harmonised EU-market Information:

There is also a need for viable data on EU-level:

Information on current markets and prices as well on future developments and realistic perspectives for RRMs and biobased products, as finalised in Germany and France and started in UK.

Support from the EU-Commission to run an enlarged market survey following the methodology agreed in the three Member States is asked in the relevant calls for proposals within the 7th EU- Research Framework Programme.

Reaction of EU Commission

“Accelerating the Development of the Market for Bio-based Products in Europe”

REPORT OF THE TASKFORCE ON BIO-BASED PRODUCTS
Composed in preparation of the Communication
“A Lead Market Initiative for Europe”
{COM(2007) 860 final}

Recommendation

We propose, as an action of high priority to ensure a coordinated and coherent approach, to establish a Commission Inter-Service Task Force (ISTF) complemented by a high-level advisory group involved in the development of bio-based product markets.

Standards

Recommendation

Sustainability standards and labels (eco-efficiency) will to a large extent rely on harmonised and in-depth life cycle assessments and would need to cover the whole spectrum of bio-based products, from biomass raw material to intermediate products and final end products. There are also links to be made with standards that are being developed for recycled materials and products.

Labelling

Recommendation

It is recommended that bio-based products become a new product group category within a revised EU eco-label scheme and that the specific product requirements are developed with a strong commitment from industries at an early stage and fully embedded into the sustainable development policy.

Communication

Recommendation

Communication efforts should have a “lighthouse” function steering actors towards the aim of establishing lead markets for bio-based products. This function could be facilitated by the high-level advisory group mentioned above. Communication activities could be financed by the Competitiveness and Innovation Programme (CIP).

Legislation

Recommendation

A strategic approach towards supporting the development of a lead market for bio-based products will need to be based on coherent, comprehensive and coordinated legislative actions, further streamlining and better targeting the existing ones.

DRAFT RECOMMENDATIONS

Lead Market Initiatives on Biobased Products

Ad hoc Advisory Group

WG2 Standardisation, Certification, Labelling

Intro – need for standards

Standardisation, certification and labelling are a critical component of the development and promotion of biobased products as they allow greater transparency for the communication of product information and facilitate the access to market by raising downstream industries and consumers' awareness.

Relevant specific characteristics of biobased products are those which differentiate them from traditional products and can help in showing specific values/benefits to users/consumers (set of inherent characteristics e.g. compostability, renewable carbon content and broader criteria e.g. GHG emission, energy use, sustainable sourcing of feedstock).

Sustainability standards / criteria, LCA

Sustainability is at the core of biobased products development together with product performance and quality which are the basis of all new product development. Biobased products are not only focusing on reduced environmental footprint but also on other economic opportunities (new industrial chains can be activated) and social opportunities (new jobs, less dependence from foreign energy/materials supply).

Recommendations

LCA is considering factual data and is therefore representing a snapshot of the impact of a product. In-depth life cycle assessment for innovative products can be a difficult task as data or even methodology to measure them may not be readily available and can be potentially damaging to innovative technologies when compared to mature, optimised products.

The LMI biobased products ad hoc advisory group should define in principle which key factors should be taken into account (or not) in an LCA (see discussion on sustainability) and develop a stakeholder agreement on what makes sense to be considered in an LCA and why.

Certification of the sustainable production of renewable raw material is a key aspect to allow sustainable use of raw material in the non-food sector. Traceability of raw materials for instance grains origin in a shipment are technically and logistically extremely difficult. This could add a tremendous burden on industry transforming biomass, especially in the case where no direct farmer-industry agreement can be done (e.g. small volumes of production).

Recommendations

- In the short-term, in order to promote biobased products it will be more efficient to focus on the characteristics of specific products or products sector for which standards exist or are being developed and strive to obtain harmonized/ single labels. This exercise could probably avoid the development of anarchic self-made eco-marketing tools and labels.

- Faced with the multiplicity of labels and information tags on European products, it is equally important to review the efficiency and coherence of the labelling system in Europe, evaluate the need for consumers to have labels and their actual impact on consumers' behaviour.
- Due to the fact that for some groups of lubricants an European Eco-label already is existing, it is recommended to combine the LMI with the EEL WG for more general approaches.