

International Palm Oil Sustainability Conference

Strengthening the Malaysian world market position for palm oil by sustainability certification

Putrajaya, September 11, 2012

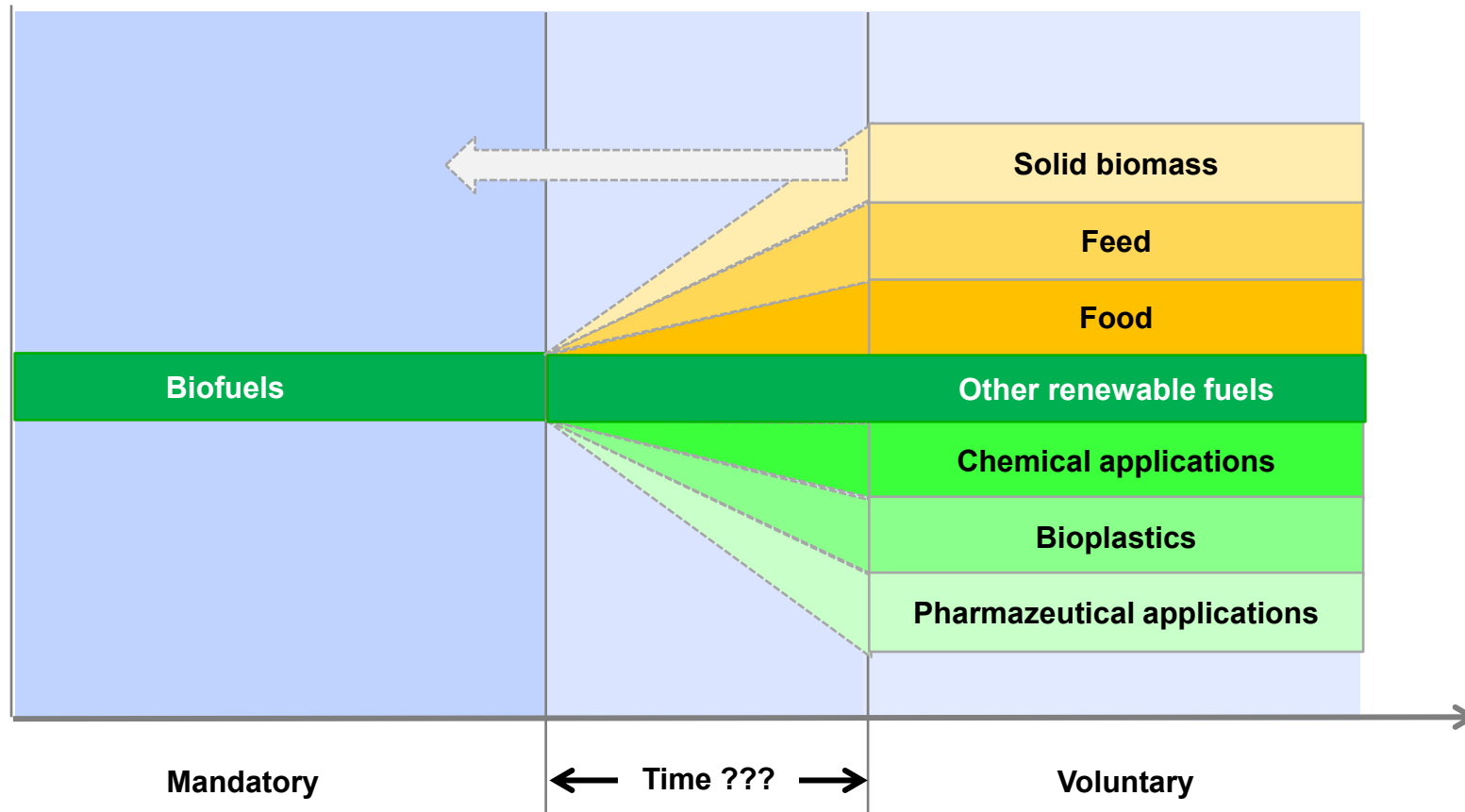
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www.meo-carbon.com**

Sustainability is a global mega trend – not just a temporarily phenomena

- Requests for sustainable cultivation and production – initially driven by NGOs – are no longer a temporarily phenomena
- Sustainability requirements will affect many market segments in different regions of the world with different intensity in time:
 - Food
 - Feed
 - Chemical industry
 - Biofuels
 - Power generation
 - Financial industry
 - ...



Sustainability requirements will be proliferated to other regions and market segments – one of the most virulent questions always is “when?”



Company or initiative driven sustainability requests may vary with respect to targets and concreteness ...

Focus in 2012: Farming and Sustainability Certifications!

Availability of sustainable biomass is a key requirement!

- Current focus on
 - Jatropha
 - Camelina
 - Palm

There is an urgent need for sustainability certification of farming projects!



Pure Sky logo

Source: Lufthansa

ADM logo

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Sustainability

Sustainability

As one of the world's largest cocoa and chocolate manufacturers, ADM is committed to ensuring a sustainable future for cocoa farming. While we are not growers of cocoa, ADM works with others along the cocoa supply chain to improve the lives of cocoa-farming families and the communities in which they operate.

Cocoa farmers around the world face many challenges. An estimated one-third of the global cocoa crop is destroyed by pests and disease each year. Many cocoa farmers have limited access to the latest agricultural technologies and planting materials. And few have business training to help them effectively market their product and manage their operations.

Beyond economic and operational limitations, many cocoa-farming

Cocoa Sustainability

Explore our Cocoa Sustainability Brochure in PDF or Flash.

Source: ADM

DUPONT logo

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As the world's population approaches nine billion by 2050, we face unprecedented challenges to sustainably address the critical needs of food, energy, and protection. Through our science-driven innovation and global collaboration, we create solutions that help meet these needs.

Sustainability is at the core of what we do - from reducing our operational footprint, to developing renewable materials and safer products, to collaborating with others to create sustainable solutions.

Our world is changing. The demographic shifts - about 150,000 more people on the planet each day - will increase strain on our planet and pressure us to use resources to feed the world, meet the growing energy

Our Approach

Source: Dupont

GIZ logo

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Home > Media centre > News > News 2012 > Sustainable Cocoa Forum established

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Sustainable Cocoa Forum established



Almost everyone enjoys a bit of chocolate every now and again. But if you take a closer look at how cocoa is produced, it may well leave a bitter taste in your mouth.

The conditions under which the cocoa farmers in many producer countries live and work are worrying: Despite the fact that cocoa is usually their main source of income, the families struggle to make a living from it. Child labour is not uncommon.

Source: GIZ

Some industry segments may also be driven by evidence that regulatory actions can be expected ...

ENDS Europe
Europe's environmental news and information service

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Climate Energy Waste & Resources Chemicals Pollution & Nature Pro

NEWS

EC to propose EU-wide criteria for biomass

ENDS Europe
Monday 27 February 2012

The European Commission will put forward proposals for EU-wide sustainability criteria on biomass fuels later this year, an official at a stakeholder meeting on the EU's renewable energy strategy confirmed on Friday.




Source: EndsEurope

AEBIOM
EUROPEAN BIOMASS ASSOCIATION

IWPB Principles

IWPB	SUSTAINABILITY PRINCIPLES
WILL	Principle 1: GREENHOUSE GAS BALANCE (GHG) The greenhouse gas (GHG) savings taking into account the whole chain of custody including production, processing and transport are at least 60% with respect to reference fossil fuels for the end use.
WILL	Principle 2: CARBON STOCK Biomass production does not take place at the expense of significant carbon reservoirs in vegetation and in the soil.
WILL	Principle 3: BIODIVERSITY Biomass production may not take place in areas with high biodiversity value, unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes.
AIM TO	Principle 4: PROTECTION OF SOIL QUALITY Biomass production and processing should maintain or improve the soil quality.
AIM TO	Principle 5: PROTECTION OF WATER QUALITY With the production and processing of biomass, ground and surface water should not be exhausted and the water should be managed such as to avoid negative impact or to significantly limit impact on water.
AIM TO	Principle 6: PROTECTION OF AIR QUALITY Production and processing of biomass should avoid negative impact or significantly reduce impact on air quality.
AIM TO	Principle 7: COMPETITION WITH LOCAL BIOMASS APPLICATIONS Biomass production for energy should not endanger food, water supply or communities where the use of this specific biomass is essential for subsistence.
AIM TO	Principle 8: LOCAL SOCIO-ECONOMIC PERFORMANCE Biomass production should respect property rights and contribute to local prosperity and to the welfare of the employees and the local population.
COVERED SEPARATELY	Principle 9: CORPORATE RESPONSIBILITY Generic sustainability principles not directly related to biomass are covered by the Codes of Conduct or Policies of the utilities participating to IWPB covering all types of commodities.



Source: AEBIOM

... some companies may be quite proactive in target setting – however market penetration will depend on a variety of drivers

Sustainability drivers:

- NGO pressure and media campaigns
- Consumer behavior
- Societal values
- **Company goals and values**
- Laws and regulations
- ...
- ➔ **Timeline impact difficult to predict**

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✓ SUSTAINABLE LIVING

✓ SUSTAINABLE SOURCING

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By 2020 we will source 100% of our agricultural raw materials sustainably.

Growing for the future

Agriculture and forestry are the largest contributors to global greenhouse gas emissions and are major drivers of climate change. Half of Unilever's raw materials come from either farms or forests. Given the scale of our footprint, sustainable agricultural sourcing is therefore a strategic priority for our business and brands. We are committed to sourcing sustainably all our agricultural raw materials by 2020. As well as protecting the planet's natural resources, sustainable sourcing helps us to manage a core business risk by ensuring security of supply for the long term.

› OUR STRATEGY & FOOTPRINT

› TARGETS & PERFORMANCE

› SUSTAINABLE PALM OIL

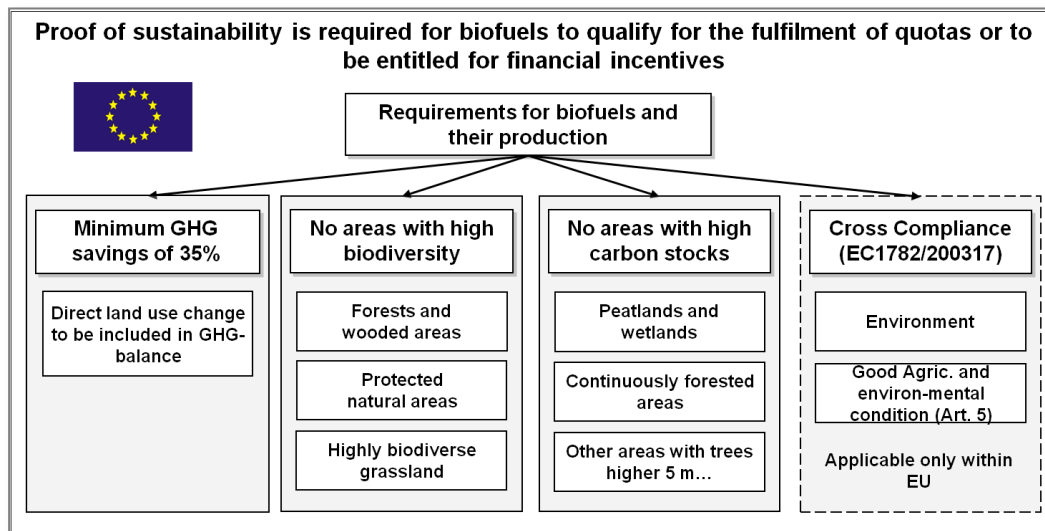
› SUSTAINABLE PAPER & BOARD SOURCING

› SUSTAINABLE SOY & OILS

Source: Unilever

Market participant will have to make a strategic decision, either to ‘wait and see’ or take the ‘first movers advantage’ – example biofuels

Market demand in E-27 generated by regulation



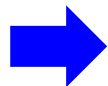
Source: Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (2009/28/EC)

Market demand drivers:

- EU Directive 2009/28/EC
- Member States sustainability ordinances
- EU Member States biofuel quotas

Market impact

- Market short of sustainable biofuels
- Price premiums been paid for sustainable biofuels



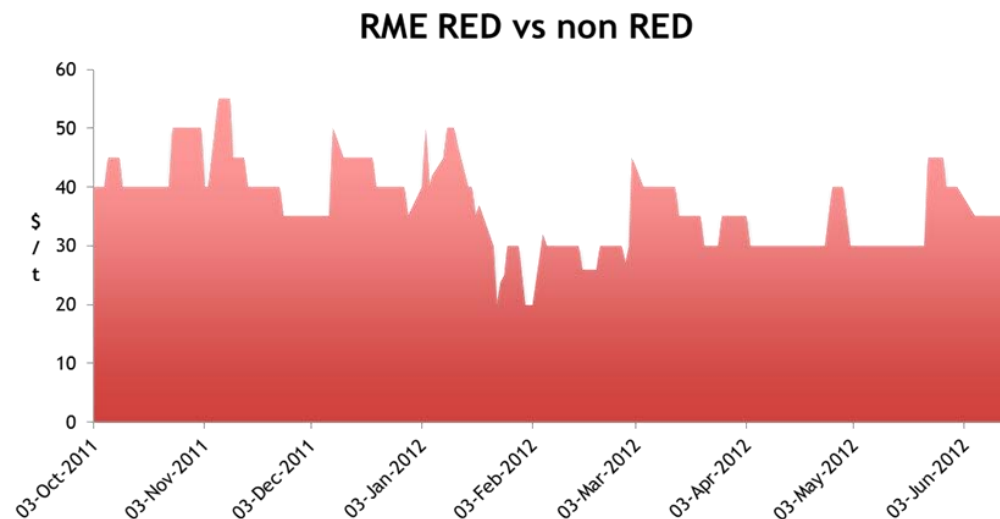
Clear benefits for a ,first mover‘ strategy

First movers have been able to generate a price premium of 40\$ to 100 \$ per ton

Spot prices			
Biodiesel, \$/t	Bid	Ask	±
Palm OME fob Rotterdam	1,140.00	1,150.00	-5.00
Rapeseed OME fob Rotterdam	1,480.00	1,490.00	-5.00
Soya OME fob Rotterdam	1,242.00	1,252.00	-3.00
FAME 0°C CFPP fob Rotterdam	1,232.00	1,242.00	-3.00
FAME -10°C CFPP fob Rotterdam	1,460.00	1,470.00	-5.00

Source: Argus Media

Renewable energy directive (RED) spot prices				Price premium
Biodiesel, \$/t	Bid	Ask	±	
Palm OME fob Rotterdam	1,240.00	1,250.00	-5.00	100 \$/t
Rapeseed OME fob Rotterdam	1,520.00	1,530.00	-10.00	40 \$/t
Soya OME fob Rotterdam	1,342.00	1,352.00	-3.00	100 \$/t
FAME 0°C CFPP fob Rotterdam	1,332.00	1,342.00	-3.00	100 \$/t
FAME -10°C CFPP fob Rotterdam	1,500.00	1,510.00	-10.00	40 \$/t



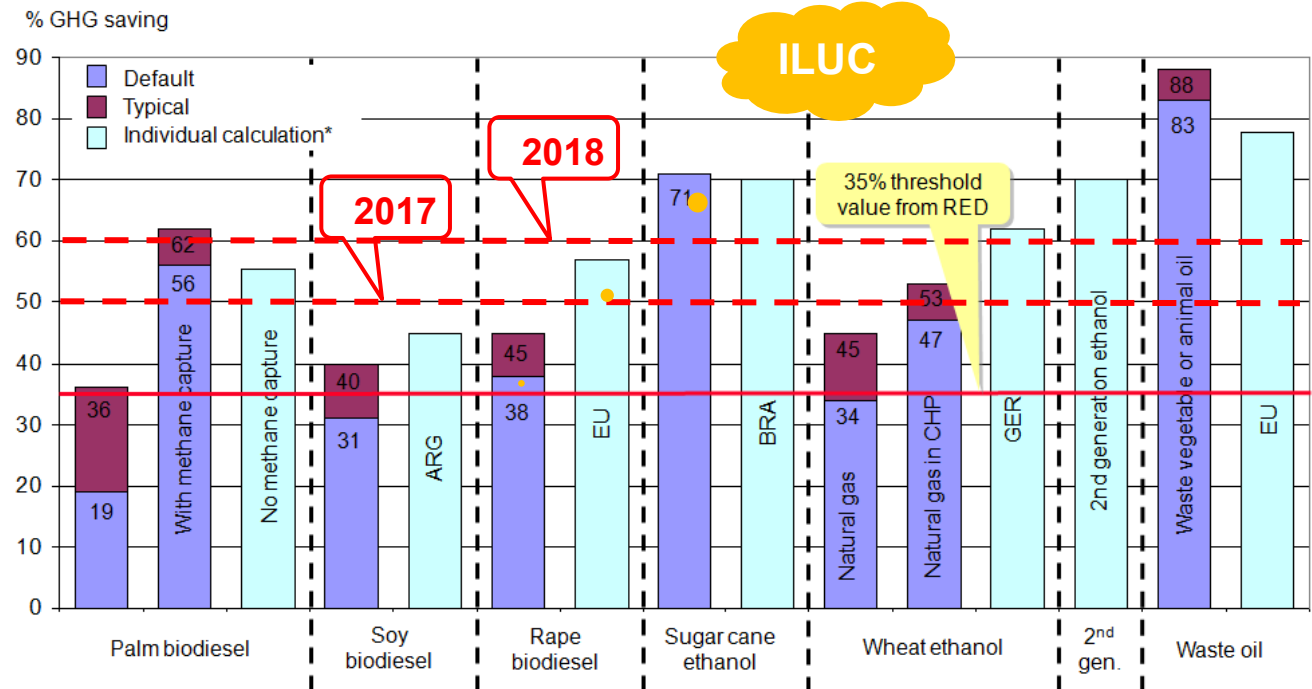
Source: Argus Media

Price premiums can be maintained when 'first movers' are able to meet increasing sustainability requirement levels – example RED/biofuels

Increasing sustainability requirements anticipated

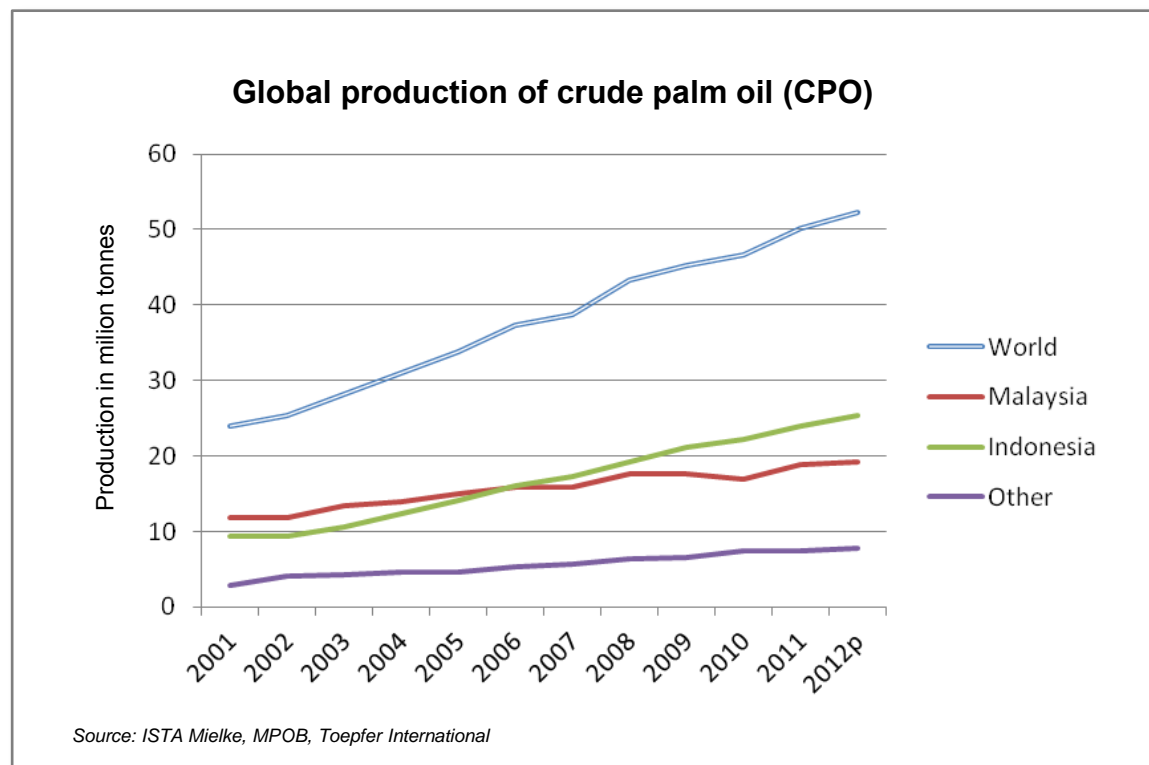
- GHG savings from 35% to 50% in 2017 and 60% in 2018 (already defined within RED)
- Additional ILUC GHG burden?
- Additional RED sustainability criteria?
 - Air
 - Water
 - Soil
 - Social

Significant efforts required for meeting future GHG savings targets



* ISCC or meo results from individual projects, or averages from different calculations (no LUC after January 1, 2008).
Source: RED, ISCC, meo.

Growth strategies must not necessarily be focused on quantity – Malaysia may opt for qualitative growth

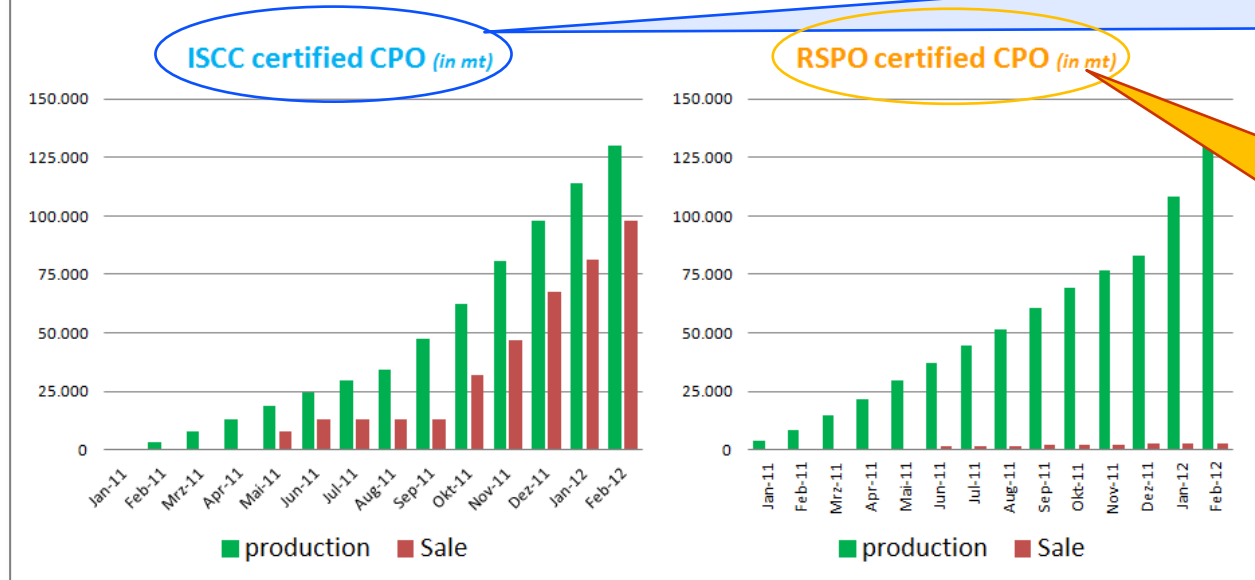


- Malaysia and Indonesia are the world dominating palm oil producers (38% and 48% market share)
- Malaysia with growth limitations due to the availability of arable land
- Focus on qualitative growth (i.e. sustainable cultivation and production) can open up new opportunities and secure long term market success

How to cover the timing risks of a 'first mover' strategy? One option may be choosing the right certification system

Unclear benefits :-

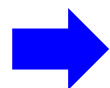
- Economic returns – Not always positive, certificate dependant



Source: Felda

- Certification system recognised by EU for biofuels
- High premium for CPO sales (biofuels)

- Certification system not recognised for biofuels
- Moderate premium for CPO sales (other segments than biofuels with less demand for sustainable products)

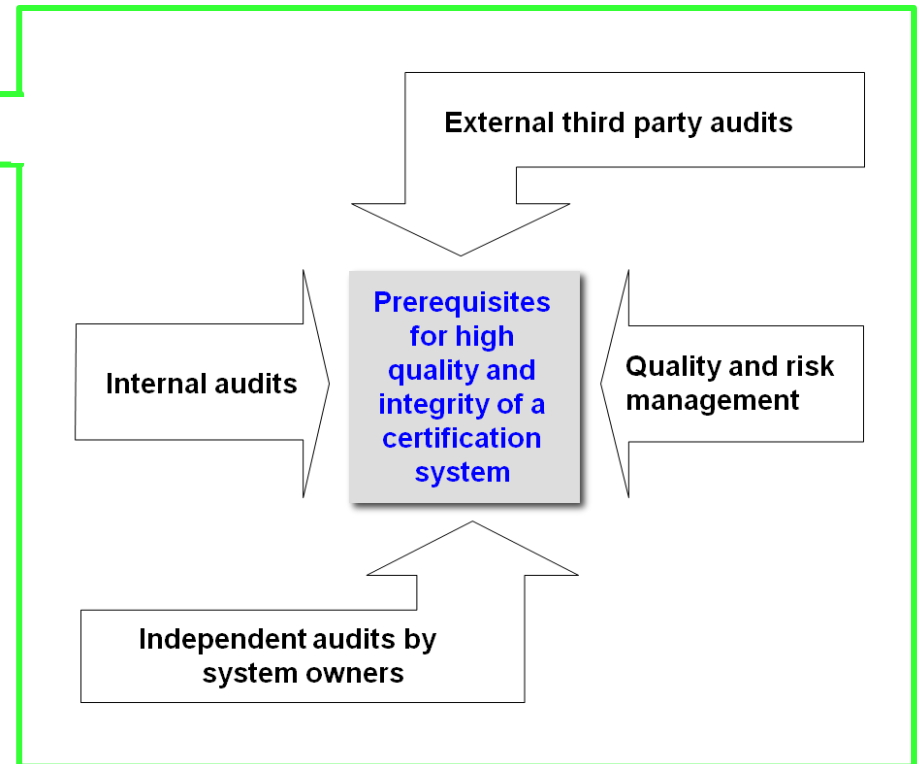


Specialized standards may limit the access to price premiums, standards open for all market segments and kinds of biomass offer additional opportunities

Important features of credible quality standards and sustainability certification systems

Important features:

- Reliable governance processes
- Covering important ecological and social criteria
- Open access to certificate database
- Providing recognized GHG calculation methodology
- Balanced cost – benefit structure and ‘built in’ continuous improvement
- Open for multi-stakeholder
- Open for flexible adaption to market specifics
- One stop shopping for all kinds of biomass, industry segments and other applications



Credible sustainability certification systems cover important ecological and social sustainability issues

Land use change

- Amount of forest and primary forest
- Existence of No-go areas according to databases like WDPa, Ramsar-Wetlands, Intact Forest Landscape
- National biofuels programs and their impacts

Ecological Sustainability

- Country-specific use of fertilizer
- Registration, use, ban and restriction of pesticides
- Forest fires, slash and burn practices
- Poisoning statistics, environmental issues

Social Sustainability

- Ratification of ILO core conventions
- Requirements against child labor, forced labor, violence of trade union rights
- Recognition of indigenous peoples, traditional land, - and land-use rights




Content

1	Summary
2	Areas [§§ 4-6 BioSt-NachV/ Biokraft-NachV]
2.1	Legislation
2.2	Databases/ Spatial plans/ Further assistance
2.3	Practical use of the databases/ maps
2.4	Other sources of information
2.5	Summary: area, surface- and land use-analysis China
3	Ecological sustainability in production
3.1	Use of pesticides and fertilizer
3.2	Forest Burning
4	Social Sustainability
4.1	ILO Conventions
4.1.1	Ratification
4.1.2	Wording of Conventions
4.1.3	Reports by national and international experts
4.2	Summary: social and labor concerned conflicts
4.3	National labor- and social legislation

Credible sustainability certification systems provide open access to their certificate database and additional certificate information

Valid Certificates

full-text search [search details](#) page 11 1059 total results 5

identificator	certificate holder	certified as	in put	add-ons	product cat.	issued	valid until	issued by	map	certificate	audit report
EU-ISCC-Cert-DE105-81129901	Kuala Lumpur Kepong Bhd, Kluang, Johor, Malaysia, Malaysia	FC, FG, OM	Palm			13.08.2012	12.08.2013	PCU			
EU-ISCC-Cert-DE105-82130101	Kuala Lumpur Kepong Bhd, Tawau, Malaysia	FC, FG, OM	Palm			13.08.2012	12.08.2013	PCU			
DE-B-BLE-BM-10-100-20120889	LPKS Saimnieks-V, Bauska, Latvia	FG				13.08.2012	12.08.2013	SGS			
DE-B-BLE-BM-10-100-20120928	Viterra, Geneva, SWITZERLAND	FG				13.08.2012	12.08.2013	SGS			
ISCC-PLUS-Cert-10012008	ADM Mainz GmbH, Mainz, GERMANY	OM, RE, BP, TR, WH	Soybean	-	FEED	13.08.2012	12.08.2013	SGS			

“First movers” will require a proven and recognized GHG calculation methodology for meeting increasing GHG threshold levels

Please enter data in green fields

0. Name of plantation

1. Individual input main product

Output

Main product: FFB yield per ha and year kg/ha*yr Source (internal documents)

2. Individual inputs emissions

2.1 Emissions from fertilizer and pesticides use

$$EM_{fertilizer} = f_{fertilizer} \left[\frac{kg}{ha * yr} \right] * \left(EF_{production} \left[\frac{kgCO_2}{kg} \right] + EF_{field} \left[\frac{kgCO_2}{kg} \right] \right)$$

fertilizer inputs

ammonium nitrate*	<input type="text" value="0,00"/>	kg/ha*yr	Source (internal documents)
ammonium sulfate*	<input type="text" value="0,00"/>	kg/ha*yr	
urea*	<input type="text" value="0,00"/>	kg/ha*yr	
P2O5	<input type="text" value="0,00"/>	kg/ha*yr	
K2O	<input type="text" value="0,00"/>	kg/ha*yr	
MgO	<input type="text" value="0,00"/>	kg/ha*yr	
CaO	<input type="text" value="0,00"/>	kg/ha*yr	
Other	<input type="text" value="0,00"/>	kg/ha*yr	

fertilizer emission factors

ammonium nitrate*	<input type="text" value="8,55"/>	kgCo2/kg N*	Source and year of publication
ammonium sulfate*	<input type="text" value="2,69"/>	kgCo2/kg N*	Ecoinvent 2.2 dataset, 2010
urea*	<input type="text" value="3,31"/>	kgCo2/kg N*	Ecoinvent 2.2 dataset, 2010
field emissions N	<input type="text" value="4,87"/>	kgCo2/kg	BLE-guideline sustainable biomass production, 2010
P2O5	<input type="text" value="1,29"/>	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
K2O	<input type="text" value="0,50"/>	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
MgO	<input type="text" value="1,06"/>	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
CaO	<input type="text" value="0,30"/>	kgCo2/kg	BLE-guideline sustainable biomass production, 2010
Other	<input type="text" value=""/>	kgCo2/kg	

* refers to the amount of nitrogen in the fertilizer

CO₂ emissions from fertilizer kgCO₂/ha*yr

GHG calculator

- uniform procedures
- transparent and fully documented
- update of all input data possible
- based on recognized RED methodology
- Comparability of results
- Calculation independent of final use
- Can be used for certification audits

A balanced cost/benefit structure should be an integral part of the continuous improvement program of a certification systems

Reduction of audit costs

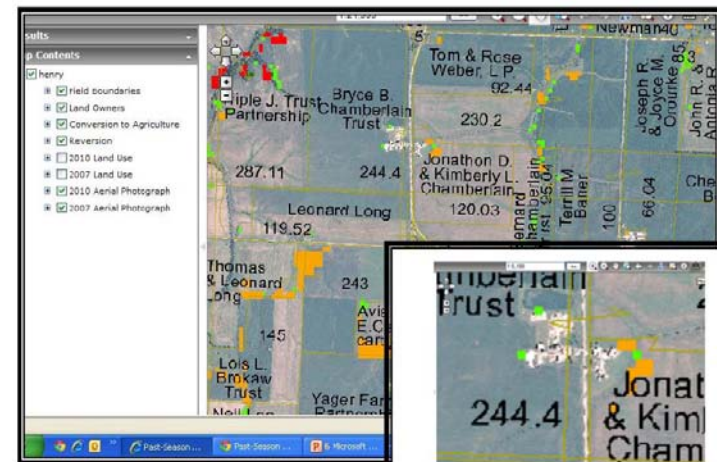
- Equivalence benchmarking for integrating existing legal frameworks or other standards
- Implementation of remote sensing tools to detect land use change

Equivalence benchmarking

Remote sensing (e.g. Land Viewer tool)

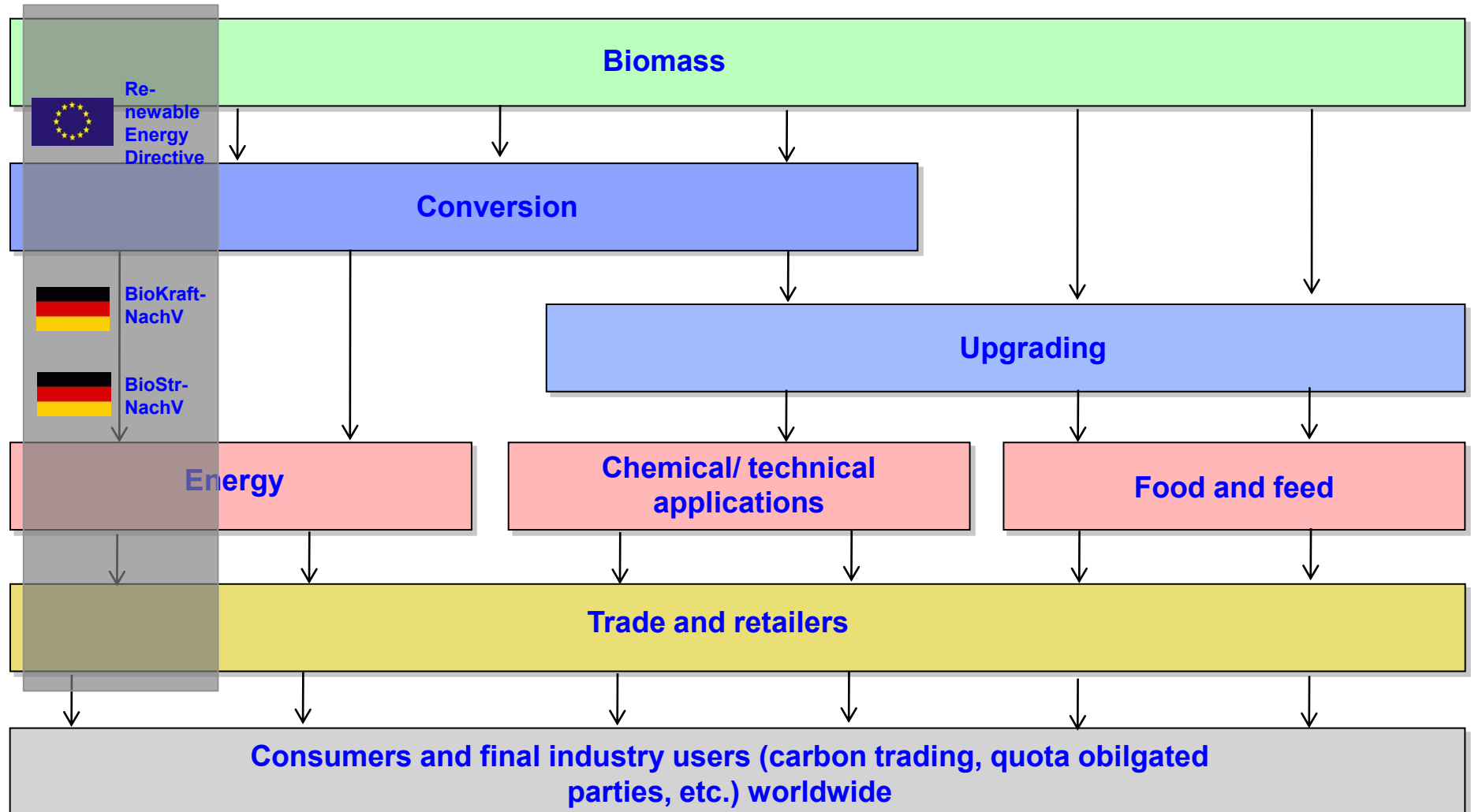
Criterion number	Source	Criterion	NA – Laws, Regulations and Control Mechanisms in Place
2.2 Natural water courses			
2.2.1	Sustainability	Natural vegetation areas around springs and natural watercourses are maintained or re-established	X The Natural Resource Conservation Service (NRCS) has conservation requirements including protection of springs and natural watercourses with are required as part of Farm Service Agency (FSA) participation. +90% of the farms in Nebraska participate in FSA programs.
2.3 Soil conservation and avoidance of soil erosion			
2.3.1	Sustainability	Good agricultural practices must be applied with respect to: Prevention and control of erosion, maintaining and improving soil nutrient balance, soil organic matter, soil pH, soil structure, soil biodiversity and prevention of salinisation. A soil management plan aimed at sustainable soil management, erosion prevention and erosion control must be documented. Annual documentation of applied good agricultural practices with respect to the abovementioned aspects must be in place	X The NRCS requires that all farms participating in FSA programs have their fields evaluated to determine whether any of the land is highly erodible. If so, a Highly Erodible Land plan is prepared by the NRCS and is required to be followed.
2.3.2	Cross Compliance	Field cultivation techniques used to reduce the possibility of soil erosion	X See above.
2.4 Soil organic matter and soil structure			
2.4.1	Cross Compliance	Soil organic matter is preserved	X See above

Illustrative example



Source: Steffen Mueller, Ken Copenhaver University of Illinois 2012

One stop shopping opportunity for all kinds of biomass, industry segments and applications is a key success factor for system users



Is there a certification system available meeting those important features? – There is : International Sustainability and Carbon Certification

The screenshot shows the ISCC website homepage. At the top, there is a navigation bar with the ISCC logo (a globe with a magnifying glass) and the text "International Sustainability & Carbon Certification". To the right of the logo are four main navigation links: "ISCC System" (What is the ISCC System?), "Certification Process" (How can I get a certificate?), "Certificate Holders" (Who holds an ISCC certificate?), and "ISCC Association" (How can I participate?). A search bar and a language selector set to "English" are also present.

The main content area features a large blue banner with the text "ISCC System" and "Secure, sustainable and eco-friendly. ISCC certified biomass and bioenergy." Below this text is a button labeled "ISCC System". To the right of the text are three images: a river with a boat, a grocery store aisle, and an industrial facility. Below the grocery store image is a box for "ISCC PLUS" with the text "For food, feed and material use" and a "more" button.

Below the banner is a section titled "ISCC - security through certification". The text reads: "ISCC aims at establishing an international, practicable and transparent system to certify biomass and bioenergy. ISCC focuses on". This is followed by a list of four bullet points:

- > greenhouse gas reduction,
- > sustainable land use,
- > protection of natural habitats and
- > social sustainability.

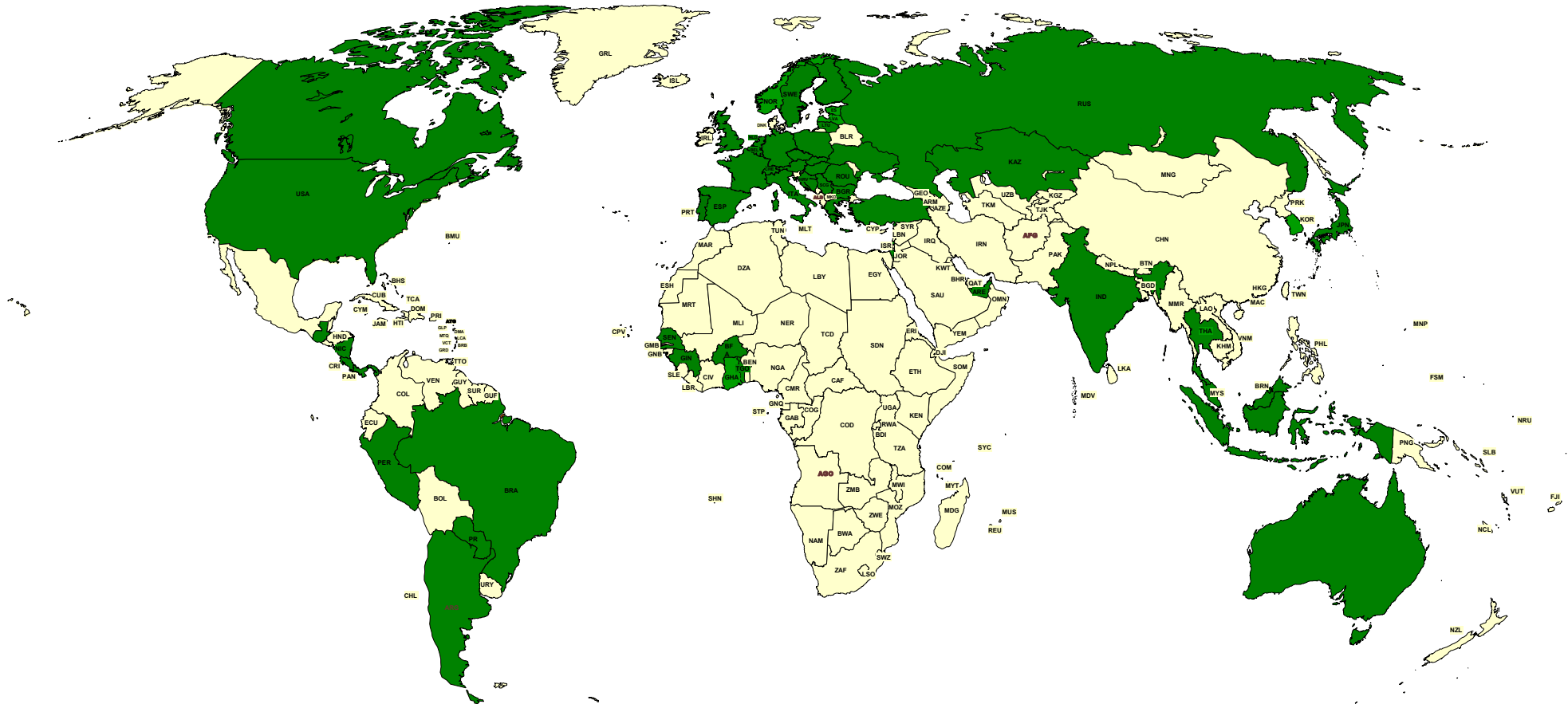
On the right side of the page, there is a sidebar with a section titled "News & Events". Under this section is a sub-section titled "Sustainable Cocoa Forum" with the text: "On June 13, 2012 the Sustainable Cocoa Forum has been founded in Berlin. ISCC participated as a founding member in the forum."

ISCC is currently the market leader with respect to the number of issued certificates and global coverage – more than 1600 certificates ...



* Numbers per August 29, 2012

... from system users in 66 countries



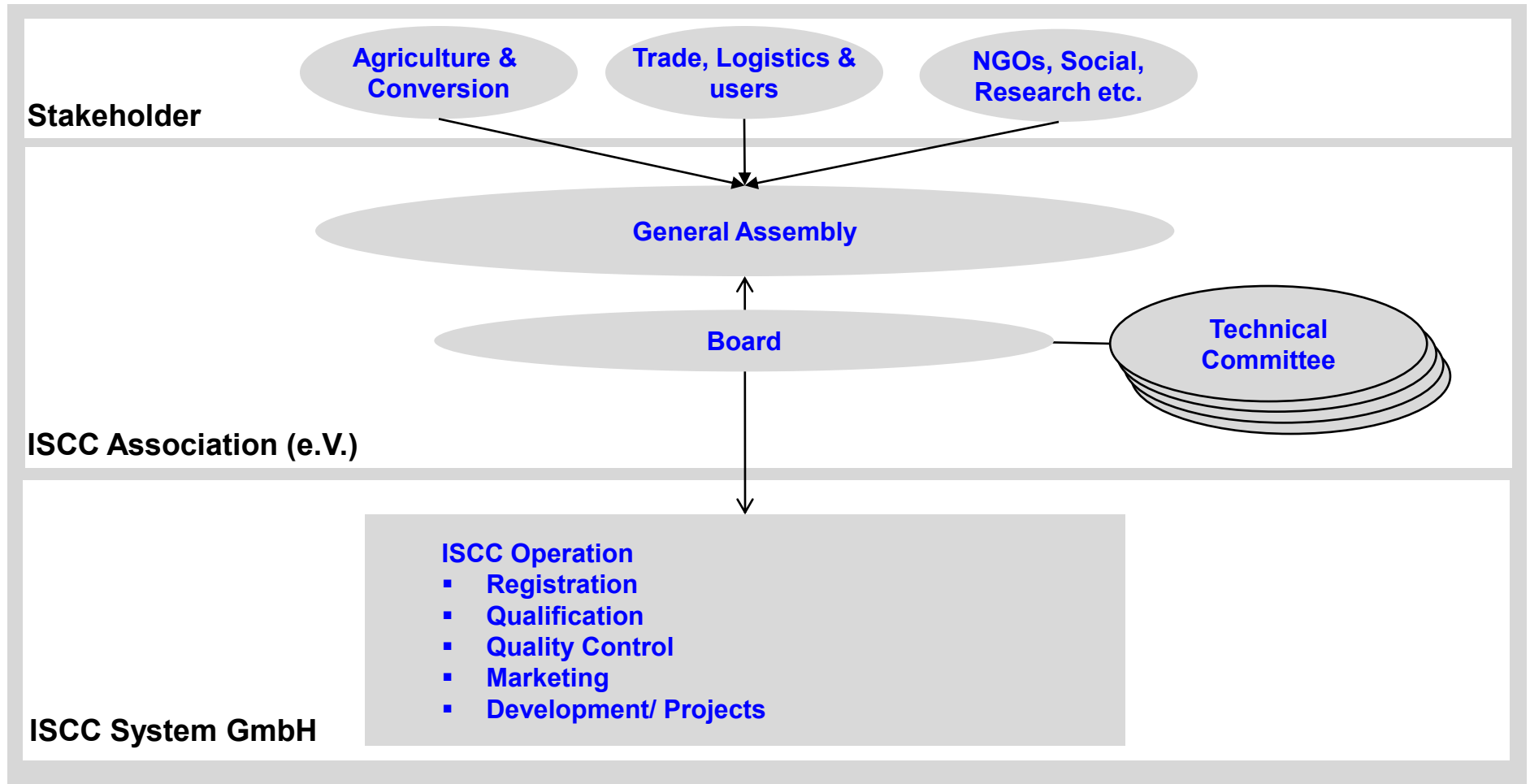
 ISCC registration /certificates

ISCC certification services can be provided by currently 22 certification bodies worldwide

Certification bodies using the ISCC scheme



ISCC is open for all stakeholder groups – agriculture, trade, industry, NGOs and research institutions



ISCC members represent all kinds of biomass, industry segments and applications

Selection Members



The ISCC certificate database is open for everybody and offers a variety of information ...

ISCC
International Sustainability & Carbon Certification

Deutsch

ISCC-System
Was ist das ISCC-System?

Zertifizierungs-Prozess
Wie bekomme ich ein ISCC-Zertifikat?

Zertifikate-Inhaber
Wer hat ein ISCC-Zertifikat?

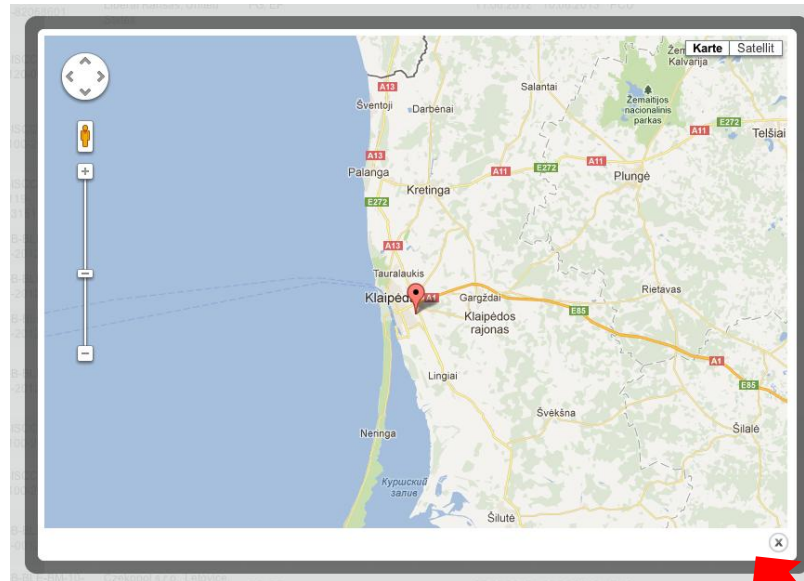
ISCC-Verein
Wie kann ich mitwirken?

Alle Zertifikate

Volltextsuche Detailsuche Seite 1 ▶ 1628 Ergebnisse insgesamt alle ▾

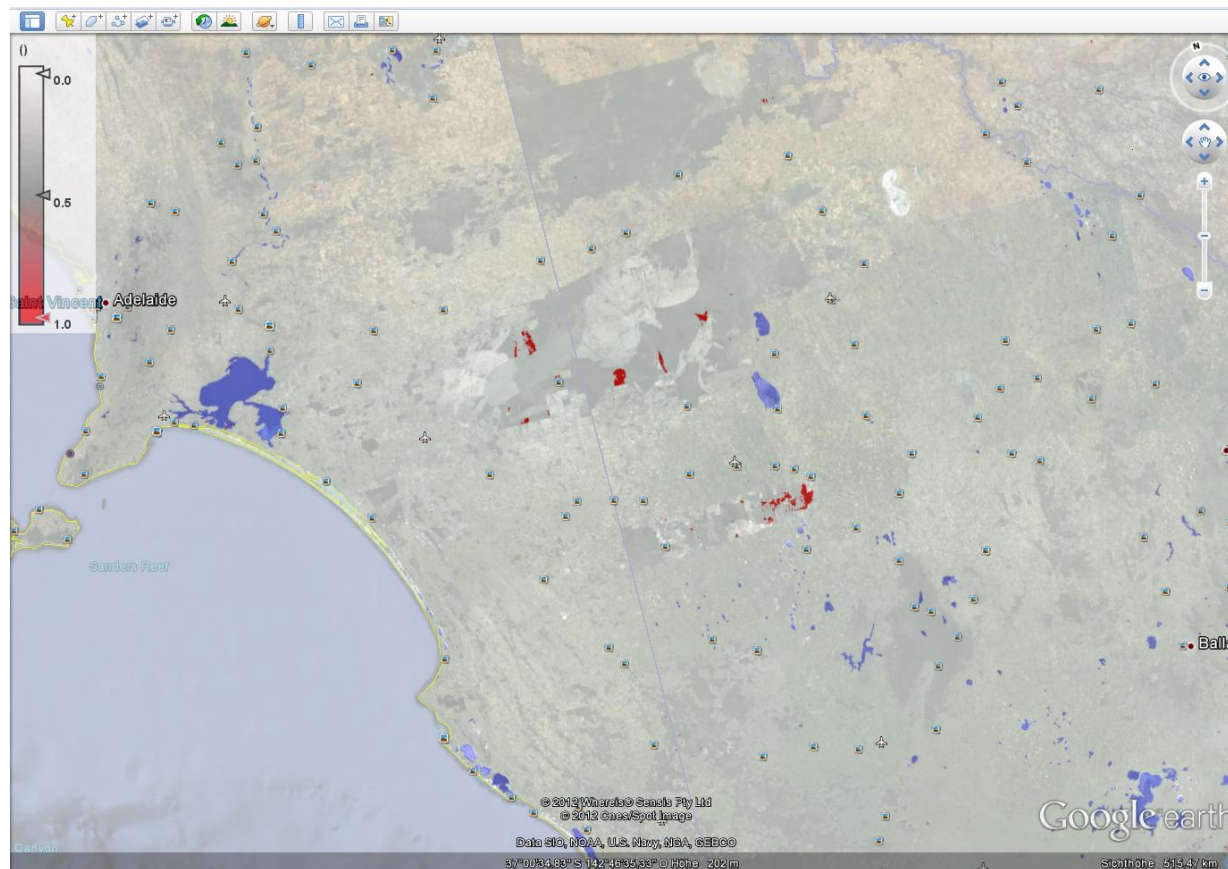
Identifikator	Inhaber	Zert. als	In put	Add Ons	Prod. Kat.	gültig ab	gültig bis	Ausst.	Karte	Zertifikat	Audit Bericht
DE-B-BLE-BM-10-105-82068601	Arkalon Ethanol, LLC., Liberal Kansas, United States	FG, EP				11.06.2012	10.06.2013	PCU			
EU-ISCC-Cert-DE120-00120268	UAB Mestilla, Klaipeda, Lithuania	FC, FG, OM, BP	Rape / canola			10.06.2012	09.06.2013	BVC			
EU-ISCC-Cert-DE100-20120114	ADM International Sàrl, Rolle, Switzerland	FC, FG, TR, WH	Rape / canola, Soybean, Palm, UCO			08.06.2012	07.06.2013	SGS			

... such as insights into the location of an ISCC certificate holder and the certificate

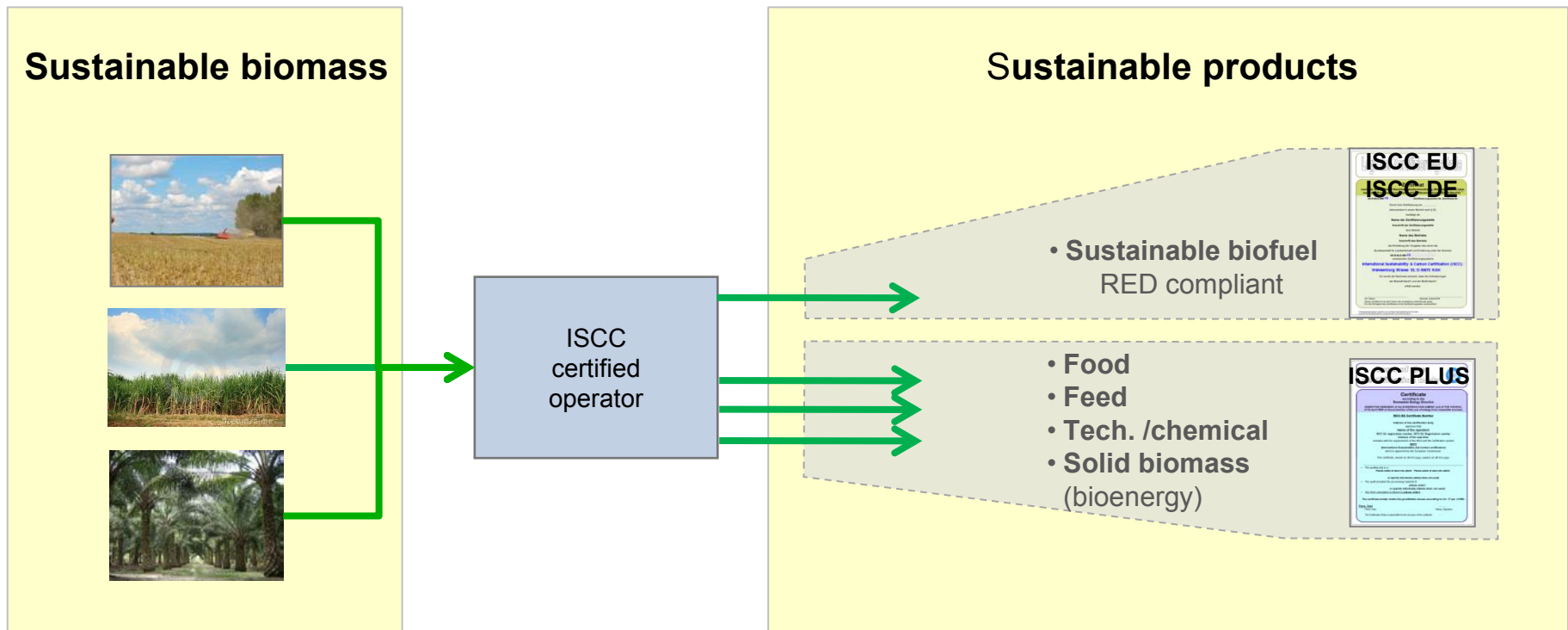


DE-B-BLE-BM-10-105-82068601	Arkalon Ethanol, LLC., Liberal Kansas, United States	FG, EP		11.06.2012	10.06.2013	PC		
EU-ISCC-Cert-DE120-00120268	UAB Mestilla, Klaipėda, Lithuania	FC, FG, OM, BP	Rape / canola	10.06.2012	09.06.2013	BVC		
EU-ISCC-Cert-DE100-20120114	ADM International Sàrl, Rolle, Switzerland	FC, FG, TR, WH	Rape / canola, Soybean, Palm, UCO	08.06.2012	07.06.2013	SGS		

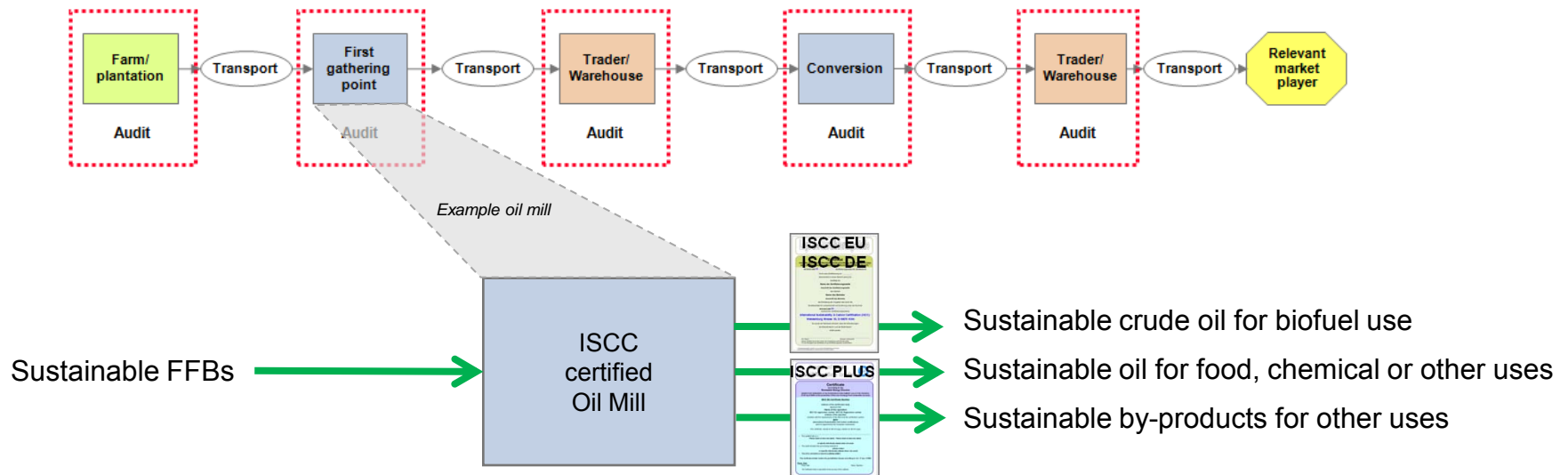
ISCC also provides remote sensing detection services – example identification of areas where forest delogging took place after 2008



ISCC offers one stop shopping for all kinds of biomass – ISCC DE/EU for regulated biofuels markets and ISCC PLUS for all other applications



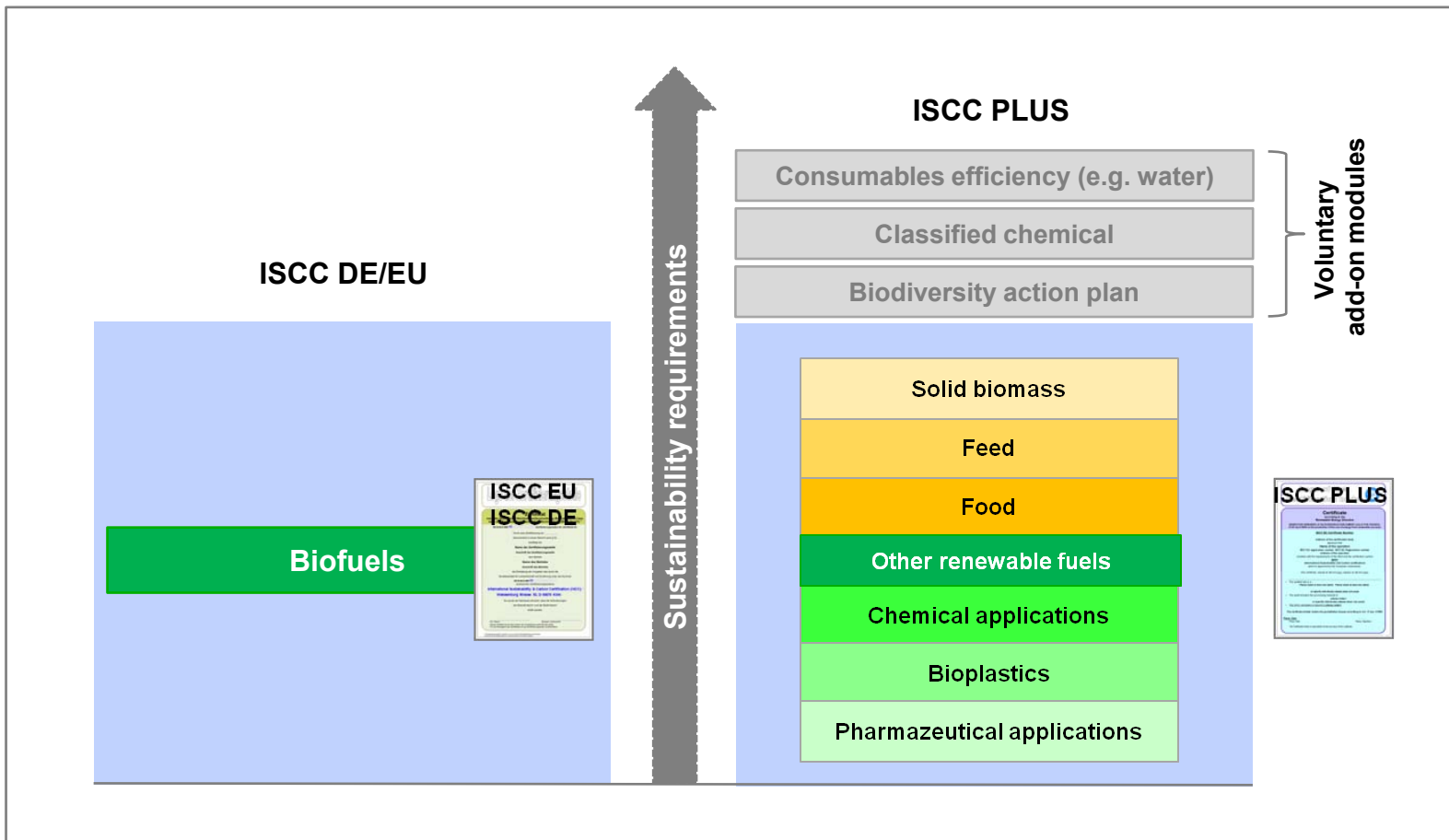
Already RED certified system users have the chance to untap additional market opportunities – example oil mill



Additional market opportunities and economies of scale for ISCC system users

- ➔ Oil mills and refineries may extend their sustainable product portfolio with the ISCC PLUS certificate
- ➔ Additional revenues by selling sustainable food, feed and other by-products
- ➔ Traders and first gathering points: economies of scale (i.e. allocation of certification costs to higher volumes)
- ➔ Plantations: untapping additional customer channels

ISCC DE/EU and ISCC PLUS sustainability requirements are equivalent – system users may apply add-ons to best comply with their customer needs





Thank you for your attention!

Andreas Feige
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