Assessment if International Sustainability & Carbon Certification system (ISCC)

Version as submitted 18 March 2011

Summary

An assessment has been made on compliance of the International Sustainability & Carbon Certification (ISCC) scheme, as submitted to the European Commission for recognition with the sustainability criteria of Directive 2009/28/EC.

The assessment results indicate that the ISCC scheme meets the mandatory sustainability requirements of Directive 2009/28/EC on GHG, land-use, chain of custody and audit quality.

Scheme scope:

- All feedstocks;
- All geographic locations;
- The scheme covers all economic operators along the supply chain from the farm/plantation through conversion into biofuel or bioliquid, to biofuel/bioliquid traders. Economic operators who bring biofuel/bioliquid to the market, and Transport companies, can receive a certificate on a voluntary basis (ISCC 201, p.9-10).

Background

The ISCC scheme is an international initiative led by consultancy company Meo Carbon Solutions and supported by the German Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) through the Agency for Renewable Resources (FNR). The German Ministry of Environment (BMU) has been involved in the development process.

ISCC is a voluntary certification system allowing a differentiation of sustainable biomass, biofuels and bioliquids from non-sustainable ones including the greenhouse gas emissions at the different stages of the supply chain.

The project was initiated in 2006. More than 250 stakeholders from Europe, Latin America and South East Asia representing all stakeholder groups along the supply chains, including NGOs and research institutes have been involved in its development.

In 2010 the International Sustainability and Carbon Certification e.V. (ISCC Association) was founded to facilitate stakeholder representation. The executive power and the operative management of the system are assigned to the ISCC System GmbH (ISCC limited liability corporation).

By the end of February 2011, more than 450 companies in approximately 25 countries in Europe, the Americas and South East Asia are using the system.

This assessment is based on the version ISCC 11-03-15 (V 2.3-EU) submitted by ISCC to the European Commission on 18 March 2011.

Assessment results

The summary results of the assessment are presented in the table below. The detailed assessment results are available in Annex 1.

Table 1: Assessment results - summary

RED Article	ISCC Version as submitted 18 March 2011	Comments
Sustainability criteria		
17(2): Greenhouse gas emissions savings	Y	
17(3): Conservation of biodiversity	Y	
17(4): Conservation of carbon stocks	Y	
17(5): Conservation of peatlands	Y	
Chain of Custody		
18(1): Use of a mass balance system	Y	
Audit Quality		
18(3): Adequate standard of independent auditing	Y	

Annex 1: Detailed assessment results

Sustainability criteria

The sustainability criteria detailed below are the mandatory sustainability criteria of the RED: Article 17(2) – 17(5)). It is intended that it will be possible for a scheme to be recognised for compliance with individual Articles under the RED.

Article 17(2): Greenhouse gas emissions savings	The use and production of biofuels and bioliquids should lead to reductions in greenhouse gas emissions compared to fossil fuels	
Requirement	Guidance	Assessment
1.1 The greenhouse gas emission saving from the use of biofuels and bioliquids shall be at least 35%.	• In the case of biofuels and bioliquids produced by any installation[1] that was in operation on 23 January 2008, the 35% greenhouse gas saving threshold needs to apply from 1 April 2013, and may also apply before that date. • Greenhouse gas emissions from any land-use change that has occurred since 1 January 2008 shall be taken into account in the greenhouse gas calculation, according to the methodology in the RED Annex V.	Y • ISCC 201: System Basics for the certification of sustainable biomass and bioenergy • GHG savings of at least 35%, with grandfathering clause included (4.2.3). • ISCC 203: Requirements for Traceability • RED 'special provision' state that plants in operation prior to 23 January 2008 do not have to comply with min. GHG savings of 35% (5). • Installations which received a certificate under the grandfathering clause in the past, can only prolong their certificate (validity of the certificate) under the grandfathering

[1] The term "installation" includes any processing installation used in the production process, as long as it has not been intentionally added to the production chain only to qualify for the exemption.

			clause latest March 31st 2013. From April 1st 2013 onwards this installation has to comply with the minimum GHG emission savings of 35% (5). • ISCC 205: GHG Emissions Calculation Methodology and GHG Audit • GHG emissions from land use changes taking place after the cut-off date of January 1, 2008 must be taken into account. This is also the case when default values are used, as they do not include possible GHG emissions or savings from land use change (4.2.3). • The following text then provides a satisfactory explanation of when a carbon stock calculation is required in-line with the RED Annex V and makes reference to the EC Decision of June 2010. • ISCC 202-01: Checklist for the control of Sustainability requirements for the production of biomass • It is indicated that the carbon stock of the reference area (over ground and underground biomass plus soil carbon) and of the converted area shall be declared. This is also valid after the converting of the area (4.1).

1.2 The greenhouse gas emission saving from the use of biofuels and bioliquids shall be calculated in accordance with RED Article 19(1)-19(3) and Annex V and Commission Decision 2010/335/EU of 10 June 2010.		Y	• ISCC 205: GHG Emissions Methodology and GHG Audit • Verification of Actual values (section 2): (1) Correct application of the default values (based on default values from Directive 2009/28/EC). (2) In the case of individual calculations ("actual values") the following elements need to be verified: a. Data for all relevant in- and outputs of the production process. These data must be verified by internal documents and evidence like production reports, delivery notes or invoices of the respective element in the value chain b. Emission factors and their sources. Emission (sic) should come from the "ISCC list of emission factors" (see section 6 of this document). If an emission factor that is needed for the calculation is not available on this list, it must come from scientifically peer-reviewed literature/ databases and must lie within the commonly accepted data range. The year of publication must also be documented c. Lower heating values for the main product and co-products. For transport fuels these values must come from Directive 2009/28/EC, Annex III. If values are not available in the Directive values must come from scientifically peer reviewed literature/ databases and must lie within the commonly accepted data range. The year of publication must also be documented. (3) Method of calculation of the individual ("actual") GHG emission value and provision of the correct value. Should one element in the value chain have to deal with different individual GHG emission values on the input side, the worst one of these values (the one with the highest emissions) can be used for the entire production. • Option to use default, actual or default/actual values (4.1). For default values, "So far, default values from the Directive

			2009/28/EC are available in gram CO2eq emissions per MJ of final product (e.g. per MJ of biodiesel or bioethanol). […]Values in emissions per kg of product can be taken from an appropriate source provided the values are directly derived from the default values (in gCO_2eq/MJ fuel) taken from the Directive 2009/28/EC and based on background data from the Joint Research Centre (JRC). As an example, the values published by BioGrace could be considered (BioGrace URL included) (4.1 (1)). • For actual values, "It would not seem necessary to include in the calculation inputs throughout the supply chain, which will have little or no effect on the result. Inputs with little or no effects are those that have an impact on overall emissions of the respective production unit that is lower than 0.5% of the total emissions of the production unit" (4.1, (2)). • Cultivation based on actual values - Data gathering from databases and literature: The following sources can be used: Official statistical data from government bodies, Scientifically peer-reviewed literature. […] The date of all data shall be documented. The data used shall be based on the most recent available data and shall be updated over time (4.2.1.2). • Actual data - Raw material production: Data collected on-site. Annual average of the previous year must be used for crop yield and agro-chemical usage, diesel, electricity usage (4.2.2). • Concept of NUTS2 regions and use of default values for cultivation explained (4.2.2). • Land use change taking place after the cut-off date of January 1, 2008 must be taken into account. This is also the case when default values are used, as they do not include possible GHG emissions or savings from land use change (4.2.3).

			• The entitlement of a bonus of 29 g CO2eq/MJ of liquid biomass for cultivation on degraded land according to Directive 2009/28/EC, Annex V is not possible until final definitions from the European Commission of degraded land are available. Once this is the case this option will be included in the ISCC System (4.2.3). • Reference to the RED (point 7) and June 2010 Decision for calculating emissions from land use change (4.2.3). • Use of aggregated values for agricultural management: Such numbers should primarily be based on official statistical data from government bodies when available and of good quality. If not available, statistical data published by independent bodies may be used. As a third option, the numbers may be based on scientifically peer-reviewed work, with the precondition that data used lies within the commonly accepted data range when available. The data used shall be based on the most recent available data from the abovementioned sources. Typically, the data should be updated over time, unless there is no significant variability of the data over time (4.2.4). • Actual data - Processing: Data collected on-site. The basis for the calculation should always be the previous year. Annual average figures can be used for the yield of main/co-product(s), electricity usage, fuel consumption/type for heat production etc (4.2.5). • Transport distances are based on sum of loaded/empty journeys (4.2.6). • Allocation of GHG emissions for product/co-product(s) by energy content explained (4.2.6). • Formula for emission savings provided with correct FFCs

			(4.2.9). • Emissions for biofuel distribution (storage at import and export depots and filling station) are included in methodology with reference made to JRC/BioGrace (4.2.9). • ISCC List of emission factors: The list draws wherever possible from the BioGrace project. Where no values are available from BioGrace other commonly accepted databases have been used (6).

Article 17(3): Conservation of biodiversity	Biofuels and bioliquids shall not be made from raw material obtained from land with high biodiversity value		
Requirement	Guidance	Assessment	
2.1 Conservation of primary forest and other wooded land	• Biofuels and bioliquids shall not be made from raw material obtained from land that was primary forest or other wooded land in or after January 2008, whether or not the land continues to have that status • Primary forest and other wooded land is defined as forest and other wooded land of native species, where there is no clearly visible indication of human	Y	• ISCC 202 Sustainability Requirements for the Production of Biomass: 4.1.1 (1) • ISCC 202-01 Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1 • Cut-off date: January 2008 • ISCC 202 4.1.1 (1): “The production on land that had one of the following statuses in or after January 2008, no matter whether or not the land still has this status is not allowed: o Forest land: Forest land comprises primary forests

	activity and the ecological processes are not significantly disturbed.		and other natural areas that are covered with native tree species and do not show clearly visible indications of human activity and the ecological processes are not significantly disturbed […]" • Compliance demonstrated using either positive or negative evidence (ISCC 202-01 4.1) • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after January 2008 (ISCC 202-01 4.1).
2.2 Conservation of protected areas	• Biofuels and bioliquids shall not be made from raw material obtained from land that was a protected area in or after January 2008, whether or not the land continues to have that status. • This includes areas designated: i) by law or by the relevant competent authority for nature protection purposes; or ii) for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their	Y	• ISCC 202 Sustainability Requirements for the Production of Biomass: 4.1.1 (2) and (3) • ISCC 202-01 Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1 • ISCC 202 4.1.1 (2) refers to (i) and 4.1.1(3) refers to (ii) • "The production on land that had one of the following statuses in or after January 2008, no matter whether or not the land still has this status is not allowed: […]" o (2) "Areas for nature protection purposes comprise areas that are designated by law or by the relevant competent authority to serve the purpose of nature protection as well as areas that have been acknowledged by the European Commission as areas for the protection of rare, threatened or vulnerable ecosystems or species. […]"

	recognition in accordance with the second subparagraph of Article 18(4) of the RED; • An exception is possible if evidence is provided that the production of that raw material did not interfere with those nature protection purposes.		o (3) “Areas for the protection of rare, threatened or endangered ecosystems or species recognized by international agreements or included in lists drawn up by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their recognition in accordance with the second subparagraph of Article 18(4) of the RED. […]” • RED Article 17(3)(b)(ii) is currently an “empty” provision as the EC has not, at the time of writing, recognised any lists or areas. For (ii) ISCC state they will communicate to economic operators and details of lists on protected areas as soon as they area available from the EC. The standard documentation will be updated accordingly. • Compliance demonstrated using either positive or negative evidence (ISCC 202-01 4.1) • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after January 2008 (ISCC 202-01 4.1)
2.3 Conservation of highly biodiverse grassland	• Biofuels and bioliquids shall not be made from raw material obtained from land that was highly biodiverse grassland in or after January 2008, whether or not	Y	• ISCC 202 Sustainability Requirements for the Production of Biomass: 4.1.2 • ISCC 202-01 Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1

	the land continues to have that status. Highly biodiverse grassland is defined as: i) natural, namely grassland that would remain grassland in the absence of human intervention and which maintains the natural species composition and ecological characteristics and processes; or ii) non-natural, namely grassland that would cease to be grassland in the absence of human intervention and which is species-rich and not degraded, unless evidence is provided that the harvesting of the raw material is necessary to preserve its grassland status[2]		• Cut-off date: January 2008 • Compliance demonstrated using either positive or negative evidence • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after January 2008 • ISCC 202, Introduction p4 explicitly says “Any conversion of grassland is prohibited until the EC has published its definitions” • ISCC 202, section 4.1.2, p10 further states that, “Highly biodiverse grassland, as stated in the RED, has not yet been fully defined by the EC. Until definitions, criteria and geographic areas featuring grassland with high biodiversity are determined by the Commission, any conversion of grassland in or after January 2008 is prohibited within the ISCC system.”

[2] The European Commission shall establish the criteria and geographic ranges to determine highly biodiverse grassland (RED 2009-28 EC Article 17(3c)). Further information is awaited following the Comitology process.

Article 17(4): Conservation of carbon stocks	Biofuels and bioliquids shall not be made from raw material obtained from land with high carbon stock		
Requirement	Guidance	Assessment	
3.1 Conservation of wetlands	• Biofuels and bioliquids shall not be made from raw material obtained from land that was wetland in January 2008 and no longer has that status • A wetland is land that is covered with or saturated by water permanently or for a significant part of the year • These provisions shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008	Y	• ISCC 202 Sustainability Requirements for the Production of Biomass: 4.1.3 (1) • ISCC 202-01 Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1 • Cut-off date: January 2008 • Compliance demonstrated using either positive or negative evidence • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after January 2008) • ISCC 202, section 4.1.3: Definition of wetland includes guidance on appropriate conventions that define wetlands but also states “The application of the requirement is not restricted to the wetlands covered by the convention, it applies to all wetlands.”
3.2 Conservation of continuously forested areas	• Biofuels and bioliquids shall not be made from raw material obtained from land that was continuously forested in	Y	• ISCC 202: Sustainability Requirements for the Production of Biomass: 4.1.3 (2) • ISCC 202-01: Checklist for the Control of Sustainability

	January 2008 and no longer has that status • Continuously forested areas are defined as land spanning more than one hectare with trees higher than five metres and a canopy cover of more than 30%, or trees able to reach those thresholds in situ • These provisions shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008		Requirements for the Production of Biomass: 4.1 • Cut-off date: January 2008 • Compliance demonstrated using either positive or negative evidence • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after January 2008. • ISCC 2020 4.1.3 (2) definition of continuously forested covers both continuously forested areas and 10-30% canopy cover forested areas as defined by RED. Additionally, it includes any area designated by national legislation as "forest". P12 says "no conversion of continuously forested areas is allowed, even if it is allowed by national regulation."
3.3 Conservation of forested areas with 10-30% canopy cover	• Biofuels and bioliquids shall not be made from raw material obtained from land that was sparsely forested in January 2008 and no longer has that status • Sparsely forested areas are defined as land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10% and 30%, or trees able to reach those thresholds in situ, unless evidence is provided that the carbon stock of the	Y	• ISCC 202: Sustainability Requirements for the Production of Biomass: 4.1.3 (2) • ISCC 202-01: Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1 • Cut-off date: January 2008 • Compliance demonstrated using either positive or negative evidence • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation

	area before and after conversion is such that, when the methodology laid down in part C of Annex V is applied, the greenhouse gas threshold (principle 1 above) would still be fulfilled • These provisions shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008		is made between evidence for areas converted before and after January 2008. • ISCC 202 4.1.3 (2) definition of continuously forested covers both, continuously forested areas and 10-30% canopy cover forested areas as defined by RED. • Compliance with GHG threshold in case raw material is obtained from 10-30% canopy cover forested areas is clearly stated (using the methodology laid down in part C of Annex V).

Article 17(5): Conservation of peatlands	Biofuels and bioliquids shall not be made from raw material obtained from peatland		
Requirement	Guidance	Assessment	
4.1 Conservation of peatlands	• Biofuels and bioliquids shall not be made from raw material obtained from land that was peatland in January 2008, • An exception is possible if evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.	Y	• ISCC 202: Sustainability Requirements for the Production of Biomass: 4.1.4 • ISCC 202-01: Checklist for the Control of Sustainability Requirements for the Production of Biomass: 4.1 • Cut-off date: January 2008 • Compliance demonstrated using either positive or negative evidence • Means of verification: satellite images, land use plans, expert concept, remote sensing based data indicating crop yield, land registers, documents on land area payments. A differentiation is made between evidence for areas converted before and after

			1 January 2008. • ISCC 202 4.1.4 does not permit raw material from land that was peatland in January 2008, unless the soil was completely drained in January 2008 or there has not been draining of the soil since January 2008. Appropriate clarification on extra drainage as per EC Communication on practical implementation.

Chain of Custody

The specific requirements for the chain of custody are documented in documents ISCC 203 Requirements for Traceability and ISCC 204 Mass Balance Calculation Methodology.

Article 18(1): Use of a mass balance system	Economic operators shall use a mass balance system		
Requirement	Guidance	Assessment	
5.1 Economic operators shall use a mass balance system	• The mass balance system: a) allows consignments of raw material or biofuel with differing sustainability characteristics to be mixed; b) requires information about the sustainability characteristics and sizes of the consignments referred to in point (a) to remain assigned to the mixture; and (c) provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture.	Y	• ISCC 204: Mass Balance Calculation Methodology • Allows both physical segregation (2 options) and mass balance (1 option). • The two physical segregation options are (4.1.1): (1) Physical segregation of all batches (2) Physical segregation of sustainable and non sustainable batches • The option for mass balance is (4.1.1): (1) Physical mixing and documentation of quantity credits • Conversion factors have to be applied in all cases (4.1.2). • ISCC 203: Requirements for traceability • Section 4.2.2.1 Chain of custody requirements in 4.2.2.1 [for farms / plantations] “Farms or plantations do not need to operate a mass balance system or quantity bookkeeping in case of physical segregation. Chain of custody requirements include the documentation of the origin as well as verification that the yield per hectare times field size in hectare is in line with the related quantity of stored, delivered or sold sustainable

			biomass.”
5.2 Prevention of double counting/claiming	• [No specific text in Directive / Communication] • An information system needs to be included which is able to keep track of the flow of information through the supply chain.	Y	• ISCC 203: Requirements for traceability • Companies must keep records for all incoming sustainable products into the company or into internal processes. This includes, for instance, names and address of suppliers, copies of certificates and statements of conformity, traceability attributes (such as unique batch identification number and details of the supplier and receiving party). “During each receipt of goods the receiver has to examine by means of the available ISCC database (ISCC webpage) whether the supplier of sustainable products possesses a certificate or statement of conformity valid for the period of the delivery.” (4.2.1.1). • Section 4.2.1.4 “The mass balance system (s.a. ISCC 204) ensures for every element of the supply chain that the outgoing sustainable quantity does not exceed the incoming sustainable quantity within the maximum period of three months. The integrity of the mass balance quantities (i.e. crosschecked with the quantities from the companies reporting system) and the correctness of the mass balance calculation is audited by an independent certification body. In case more sustainable products have been delivered than received, the audit will reveal any inconsistencies caused by mistake, double counting

			or fraud." • ISCC 204: Mass Balance Calculation Methodology • "Under the framework of the mass balance calculation of conversion processes the amount of sold or withdrawn sustainable products within one period should not be larger than the product of the amount Ai going into the process times the conversion factor C" (4.1.2).
5.3 The mass balance system shall operate at least at the level of a site	• The mass balance system shall operate at a level where consignments could normally be in contact, such as in a container, processing or logistical facility or site (defined as a geographical location with precise boundaries within which products can be mixed).	Y	• ISCC 204 Mass Balance Calculation Methodology: • Section 4.3.6 "The maximum periodical boundary are [sic] three months and the spatial boundary is defined as the site of an operation, processing or logistical facility with the site being the geographical location with precise boundaries within which products can be mixed."
5.4 The mass balance shall specify the timeframe over which the system operates	• If the balance in the system is continuous in time, a "deficit", i.e. that at any point in time more sustainable material has been withdrawn than has been added, is required not to occur. • Alternatively the balance could be achieved over an appropriate period of time and regularly verified. • In both cases it is necessary for appropriate arrangements to be in	Y	• ISCC 203: Requirements for traceability • Section 4.1.4 (6) "Records on the periodic mass balance calculations based on the above data for the sustainable quantity of the products. The maximum period is three months." • Section 4.2.1.4 "The mass balance system (s.a. ISCC 204) ensures for every element of the value chain that the outgoing sustainable quantity does not exceed the incoming sustainable quantity within the maximum period of three months."

	place to ensure that the balance is respected.		• ISCC 204: Mass Balance Calculation Methodology • Section 4.2.3 “The mass balance calculation requires the definition of the timeframe. The maximum timeframe (period) for the mass balance calculation is three months. Participants in the ISCC scheme may choose a period less than three months, e.g. one month. Therefore the mass balance calculation for relevant elements of the supply chain must be balanced within the period for both incoming and outgoing sustainable products according to the RED.” • Section 4.3.2 “The transfer of positive credits from one period to the other is only possible if the credit transfer is covered by the equivalent quantity of physical biomass, bioliquid or biofuel (i.e. it is not possible to carry over more positive credits into the next period than the quantity which is physically in stock at the end of the period).”

Audit Quality

Assessment of the audit processes of a voluntary scheme is relevant for auditing of the sustainability criteria and auditing of the chain of custody. The level of complexity of a chain of custody is a function of the features that a scheme allows.

RED Article 18(3):
Member States shall take measures to ensure that economic operators submit reliable information and make available to the Member State, on request, the data that were used to develop the information. Member States shall require economic operators to arrange for an adequate standard of independent auditing of the information submitted, and to provide evidence that this has been done. The auditing shall verify that the systems used by economic operators are accurate, reliable and protected against fraud. It shall evaluate the frequency and methodology of sampling and the robustness of the data.

Article 18(3): Adequate standard of independent auditing	Voluntary Schemes need to ensure a sufficient quality of auditing and verification		
Requirements	Guidance	Assessment	
6.1. Documentation management	• The system ensures that economic operators must have a documentation management system. • It should be a condition of participation in voluntary schemes that economic operators: i) have an auditable system for the evidence related to the claims they make or rely on; ii) keep any evidence for a minimum of 5 years; and	Y	• ISCC 251: Requirements on Certification Bodies • Certification bodies have to fulfil the following requirements. ISO Guide 65, ISO 17021 (4.1.1). • In the context of the ISCC certification system certification bodies perform the following work: (1) Risk evaluation, (2) Conduct of audits (inspections), (4) To run a register of participants, (5) Transmission of data to the competent authority, (6) Storage and handling of information (4.2.1). • Certification bodies must archive results of inspections, and copies of all certificates that they issue on the basis of this Ordinance, for a period of at least 10 years (4.2.2.6)

	iii) accept responsibility for preparing any information related to the auditing of such evidence. • The auditable system should normally be a quality system drawing on points 2 and 5.2 of Module D1 ('Quality assurance of the production process') of Annex II of the Decision on a common framework for the marketing of products.		• [Documentation management system and Quality system also covered by ISO Guide 65.]
6.2 Retrospective audits	• The voluntary scheme shall arrange for regular, at least yearly, retrospective auditing of a sample of claims made under the scheme. It is the responsibility of the verifiers to define the size of the sample that will permit them to reach the level of confidence necessary to issue a verification statement. • For these audits requirements are that the auditor should be: 1. Independent of the activity being audited 2. Free from conflict of interest 3. Competent o Point 1 and 2 mean that the audit shall be carried out by an external third party (not the economic	Y	• ISCC 251: Requirements on Certification Bodies • Certification bodies conduct certification audits and surveillance audits (4.2.2.2). • ISCC 252: Regulations to carry out audits • Certification audit: The validity of an ISCC certificate is one year. Due to this, an annual ISCC certification audit must take place for every element of the value chain (4.2.1.1). • Surveillance audit: In case of reasonable suspicion, especially due to the results of precedent surveillances, the competent authority may induce the surveillance of the element of the supply chain in shorter than annual intervals (4.2.1.2.1). • Certification bodies can use unannounced surveillance audits as an instrument of risk management (4.2.1.2.3). • Audits of warehouses delivering to a first gathering point: If a first gathering point has self-declarations from warehouses supplying the first gathering point, a sample of a min. of the square root (based on the risk assessment) of warehouses

	operator) o Point 3 mean that the auditor has the generic skills and the verification body has the general skills for performing audits; and o The auditor has the appropriate specific skills necessary for conducting the audit related to the scheme's criteria and the aspect of the scheme that they are auditing (see 6.5).		belonging to a first gathering point must be controlled (4.4). • Audits of warehouses delivering to a first gathering point: [...] a sample of a minimum of the square root [...] of the numbers of warehouses belonging to a first gathering point must be audited-controlled. The requirements with respect to traceability and mass balance are valid for all warehouses. The audit of these warehouses is part of the audit of the first gathering point. Therefore these warehouses will have the same certificate number as the first gathering point (4.5). • Audits of first gathering point: All first gathering points that want to deliver sustainable biomass must be audited. No sampling or group audit of first gathering points is possible (4.6). • Audits of warehouses after the first gathering point: All warehouses after the first gathering point that a company wants to use for delivering sustainable biomass must be audited. If the warehouses belong to a logistics network the logistic centre plus a min. of the square root of the number of associated warehouses shall be audited (4.7). • Audits of conversion units: All conversion units (e.g. oil mills, oil refineries, biodiesel plants, ethanol plants) that want to deliver sustainable biomass must be audited. No sampling or group audit of conversion units is possible (4.8). • Audits at other elements of the supply chain: Audits are carried out at other elements of the supply chain that applied for an audit according to ISCC at any certification body (4.9). • Sanctions in the case of violations of ISCC principle 1: In the case any violations of ISCC principle 1 occur, i.e. there is any

			land use change, which violates ISCC principle 1, the issue of a certificate is not possible. If violations of ISCC principle 1 become evident during a surveillance or re-certification audit the certificate must be withdrawn immediately. No future certification is possible […]. In addition, withdrawn certificates (based on violation of principle 1 are published on the ISCC webpage (4.10.2). • Sanctions in the case of violations of ISCC principles 2-6, and of traceability, mass balance and GHG requirements: In the case of violations of principles 2 to 6, the farm/plantation has up to 40 days to correct and prove compliance. Before the issue of a certificate all major musts be complied with and at least 60% of the minor musts. Non-conformities in the area of traceability, mass balance and GHG calculation must also be corrected within 40 days after the audit. Otherwise the issue of a certificate is not possible (4.10.3). • ISCC 207: Risk management • Regular risk (risk factor 1), Medium risk (risk factor 1.5), High risk (risk factor 2) (4.4.3). • Defining the samples (4.5.1): Provisions for the sample sizes and procedures for non-compliance of warehouses are included in section 6.4 below.
6.3 Audits before participation to the Voluntary Scheme	• As a general rule, a voluntary scheme should ensure that economic operators are audited before allowing them to participate in the scheme.	Y	• ISCC 207: Risk Management • Each element of the supply chain that aspires to take part in the ISCC system must start the ISCC standards implementation process by carrying out a self assessment in view of the ISCC

	• There may be exceptions to this rule due to the particular character of certain schemes (for example, schemes that consist only of standard values for greenhouse gas calculations); in these cases, this should be clearly explained when the scheme is put forward for recognition. • For these audits requirements are that the auditor should be: 1. Independent of the activity being audited 2. Free from conflict of interest 3. Competent o Point 1 and 2 mean that the audit shall be carried out by an external third party (not the economic operator) o Point 3 mean that the auditor has the generic skills and the verification body has the general skills for performing audits; and o The auditor has the appropriate specific skills necessary for conducting the audit related to the scheme's criteria and the aspect of the scheme that they are auditing (see 6.5).		risk categories. […] In their audits, the certification bodies take into account the interconnection of the self assessment's result and the design of the management system (4.2.1). • Prior to each first audit, the certification bodies must conduct a risk assessment for the relevant element of the supply chain and classify it according to the three ISCC risk categories (regular, medium, high) (4.2.2). • ISCC 251: Requirements on Certification Bodies • Before starting an audit, the certification body has to carry out a risk evaluation. The results of the risk evaluation have an impact on the intensity of the audit (4.2.2.1). • ISCC 252: Regulations to carry out audits • All elements in the supply chain that register with ISCC and want to receive a certificate are subject to an audit before participating in the scheme (4). • All elements of the supply chain that want to be audited according to ISCC and want to receive a certificate must register with ISCC. ISCC registration should take place after contractual agreement with the certification body, but before the audit actually takes place. Those elements in the value chain which are not obliged within the ISCC System to receive a certificate and do not actively aspire to receive one on a voluntary basis do not need to register with ISCC. Transport does not need to register with ISCC and does not need to receive a certificate. Relevant market players such as an economic operator which brings sustainable bio-liquids/biofuels into the market can receive a certificate on a voluntary basis.]

			The following elements of the supply chain shall register: Farms/ plantations, First gathering points, Conversion units (oil mills, refineries, esterification plants, sugar mills, ethanol plants, other conversion units), Traders/ warehouses (4.1). Elements of the supply chain which are part of a group shall submit a complete list of their group members. Groups can either be farms/plantations or warehouses. Groups of farms/plantations are subject to group certification (see also ISCC 256) (4.1). • The general provisions for audits do not depend on the value chain element which is being audited. The same provisions apply for all elements. All elements in the supply chain that register with ISCC and want to receive a certificate are subject to an audit before participation in the scheme (4.2). • Certification audit: The validity of an ISCC certificate is one year. Due to this, an annual ISCC certification audit must take place for every element of the supply chain (4.2.1.1). • ISCC 256: Group Certification • Prior to a first certification, all members and the group as a whole must be subject to an internal audit (4.4.2). • Before a new member can be registered, it must first be internally audited (4.6) • See section 6.4 below for details on the sample size for farms and plantations.

6.4 Group auditing [OPTIONAL – only relevant when group auditing is applied]	• Group auditing - in particular for smallholder farmers, producer organisations and cooperatives - can be performed. [Note that group auditing is only permitted for the producers of raw material only, not other economic operators further down the supply chain.] • In such cases, verification for all units concerned can be performed based on a sample of units, where appropriate taking into account a relevant standard developed for this purpose. o What is the basis of the sample size? o What is the threshold for non-compliance and do they apply to whole group? o What are the implications/procedures of non-compliance? o Are downstream parties informed of the non-compliance? • Group auditing for compliance with the scheme's land related criteria is only acceptable when the areas concerned are near each other and have similar characteristics.	Y	• ISCC 256: Group Certification • Group auditing can be applied for homogeneous groups of agricultural producers (4.1). • Administration by a central office (group management and internal audits) (4.1). • Group auditing for compliance with the scheme's land related criteria is only acceptable when the areas concerned are near each other and have similar characteristics. Group auditing for the purpose of calculating greenhouse gas savings is only acceptable when the units have similar production systems and products (4.1). • The farmers supplying a first gathering point can be considered as a group (4.1) • External audits must take place on a yearly basis. The group's central office is also audited. The size of the sample is determined by the group risk (4.1). • In order to avoid misuse and delivery of biomass with a sustainability claim from farmers not complying with ISCC, the group member number of the individual farmer audited noncompliant must be sent to the ISCC system. ISCC will delete these members within their database. Thus first gathering points and other receiving parties can check with the ISCC database via the ISCC webpage whether a delivery is covered by the certificate of the first gathering point (4.1). • A group is considered as homogeneous if the following criteria are met: The members are located in the same region; The climatic conditions for agricultural production are similar;, Similar production systems are applied; The risk assessment has shown a similar risk exposure for the group members (4.2).

	• Group auditing for the purpose of calculating GHG savings is only acceptable when the units have similar production systems and products.		• The size of the (random) sample is determined by the group risk factor multiplied by the square root of the number of group members – with a minimum size of one. Risk factors: Regular = x1, Medium = x1.5 and High = x2 (4.9). • In the case that the auditor detects group members not complying with the standard requirements, the audit sample must be doubled. If in the new sample group members are detected again not fulfilling the standard requirements, the sample size had to be doubled again, and so forth (4.9). • ISCC 252: Regulations to carry out audits • Warehouses can be part of a first gathering point or logistics networks. These warehouses shall use a common management system. Members of such a group will receive a unique 'group member number' which is added to the registration number in order to allow unique identification of group members (4.1). • The audit intensity of farms/plantations participating in group certification is determined by the minimum sample size (the square root of the number of farms belonging to a group) multiplied by the risk factor (4.3). • The audit intensity of warehouses which belong either to a first gathering point or are part of a company's logistics is determined by the minimum sample size (the square root of the number of warehouses belonging to a first gathering point or logistics network) multiplied by the risk factor (4.3). • ISCC delete any non-compliant 'group members' from the ISCC database – relating to Farms/Plantation, Warehouses delivering to a First Gatherings point, Warehouses delivering after the First Gatherings point, as per process described above in ISCC

			252, 4.1 (4.2, 4.5, 4.7).
6.5 Auditor competencies	• For these audits requirements are that the auditor should be: 1. Independent of the activity being audited 2. Free from conflict of interest 3. Competent o Point 1 and 2 mean that the audit shall be carried out by an external third party (not the economic operator) o Point 3 mean that the auditor has the generic skills and the verification body has the general skills for performing audits; and o The auditor has the appropriate specific skills necessary for conducting the audit related to the scheme's criteria. o Namely: o Land use criteria: Relevant experience, in agriculture, ecology or similar. o Chain of Custody system: Experience in mass balance	Y	• ISCC 251: Requirements on Certification Bodies • Certification bodies have to fulfil the following requirements. ISO 19011, ISO Guide 65, ISO 17021; Optional/preferable: ISO 14064-3 Part 3, ISO 14065 (4.1.1). • Auditors are external (third party auditing). • Independence and conflict of interest – ISO Guide 65. • Generic requirements: Covers work experience, hours of auditor training, auditor experience, personal aptitude, ISCC basic training and regular participation in ISCC training courses (4.1.2.1). • Requirement on auditors on farms (4.1.2.2): Covers specific competencies. Namely: (1) Knowledge in agriculture, handling and evaluation of data sources, (2) Pedological knowledge, (3) Biological and ecological knowledge, (4) GHG accounting (if required). Evidence of competence can be demonstrated via university (or similar) education in one of 4 areas. • Requirement on auditors in the Chain of Custody and GHG verification (4.1.2.2): Covers specific competencies. Namely: (1) Knowledge in mass balance methodology and traceability, (2) Knowledge in GHG accounting. Evidence of competence can be demonstrated via university (or similar) education in one of 2 areas.

	systems, traceability, data handling or similar. o GHG: Relevant experience in GHG accounting.		
6.6 Management of the audit	• Audits shall be properly planned, conducted and reported on • The sustainability system has clear procedures that describe how audits should be conducted • Audit includes the following: o Draw up a verification plan which corresponds to the risk analysis and the scope and complexity of the economic operator's activities, and which defines the sampling methods to be used with respect to that operator's activities; o Carry out the verification plan by gathering evidence in accordance with the defined sampling methods, plus all relevant additional evidence, upon which the verifier's verification conclusion will be based; o Request the operator to provide any missing elements of	Y	• ISCC 251: Requirements on Certification Bodies • Conduct of audits in conformity with standard ISO 19011 (4.1.1). • ISCC 252: Regulations to carry out audits • The performance of audit is geared to the general provision, described in ISO 19011:2002 (4.2.4). • Overview of typical audit activities – source: ISO 19011 (Figure 1).

	audit trails, explain variations, or revise claims or calculations, before reaching a final verification conclusion. • ISO 19011: 2002 (plan, do, act, check), or justified equivalent, covers the above requirements.		
6.7 Establishment of at least a "limited assurance level"	• A "limited assurance level"[3] implies a reduction in risk to an acceptable level as the basis for a negative form of expression by the auditor such as "based on our assessment nothing has come to our attention to cause us to believe that there are errors in the evidence"	Y	• ISCC 252: Regulations to carry out audits • ISCC has considered the requirements of ISAE 3000 in it's system set up especially with respect to quality control, risk management by ISCC and the audits, planning and performance of audits, sampling processes and reporting (4). • No indication of "limited assurance level" for audits, however. • Overall quality of audit, certification and accreditation processes considered to be sufficiently robust.
6.8 Accreditation	• Accreditation by a national accreditation body affiliated to the International Accreditation Forum (IAF); or • Accreditation as a 'full' member or 'associate' member of ISEAL; or • 'Commitment to comply' with ISO 17011: 2004 (General requirements for accreditation bodies accrediting conformity assessment bodies), or	Y	• ISCC 251: Requirements on Certification Bodies • Recognition by a national public authority or an accreditation body. Such accreditation would be done by members of the IAF, by the bodies referred to in Article 4 of Regulation (EC) No 765/2008 or by bodies having a bilateral agreement with the European Co-operation for Accreditation. Accreditation bodies shall work in line with ISO 17011: 2004.

[3] A stronger "assurance level" is the "Reasonable assurance level". Reasonable assurance implies a reduction in risk to an acceptably low level as the basis for a positive form of expression such as "based on our assessment, the evidence is free from material misstatement".

	justified equivalent, within 3 years (consistent with ISEAL associate member)		