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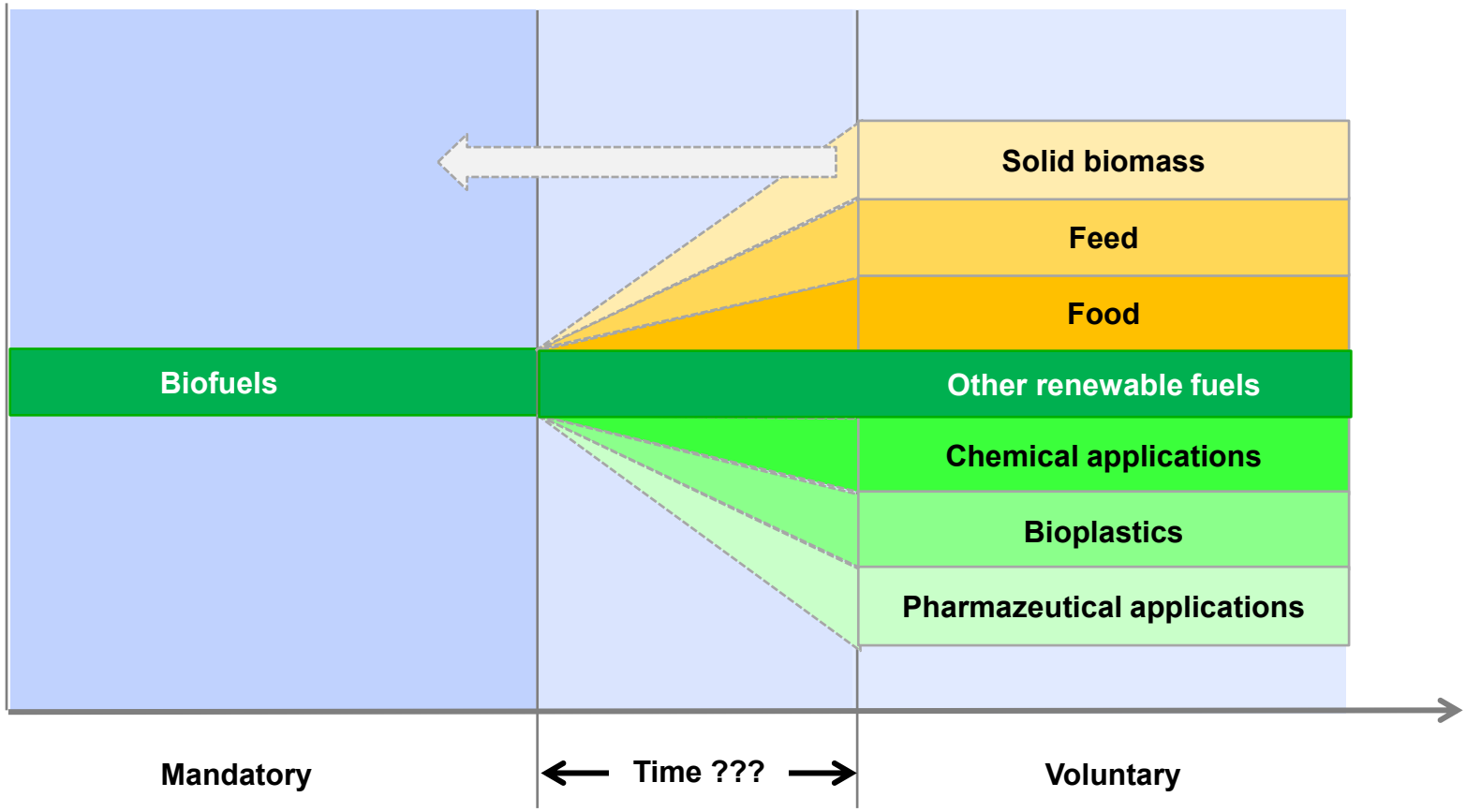
Sustainability is a global mega trend – not just a temporarily phenomena

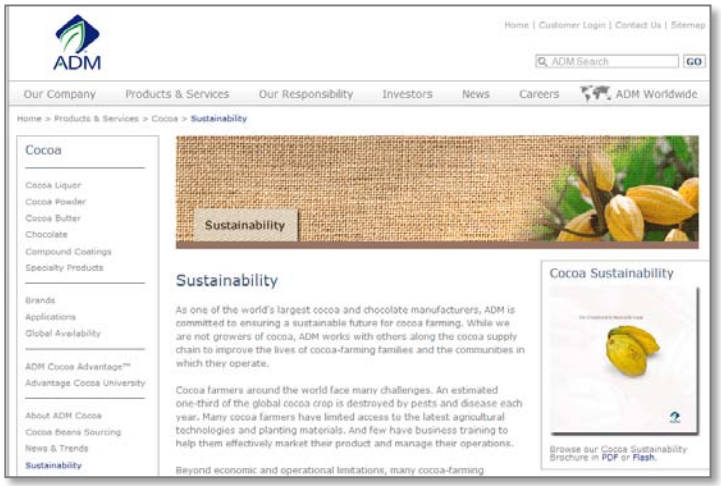
- Requests for sustainable cultivation and production – initially driven by NGOs – are no longer a a temporarily phenomena
- Sustainability requirements will affect many market segments in different regions of the world with different intensity in time:
  - Food
  - Feed
  - Chemical industry
  - Biofuels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

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

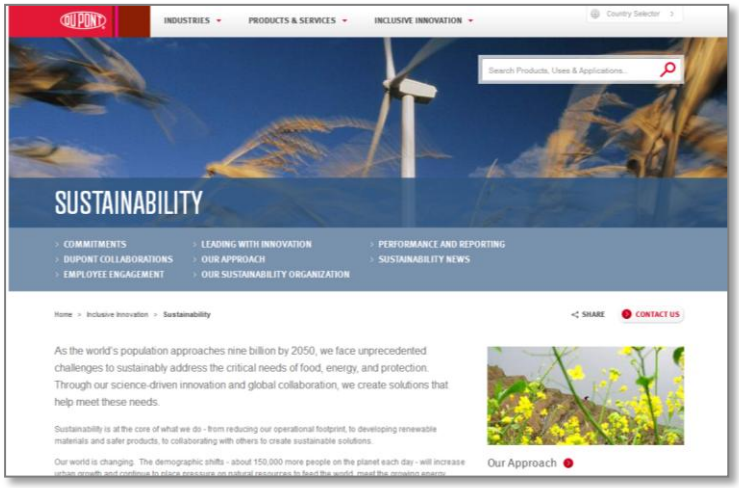


Company or initiative driven sustainability requests may vary with respect to targets and concreteness …

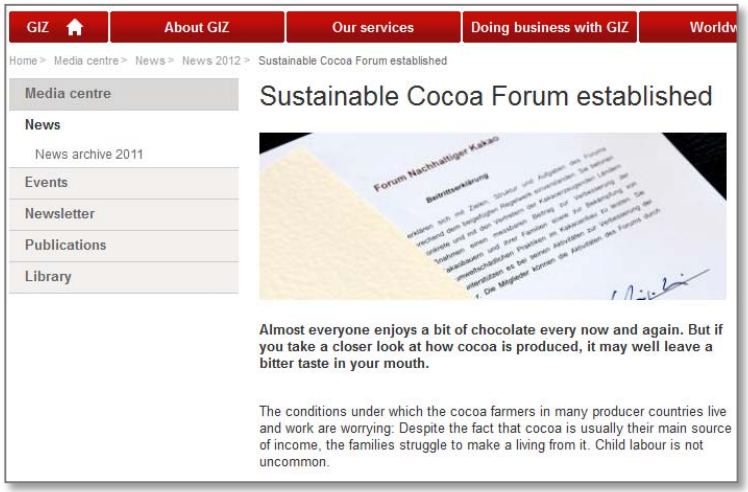
Source: Lufthansa



Source: ADM



Source: Dupont



Source: GIZ

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

ENDS Europe

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NEWS

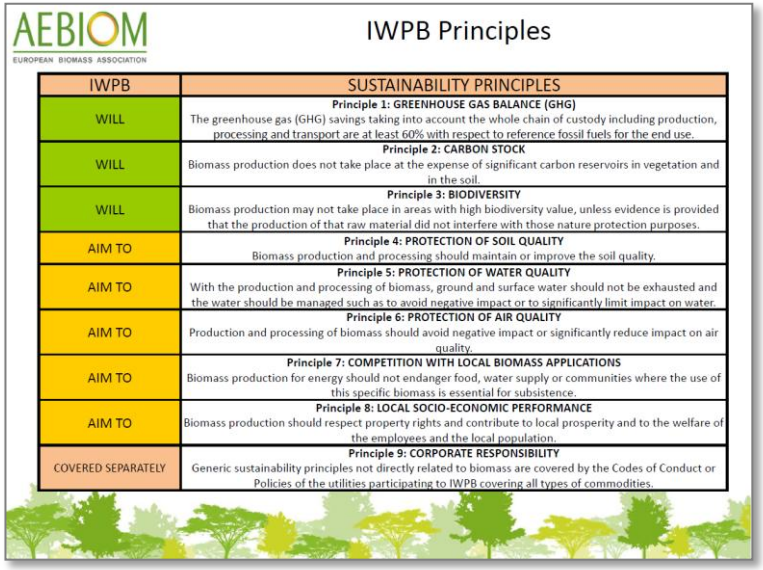
EC to propose EU-wide criteria for biomass

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.

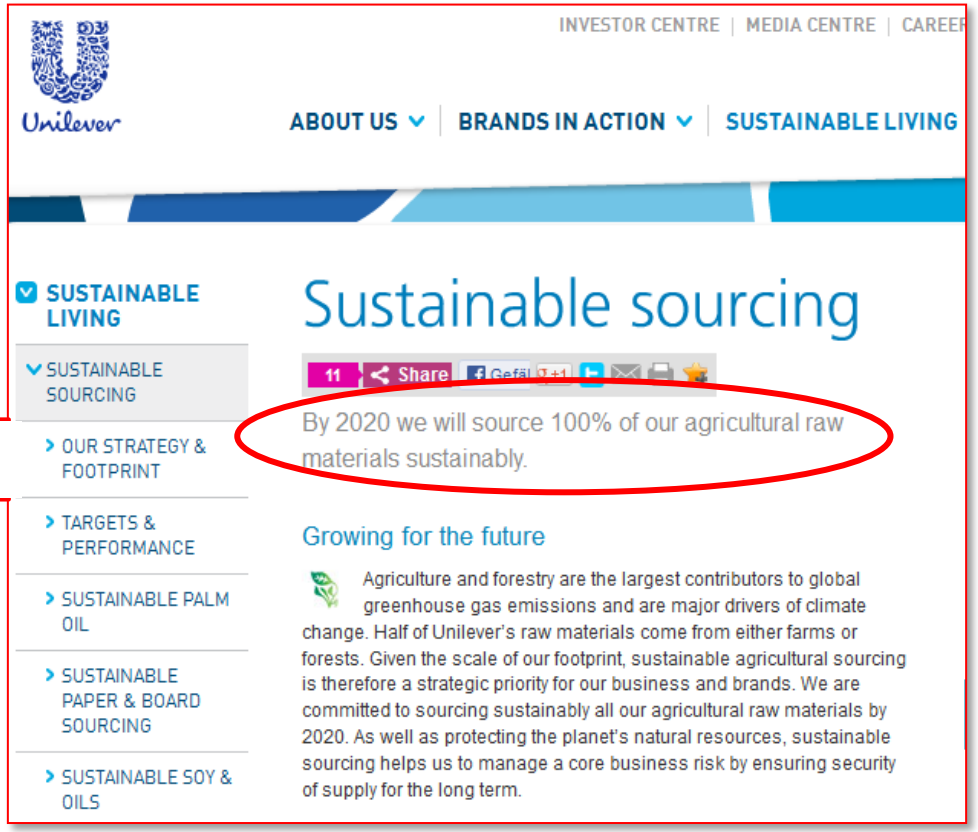
Source: AEBIOM

… 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
- …

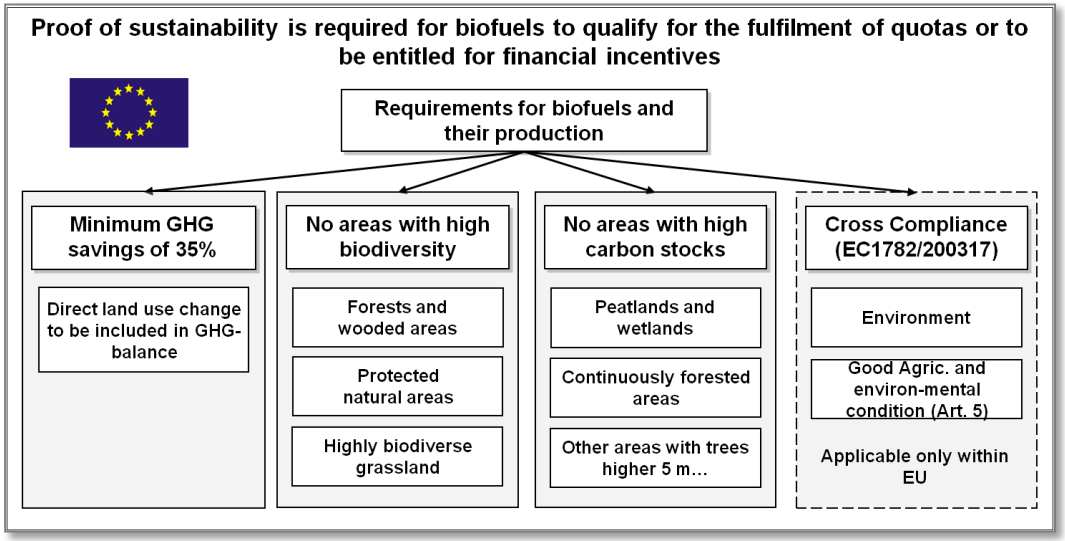
➔ **Timeline impact difficult to predict**



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

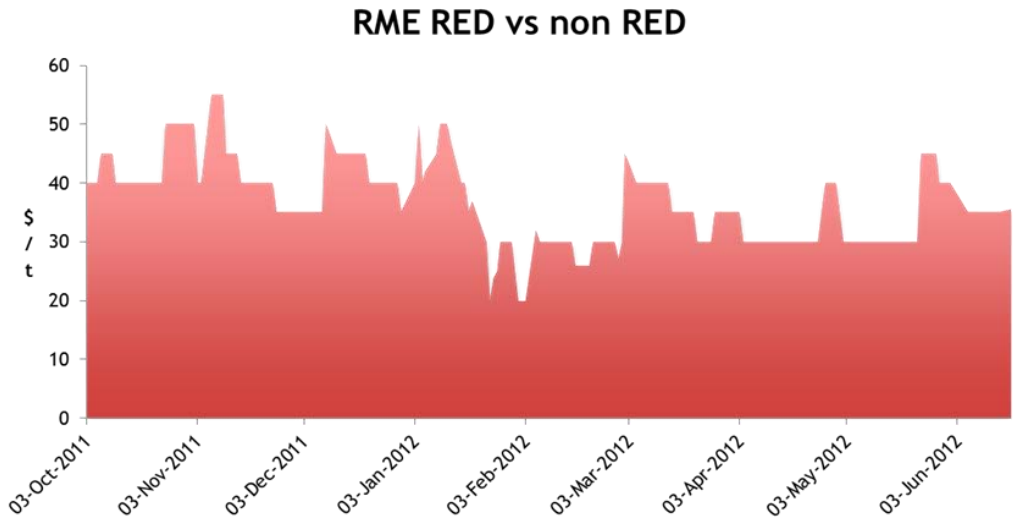
Clear benefits for a ‚first mover‘ strategy

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

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



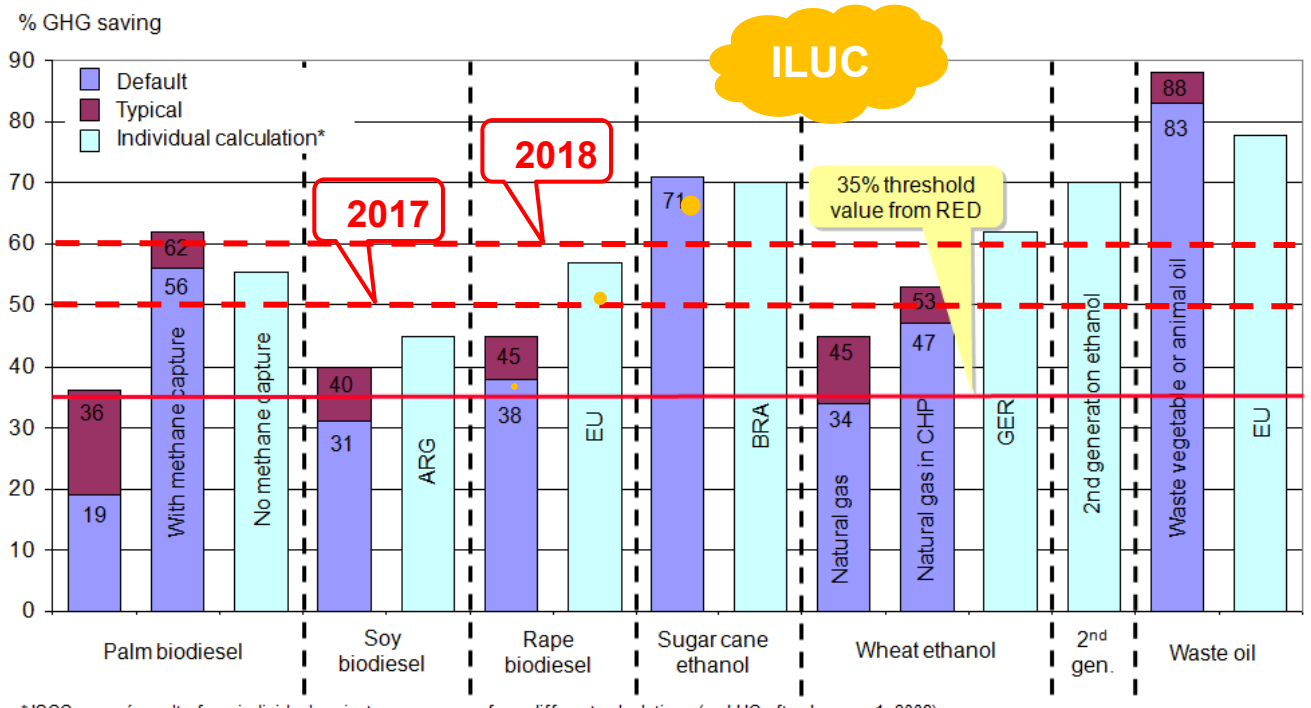
Source: Argus Media

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

Increasing sustainability requirements anticipated

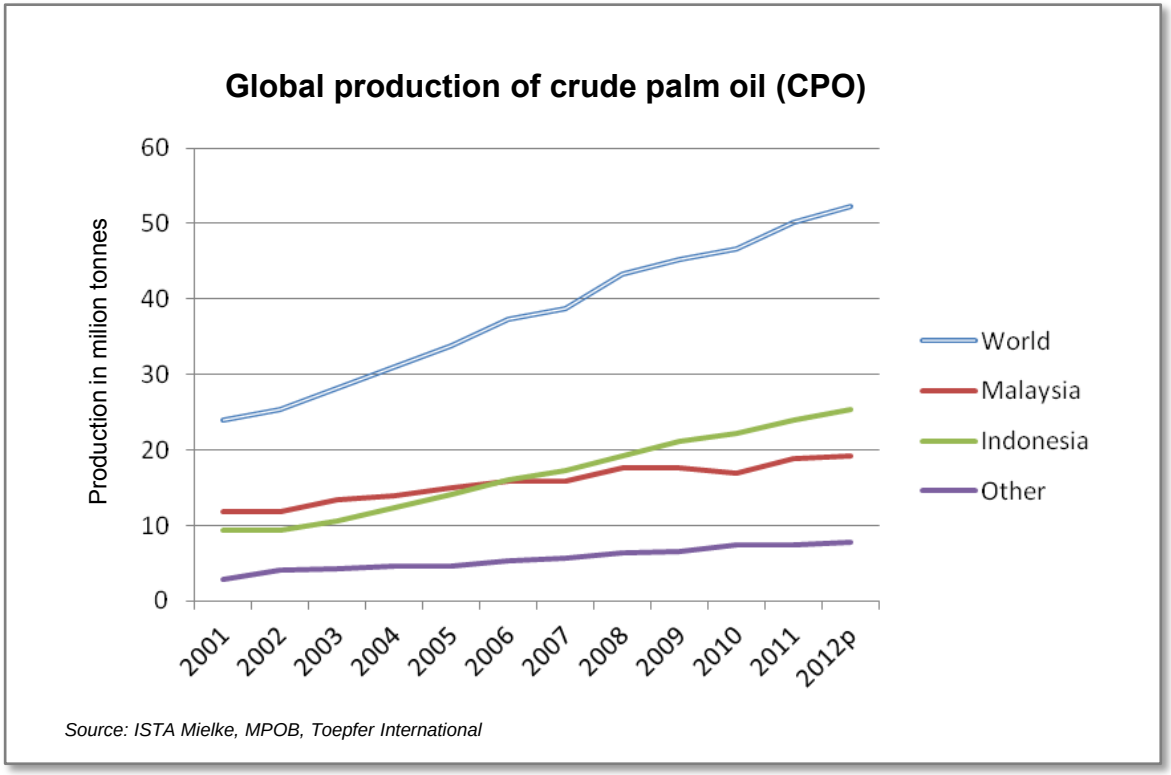
- GHG savings from 35% to 50% in 2017 and 60% in 2018 (already defined within RED)
- Additional ILUC GHG burden?
- Additional RED sustainability criteria?
  - Air
  - Water
  - Soil
  - Social

Significant efforts required for meeting future GHG savings targets



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

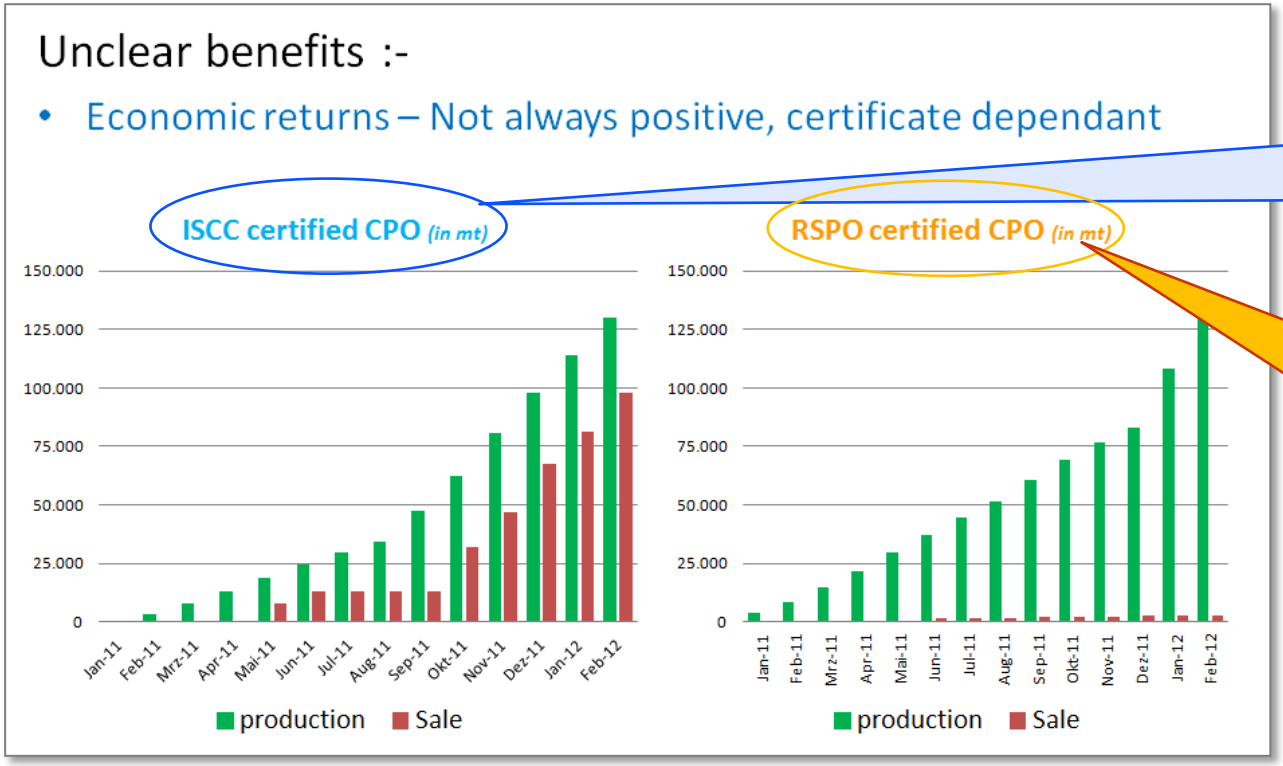
Growth strategies must not necessarily be focused on quantity – Malaysia may opt for qualitative growth



Source: ISTA Mielke, MPOB, Toepfer International

- 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



- 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)

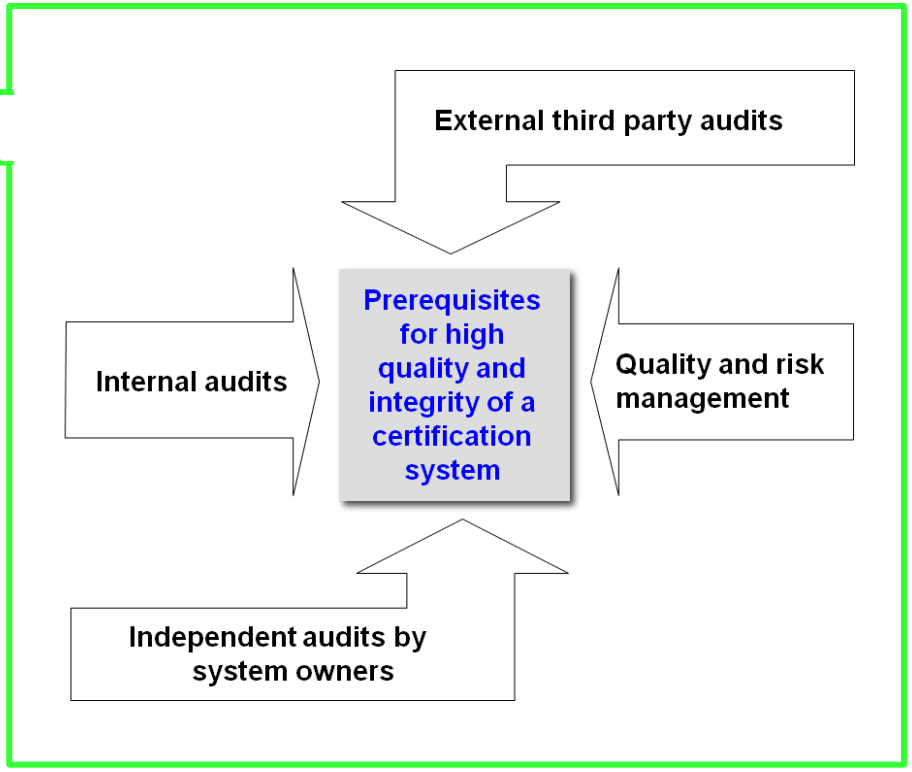
Source: Felda

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

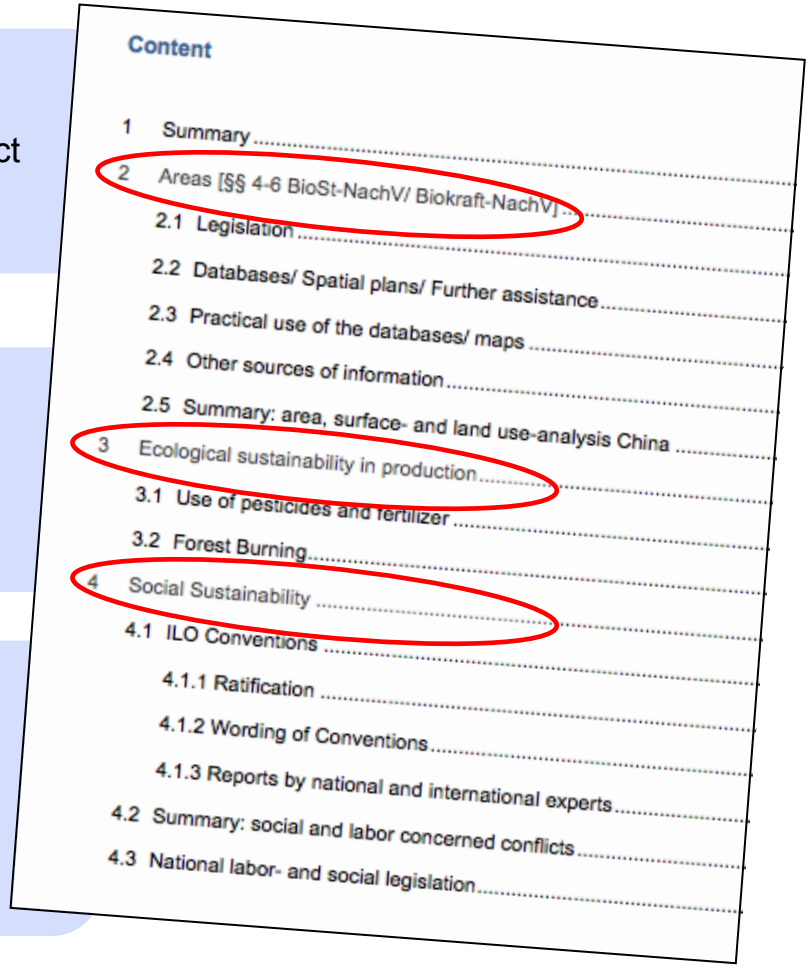
- Amount of forest and primary forest
- Existence of No-go areas according to databases like WDPA, Ramsar-Wetlands, Intact Forest Landscape
- National biofuels programs and their impacts

Ecological Sustainability

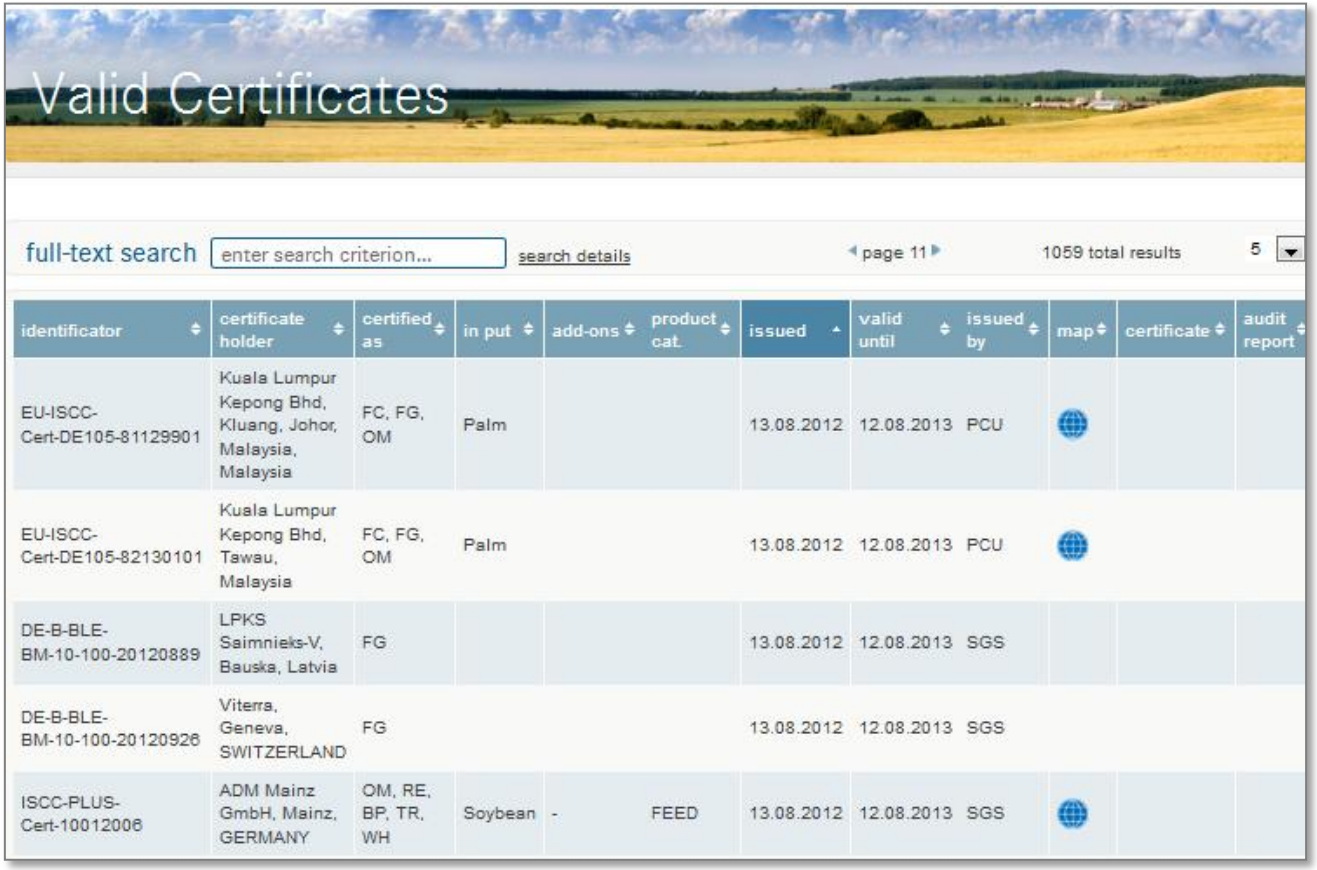
- Country-specific use of fertilizer
- Registration, use, ban and restriction of pesticides
- Forest fires, slash and burn practices
- Poisoning statistics, environmental issues

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

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



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-10-100-20120926	Viterra, Geneva, SWITZERLAND	FG				13.08.2012	12.08.2013	SGS			
ISCC-PLUS-Cert-10012006	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				Source (internal documents)
Main product:	FFB yield per ha and year	0	kg/ha*yr	
2. Individual inputs emissions				
2.1 Emissions from fertilizer and pesticides use				
$EM_{fertilizer} = fertilizer\left[\frac{kg}{ha*yr}\right]*\left(EF_{production}\left[\frac{kgCO_2}{kg}\right]+EF_{field}\left[\frac{kgCO_2}{kg}\right]\right)$				
fertilizer inputs				Source (internal documents)
ammonium nitrate*		0,00	kg/ha*yr	
ammonium sulfate*		0,00	kg/ha*yr	
urea*		0,00	kg/ha*yr	
P2O5		0,00	kg/ha*yr	
K2O		0,00	kg/ha*yr	
MgO		0,00	kg/ha*yr	
CaO		0,00	kg/ha*yr	
Other		0,00	kg/ha*yr	
fertilzier emission factors				Source and year of publication
ammonium nitrate*		8,55	kgCo2/kg N*	Ecoinvent 2.2 dataset, 2010
ammonium sulfate*		2,69	kgCo2/kg N*	Ecoinvent 2.2 dataset, 2010
urea*		3,31	kgCo2/kg N*	Ecoinvent 2.2 dataset, 2010
field emissions N		4,87	kgCo2/kg	BLE-guideline sustainable biomass production, 2010
P2O5		1,29	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
K2O		0,50	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
MgO		1,06	kgCo2/kg	Ecoinvent 2.2 dataset, 2010
CaO		0,30	kgCo2/kg	BLE-guideline sustainable biomass production, 2010
Other			kgCo2/kg	
* refers to the amount of nitrogen in the fertilizer				
CO_2 emissions from fertilizer		0	$kgCO_2$/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 inde-pendent of final use
- Can be used for certification audits

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

Reduction of audit costs

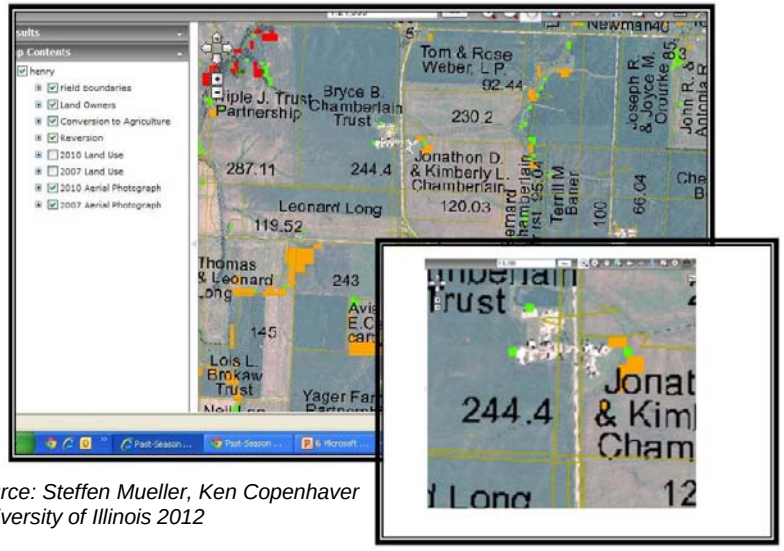
- Equivalence benchmarking for integrating existing legal frameworks or other standards
- Implementation of remote sensing tools to detect land use change

Equivalence benchmarking

Illustrative example

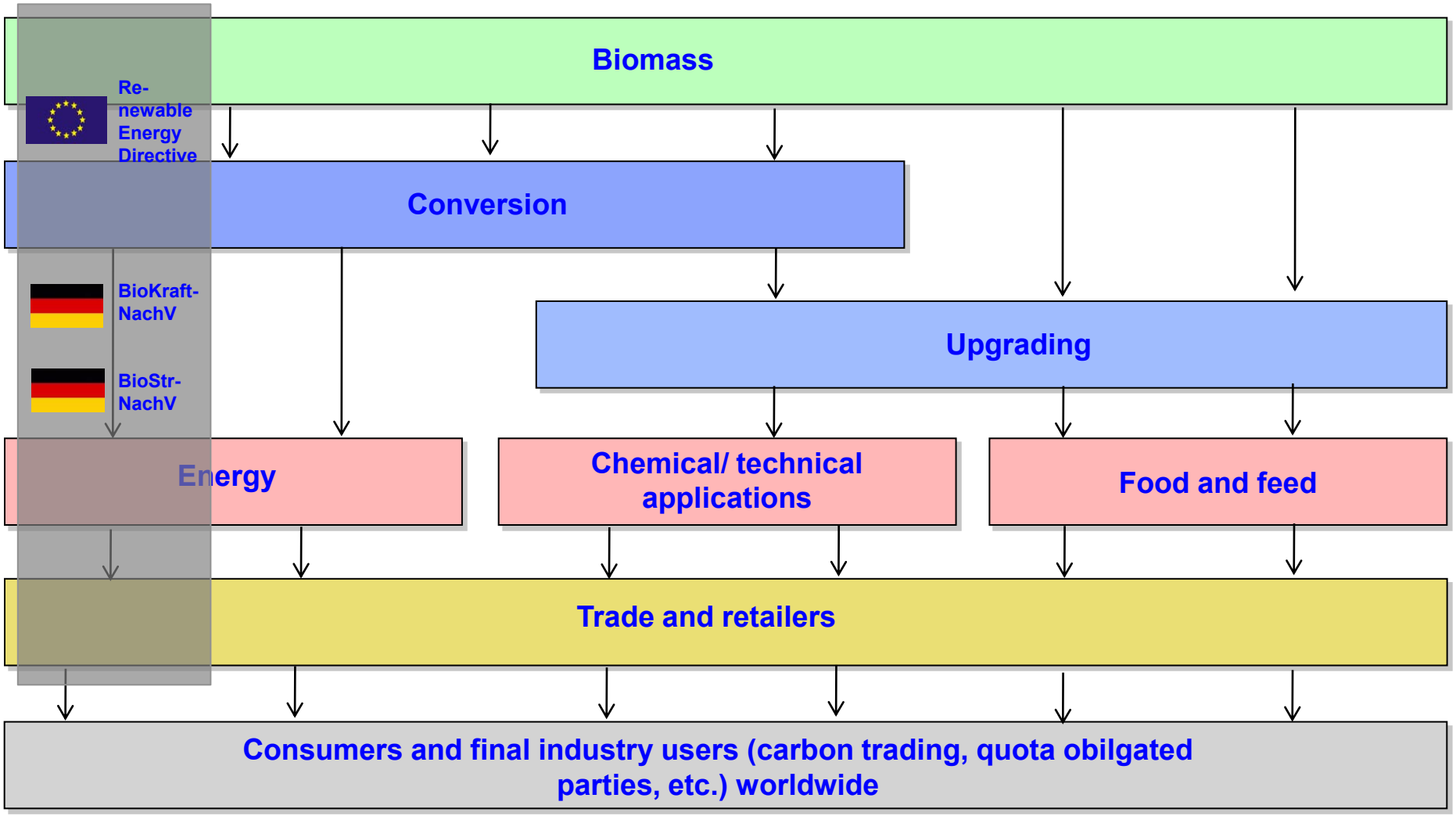
Criterion number	Source	Criterion			A – Laws, Regulations and Control Mechanisms in Place
2.2 Natural water courses					
2.2.1	Sustainability	Natural vegetation areas around springs and natural watercourses are maintained or re-established		X	The Natural Resource Conservation Service (NRCS) has conservation 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

Remote sensing (e.g. Land Viewer tool)



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

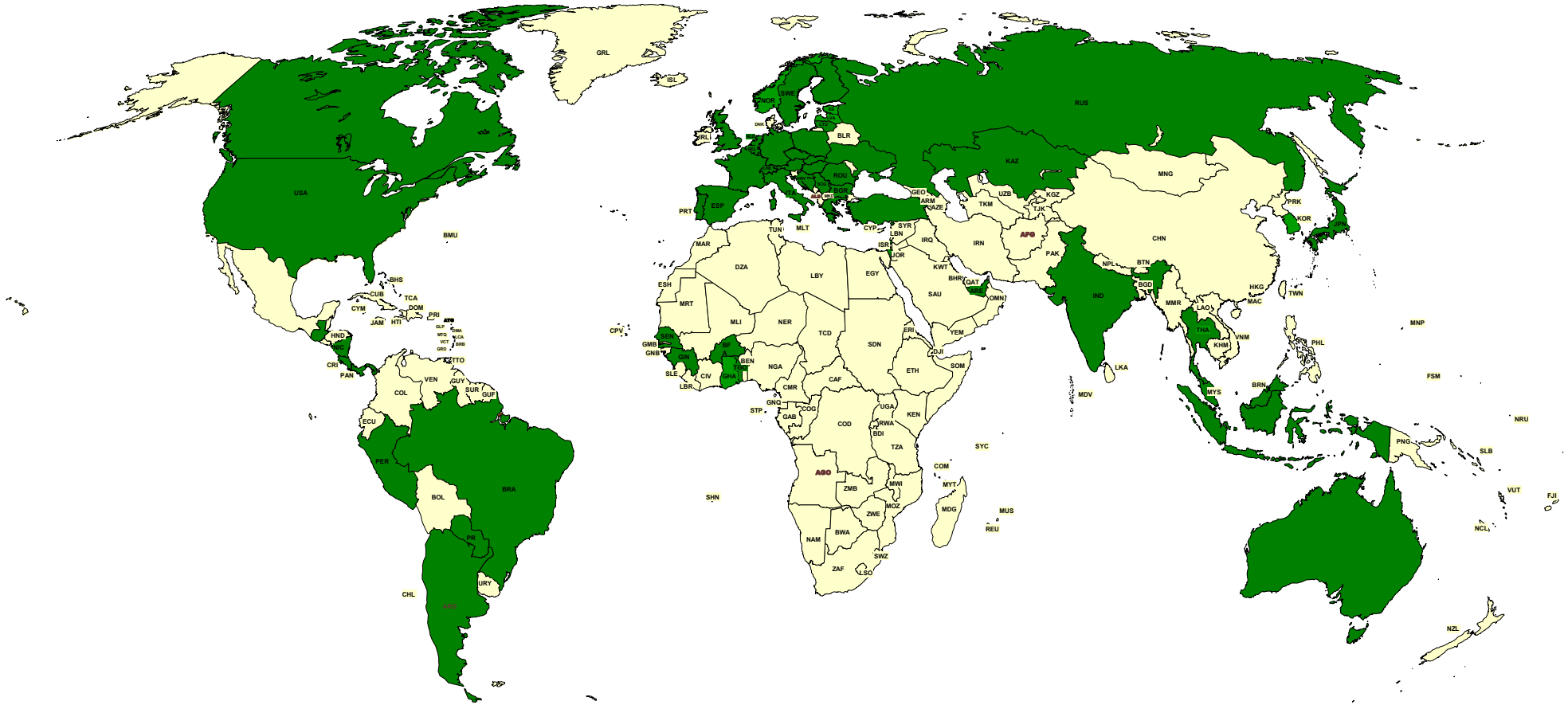


Is there a certification system available meeting those important features? – There is : International Sustainability and Carbon Certification

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

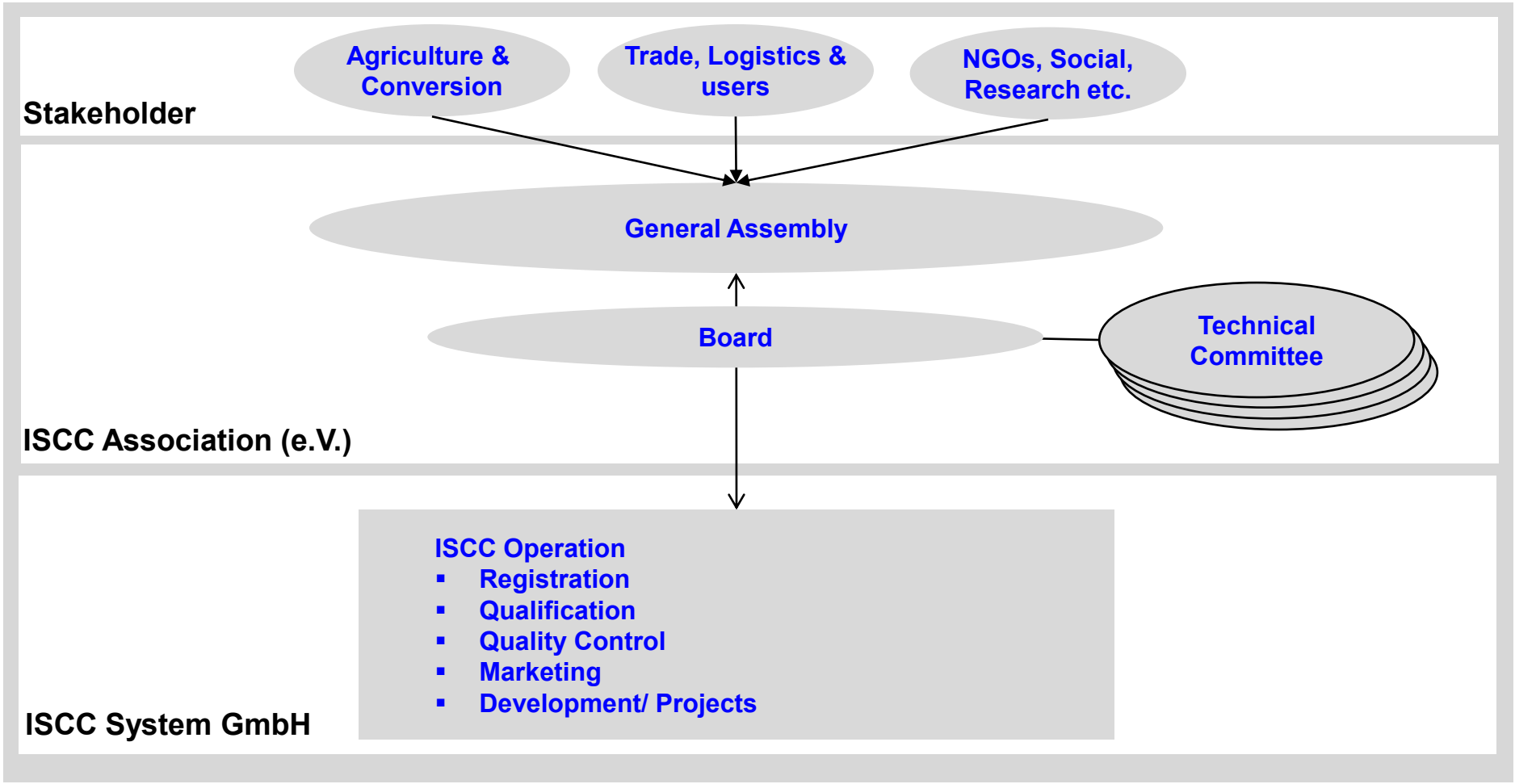
… from system users in 66 countries



ISCC registration /certificates

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

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?

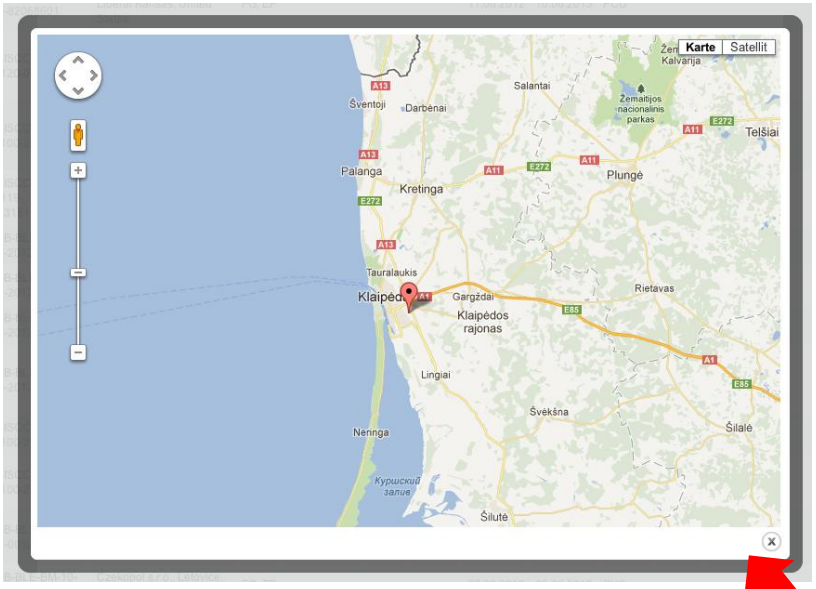
ISCC-Verein
Wie kann ich mitwirken?

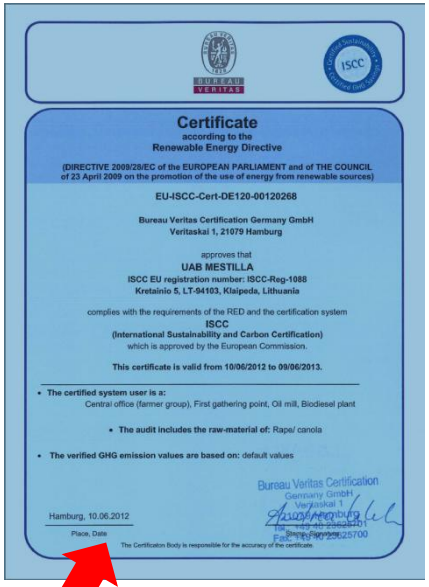
Alle Zertifikate

Volltextsuche | Suchbegriff eingeben... | 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			

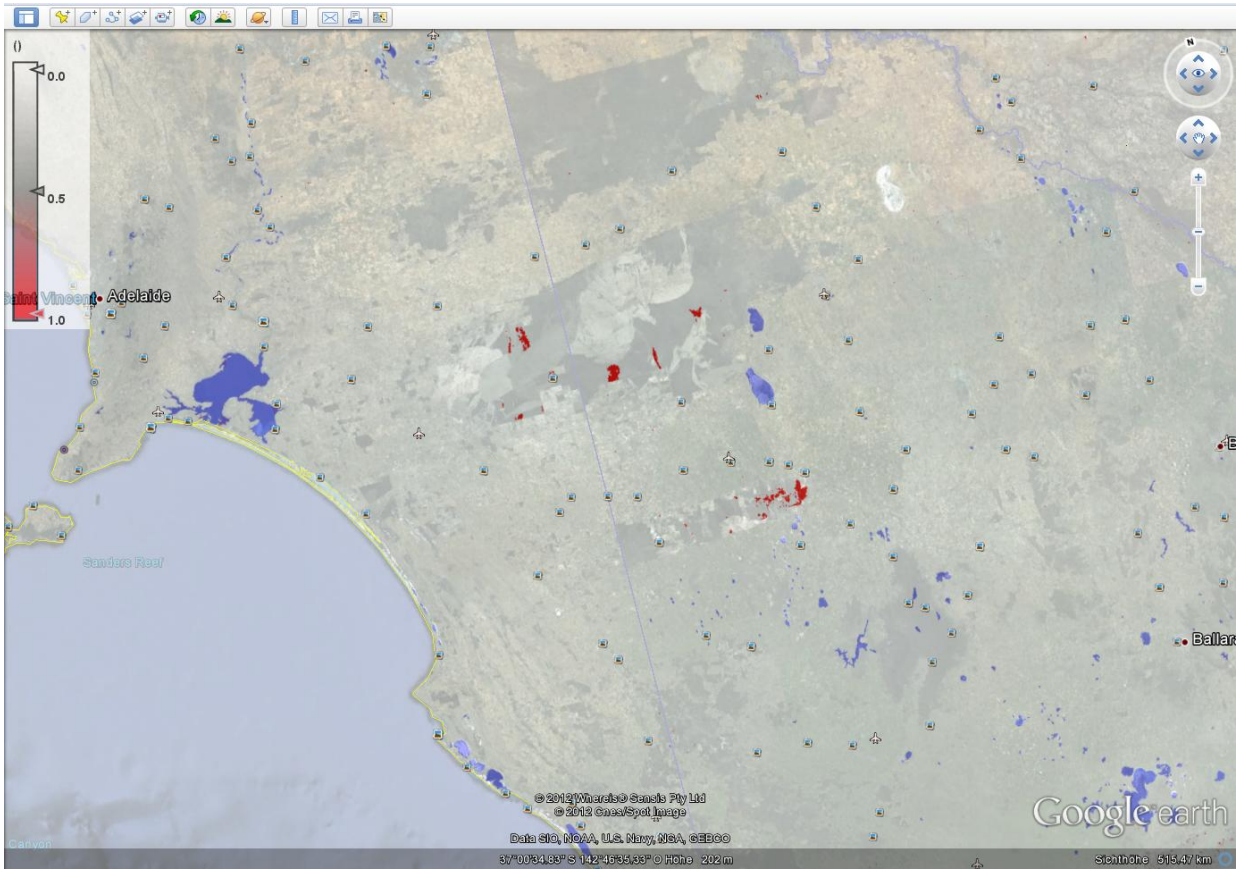
... such as insights into the location of an ISCC certificate holder and the certificate



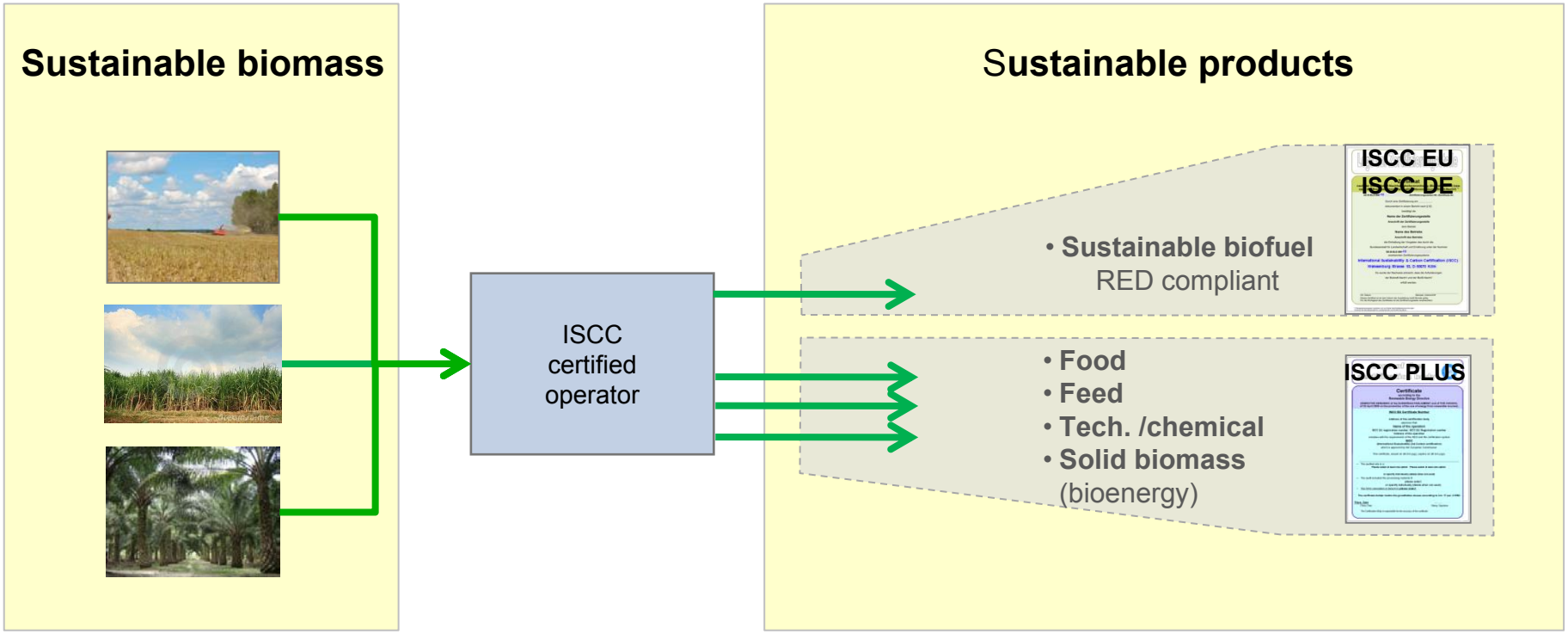

Certificate
according to the
Renewable Energy Directive
(DIRECTIVE 2009/28/EC of the EUROPEAN PARLIAMENT and of THE COUNCIL of 23 April 2009 on the promotion of the use of energy from renewable sources)
EU-ISCC-Cert-DE120-00120268
Bureau Veritas Certification Germany GmbH
Veritaskai 1, 21079 Hamburg
approves that
UAB MESTILLA
ISCC EU registration number: ISCC-Reg-1088
Kretainio 5, LT-94103, Klaipeda, Lithuania
complies with the requirements of the RED and the certification system
ISCC
(International Sustainability and Carbon Certification)
which is approved by the European Commission.
This certificate is valid from 10/06/2012 to 09/06/2013.
- The certified system user is a:
Central office (farmer group), First gathering point, Oil mill, Biodiesel plant
- The audit includes the raw-material of: Rape/ canola
- The verified GHG emission values are based on: default values
Hamburg, 10.06.2012
Place, Date

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, 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		

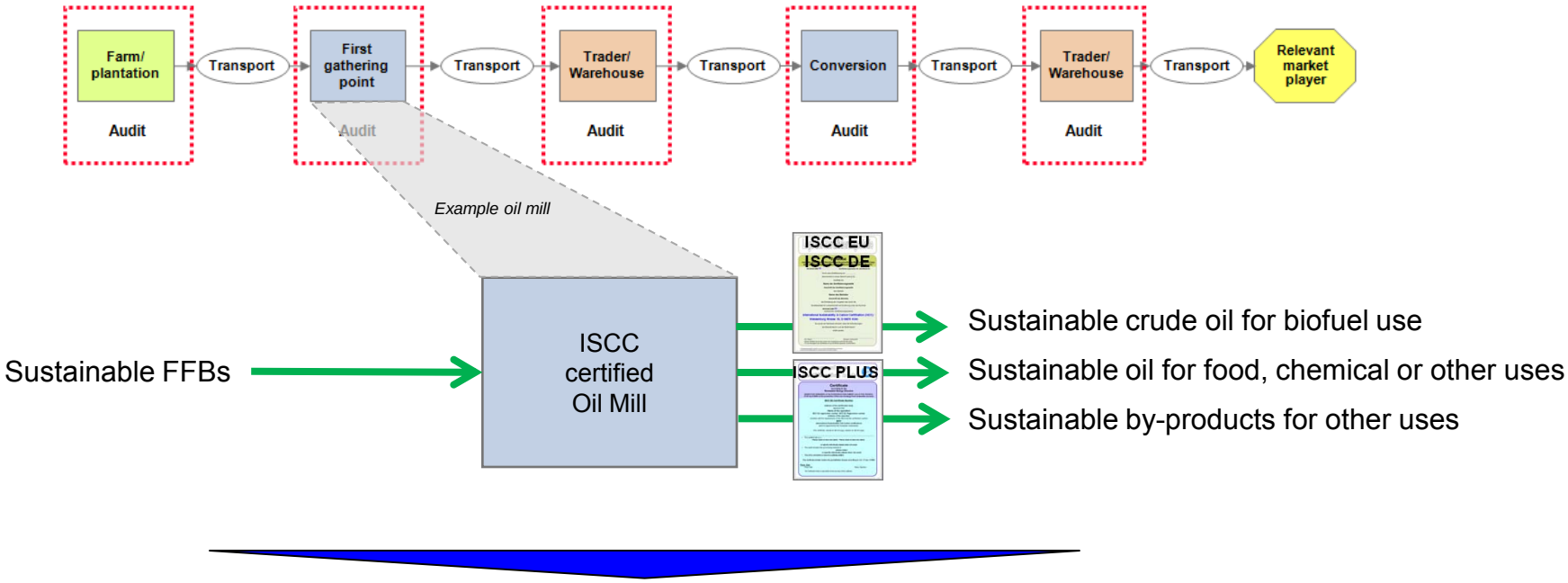
ISCC also provides remote sensing detection services – example identification of areas where forest delogging took place after 2008



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



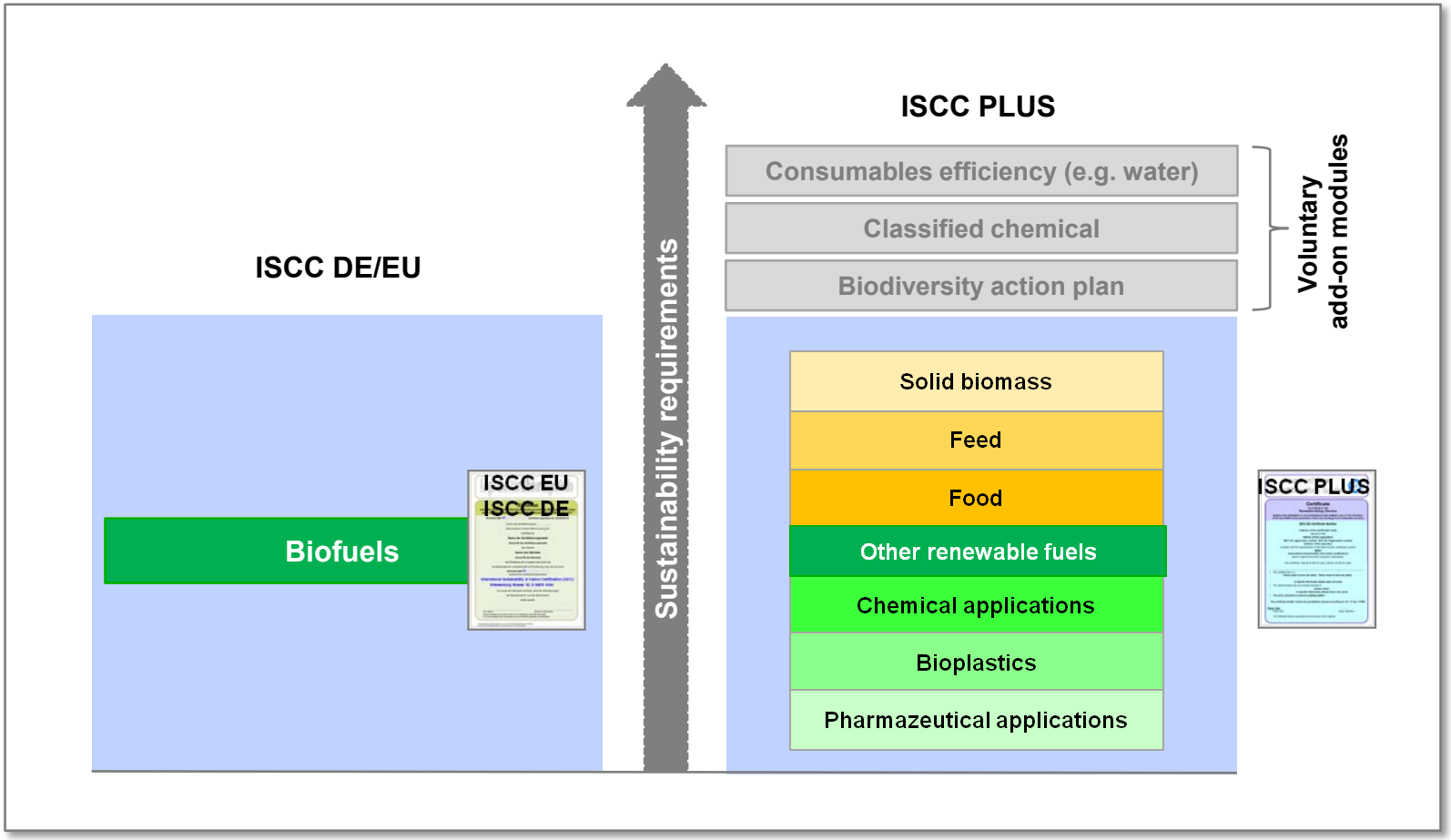
Already RED certified system users have the chance to untap additional market opportunities – example oil mill



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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