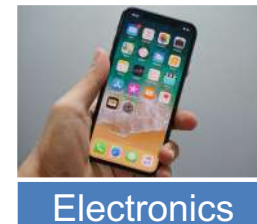
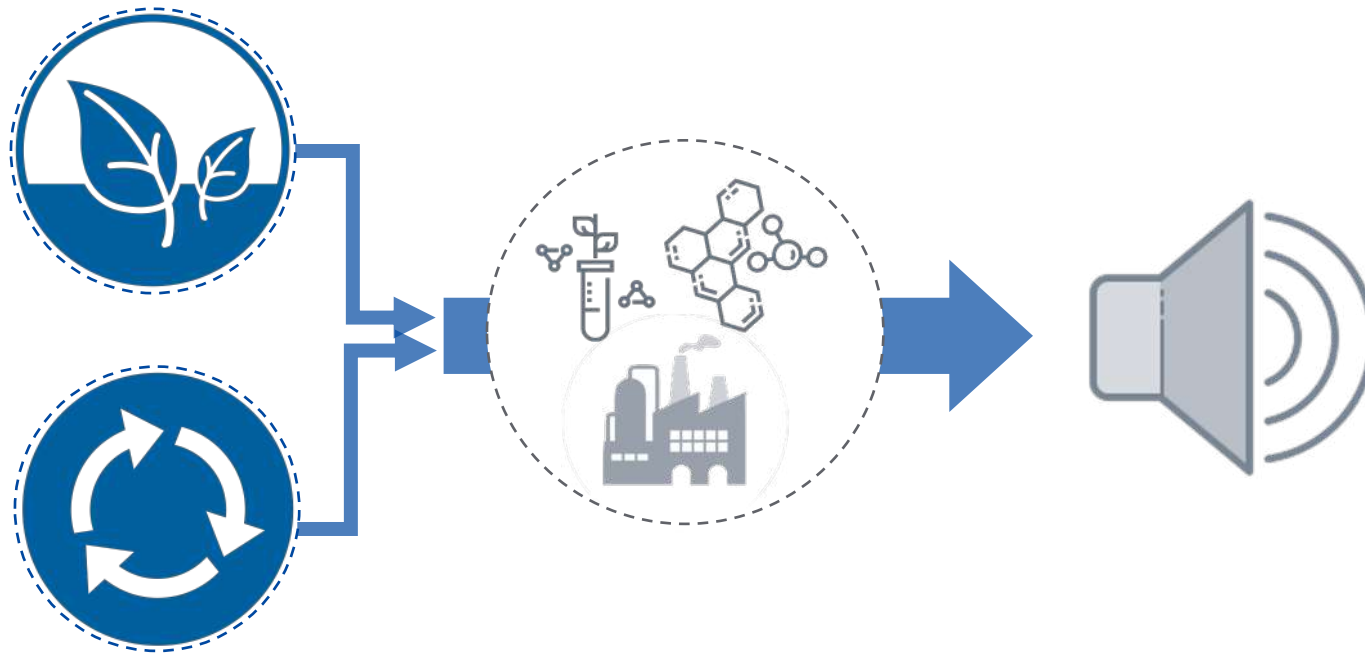


# ISCC PLUS for the Circular Economy and Bioeconomy

Dr Jan Henke, Meo Carbon Solutions GmbH

10th ISCC Global Sustainability Conference, Brussels, Belgium, 12th February 2020

# ISCC PLUS offers solutions for the **circular** economy and **bioeconomy**



**Feedstock**

**Intermediates,  
products**

**Brand owner,  
producer**

**Markets/ Applications**

# Many companies rely on the credibility of the ISCC certification system



- ## ISCC certification stands for:
- Sustainability
  - Segregation or mass balance
  - Clear attribution
  - Traceability
  - Feedstock identity
  - Conversion factors/ volumes
  - Logos and claims
  - Add-ons like LCA

# ISCC PLUS requirements are in line with important initiatives

## Ellen McArthur Foundation White Paper (2019)



- Feedstock identity
- Defined system boundaries
- Clear allocation rules
- Credible claims
- Transparent documentation
- Third-party verification

## Plastics Europe Industry View Paper (2020)

PlasticsEurope  
ASSOCIATION OF PLASTICS MANUFACTURERS

### MASS BALANCE APPROACH TO ACCELERATE THE USE OF RENEWABLE FEEDSTOCKS IN CHEMICAL PROCESSES

Climate protection, reduction of greenhouse gas emissions and saving of fossil resources are key elements for a more sustainable future. The use of renewable feedstocks in historically solely fossil based chemical processes can contribute to meet these challenges. This view paper aims to introduce key criteria when applying mass balance and to ensure a verifiable and certified approach is applied for companies willing to accelerate the use of renewable feedstocks along the value chain. Standards owners should show the application of these key criteria in their standards.

In those so-called mass balance approaches, renewable feedstocks are used instead of fossil feedstocks in existing efficient, complex and interlinked multi-step chemical production systems and supply chains thereby contributing to the bio-economy, the renewable segment of the circular economy.

This view paper focuses on mass balance approaches for renewable feedstocks.

#### Background

Mass balance is one of several well-known Chain of Custody approaches which can be used to trace the flow of materials through the value chain resulting in associated claims. Other chain of custody models include: Identity preserved, segregation and book and claim with certificate trading within open markets. These different Chains of Custody vary in terms of detailed knowledge of the source of the product, the complexity of implementation, and the renewable content in the end-product, which will in turn affect the allowed claims.

For the use of renewable feedstocks, specific production technologies may be developed and applied, which transform a renewable feedstock like e.g. sugar, vegetable oils, wood waste in segregated production plants into a bio-based chemical being used in various applications. The Chain of Custody linked to those approaches is identity preserved or segregation. Those approaches are not part of this view paper because they are covered by the CEN/TC 411 "bio-based products" standard.

# ISCC PLUS updates to cover the circular economy and bioeconomy



## ISCC PLUS Training

Bio-based and Circular Economy

17 – 18 March 2020

**ISCC**  
International Sustainability  
& Carbon Certification

**Lists of material eligible for ISCC PLUS certification**  
(03 December 2019)

ISCC PLUS certification can cover all types of agricultural biomass and products, bio-based waste and residues as well as materials contributing to the circular economy for all markets and sectors not regulated by the RED or FOD, such as the food, feed and energy markets as well as diverse industrial applications (e.g. chemical industry and packaging). The lists below are not conclusive, but aim for the harmonization of the description of material under ISCC PLUS (e.g. on ISCC certificates). System Users engaging in the biotal sector inside the European Union shall refer to the ISCC EU list of eligible material. All materials that can be covered under ISCC EU can also be covered under ISCC PLUS. This list hence outlines the materials that can **only** be covered under ISCC PLUS.

There shall be no brand names, nor technical characteristics of the material nor specifications of the production process included (e.g. bleached, deodorized, industrial grade, etc.) on the ISCC certificate. Products derived from sustainable raw material shall be stated on ISCC certificates according to tables 2 (intermediate and final products). Sustainable material may be declared more detailed in contracts, on sustainability declarations or in mass balances. For amendments of the lists (e.g. to add an additional raw material), ISCC must be contacted before a certificate can be issued.

The table for raw material does not classify material as waste/residue. ISCC does not guarantee acceptance of the waste/residue status of a certain material by authorities. Auditors and system users are obliged to investigate and research the eligibility of material in the targeted country.

If mixed biomass is accepted by both of countries, origin, this must always be indicated in "products".

In agricultural raw materials or bio-based waste during processing (example M... to the prefix "bio-based" to the respo...

In waste residue materials that derive from biological origin (fossil-based) or other determined or unknown, this shall not include mixed plastic waste). They processes if the bio-based content is plastic, even if the feedstock is bi...

In materials of non-biological origin u... the prefix "non-bio-based" to the product... shall be avoided. System Users site Annex.

ation of this list do not have to be a...

**ISCC**  
International Sustainability  
& Carbon Certification

ISCC PLUS Self-Declaration Point of Origin - Post-Industrial Material

Name of Point of Origin (In case of Post-Industrial Material this is usually a Production Site)

Street address

Postcode, city

Country

Recipient of Self-Declaration (Collecting Point)

No.	Requirements
1	Documentation is available to prove compliance with ISCC requirements* including contractual agreements with subcontractors and recipients (collecting points), delivery notes/ weighbridge tickets.
2	The respective material is a waste or processing residue and is end-of-life material (has reached the end of its intended life cycle). Its further use complies to the waste hierarchy approach introduced by the Waste Framework Directive 2008/98/EC: "any substance or object which the holder discards or intends or is required to discard" (Article 3(1)). The waste or processing residue was not intentionally produced.
3	The waste or processing residue is generated from a manufacturing process and is not reused, reworked, regrinded or accepted for the same. The material may be sent to a second country for further recovery.
4	Materials for re-use or mechanical recycling were separated from the material covered under this self-declaration. Mechanical recycling for the waste material under this self-declaration would not have been economically feasible.

Declaration is available. This can be... (regular with respect to the definition of... of waste, etc.)

... comply with the ISCC requirements\*... the purpose to evaluate the... data on my premises.

... provided during the audit and upon...

Signature

**ISCC**  
International Sustainability  
& Carbon Certification

**ISCC PLUS**  
Version 3.2

**ISCC**  
International Sustainability  
& Carbon Certification

**ISCC 208**  
Logos and Claims  
Version 1.1

## ISCC PLUS

- System Document, v. 3.2
- Material List
- Self-declarations
- Sustainability Declaration
- Procedures
- Logo and Claims guidelines

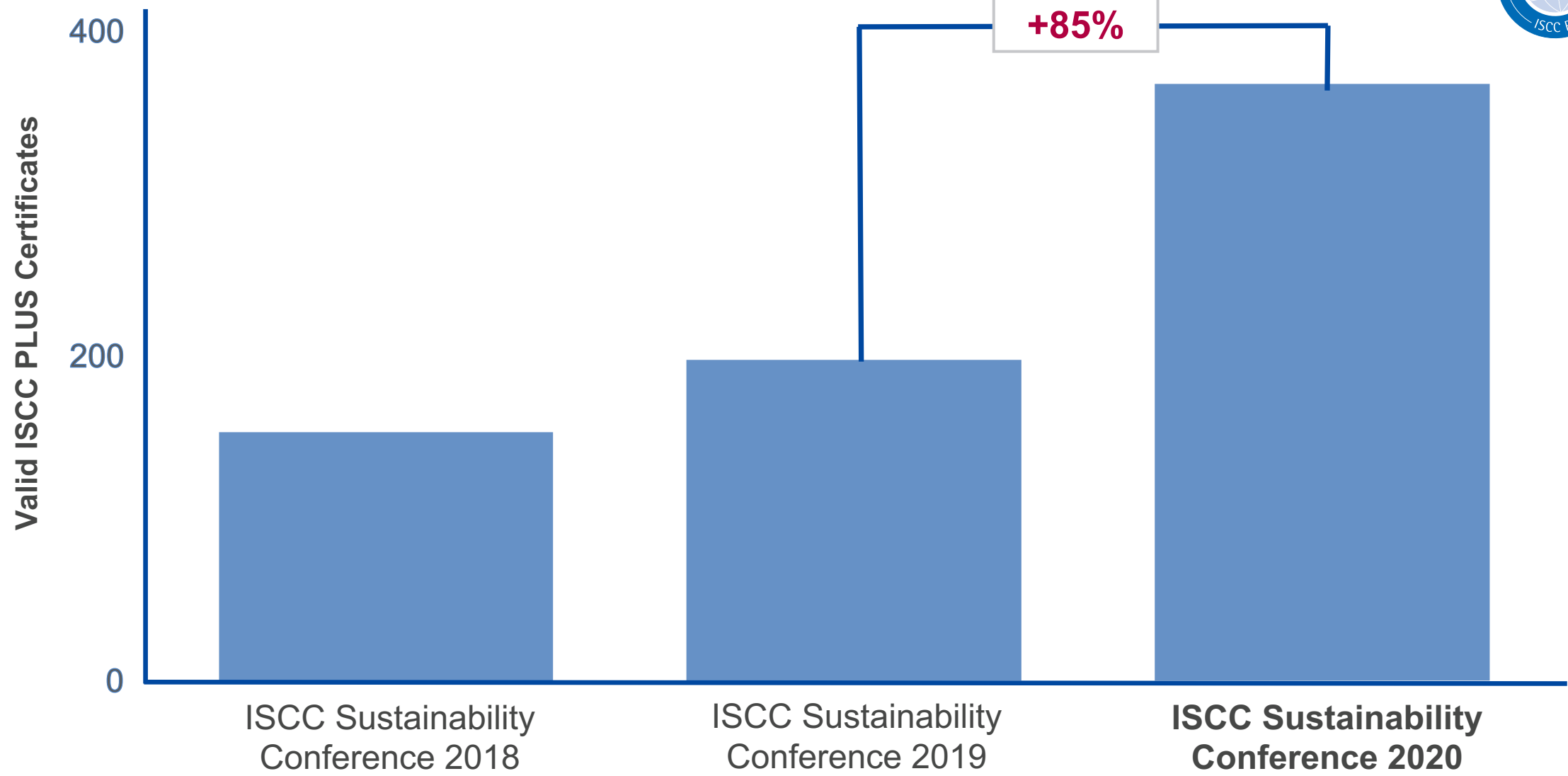
# New website for the circular economy and bioeconomy



The screenshot shows the ISCC website's navigation menu at the top, including 'About', 'Process', 'Certificates', 'Trainings & Events', 'Stakeholders', and 'Smallholder Academy'. The main header features the ISCC logo and a navigation breadcrumb 'About - Circular and Bio-based Economy'. The main content area has a large image of plastic waste with the title 'ISCC for the Circular and Bio-based Economy'. Below this, the text reads: 'ISCC supports the transition to a circular and bio-based economy'. A paragraph explains that plastic is everywhere and that while it's useful, its waste management is a global challenge. A smaller image of plastic bottles is shown. A sidebar on the right lists navigation options: 'About', 'Objectives', 'The Impact of Our Work', 'Governance & Transparency', 'Food Security', 'Circular and Bio-based Economy' (which is expanded to show 'The Mass Balance Approach', 'Physical Segregation', 'Certification Examples', 'Certification Process and Documents', 'Training Courses', and 'Conferences'), and 'In the past, recycling rates for major chemical and plastic products have been very low. Most of the plastic that has'.

[www.iscc-system.org/about/circular-economy/](http://www.iscc-system.org/about/circular-economy/)

# ISCC PLUS certification is growing





# ISCC PLUS Training

## Circular Economy and Bioeconomy

17 – 18 March 2020 in Cologne, Germany

### Content:

- Comprehensive information about the ISCC **PLUS certification system**
- ISCC **audit requirements** and ISCC application along the supply chain
- Chain of custody options, **mass balancing**, **yield calculations** and **attribution** approaches, overview on **logos and claims**



### Target Group:

- Auditors
- Companies (especially from the chemical and packaging industry)
- Brand owners and retailers
- Other interested parties





# NEW: Technical Stakeholder Committee “Circular Economy and Bioeconomy“

- Inaugural meeting:  
**4 June 2020** in Cologne, Germany
- Stakeholder platform
- Discuss and further develop ISCC PLUS for the circular economy and bioeconomy

**Registrations are open!**

## Technical Stakeholder Meeting “Circular Economy and Bioeconomy“



### Upcoming meetings:

The first meeting will take place on **04 June 2020** in Cologne, Germany. The venue will be announced shortly.

Attendance is free of charge.

[CLICK HERE FOR REGISTRATION >](#)

# MAGNUM just launched a new website on ISCC certified circular feedstock sourced for its packaging



## ISCC

ISCC is a Sustainability Certification system for all feedstocks and markets. The resin supplier **SABIC** is certified, as are all our other suppliers.



The plastic resin we use to produce this our Magnum tubs is made with certified circular recycled plastic based on **a mass balance approach.**



Source: <https://www.magnumicecream.com/uk/stories/food/recycled-tubs.html>

# Hammarplast uses ISCC logo on its medical devices



# DSM introduced ISCC certified bio-based and recycled alternatives for its engineering plastics portfolio.



As an immediate step, today, DSM Engineering Plastics is launching bio-based grades of its Arnitel® and Stanyl® product portfolio manufactured via a mass-balancing approach of bio-based feedstock. The Stanyl bio-based grades are already available with the globally recognized sustainability certification ISCC Plus. J

<https://www.dsm.com/corporate/news/news-archive/2019/2019-10-17-dsm-to-introduce-bio-and-or-recycled-based-alternatives-for-its-entire-engineering-plastics-portfolio.html>

# Eastman introduced its carbon renewal technology and uses ISCC PLUS



# EASTMAN

Eastman in the circular economy

Eastman's recycled materials will be certified by International Sustainability & Carbon Certification (ISCC), an independent agency for tracking sustainable content in a variety of industries. Costa said Eastman will work across the value chain – with Eastman customers, potential feedstock suppliers, product manufacturers, brands, and non-governmental organizations such as the Ellen MacArthur Foundation (EMF) and others – to implement this large-scale circular solution for recycling waste plastics. Eastman became a member of EMF's Circular Economy 100 Network earlier this year.

“The problem of waste plastics is not one that can be solved by a single company, but Eastman is taking definitive action to do our part,” Costa said. “Beginning commercial production of carbon renewal technology is a proof point of our determination to act quickly and decisively to accelerate the circular economy. Bringing this project to fruition so quickly – just eight months after we announced our intention to be a leader in chemical recycling – required innovation by some of the world's brightest minds and effort by thousands of members of the Eastman team.”

Source: [https://www.eastman.com/Company/News\\_Center/2019/Pages/Eastman-begins-commercial-operation-of-innovative-chemical-recycling-technology.aspx](https://www.eastman.com/Company/News_Center/2019/Pages/Eastman-begins-commercial-operation-of-innovative-chemical-recycling-technology.aspx)

# Jindal Films announced its ISCC PLUS certification

**Jindal**  
Films



Jindal Films has identified different sources of **ISCC PLUS certified polypropylene**, made of various vegetal renewable sources like sunflower, soybean, rapeseed, tall oils and other vegetal oils **via a mass balance approach**. These are ethically sourced and used to produce naphtha, which is itself converted into propylene, before being polymerized into polypropylene and introduced into Jindal Films' production process. As a result, without any compromise in the final film properties or its food contact approvals, Jindal Films is proud to announce a film range made out of these ISCC PLUS certified sustainable sources, through the mass balance concept used along the supply chain according to ISCC requirements.

<https://www.jindalfilms.com/jindal-films-highlights-labelexpo-sustainability-barrier-conformable-and-high-yield-film-solutions/?geo=eu>



## Outlook: What's next at ISCC PLUS?

- **Green Deal** (circular economy action plan, legislative waste reform, regulatory framework for recyclable packaging, ...)
- Recycled Carbon Fuels (**RCFs**)
- Renewable Fuels of Non-Biological Origin (**RFNBOs**)
- Support sustainable value chains and **differentiation based on circularity and sustainability**
- Further **support of stakeholder initiatives**
- Find **recognition** with authorities
- **Marketing** (logos/claims)
- Continue to be a reliable partner **supporting the circular economy and bioeconomy** in a **multi-stakeholder** approach



Many thanks for your attention!

---

Dr Jan Henke, Meo Carbon Solutions GmbH  
Hohenzollernring 72, 50672 Cologne, Germany  
Email: [henke@meo-carbon.com](mailto:henke@meo-carbon.com)

Follow us on   