

Interpretation of: NTA 8080:2009 en  
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## Interpretation document 07 linked to NTA 8081

This interpretation document clarifies some requirements in NTA 8080:2009, *Sustainability criteria for biomass for energy purposes* (further: NTA 8080).

The following aspects are addressed:

- scope (1);
- definition of production unit (3.26);
- definition of small-holder (3.28);
- documentation (5.1.1);
- enforcing all applicable national and regional laws and regulations (5.1.2 a);
- managing conflicts between laws and regulations and provisions of NTA 8080 (5.1.2 d);
- evidence of long time involvement (5.1.2 f);
- direct stakeholders (5.1.3.1 and 5.1.3.2);
- range of influence of the producer of primary biomass (5.1.3.1 and 5.1.3.2);
- second source of proof (5.1.3.2 c);
- feedback on consultation of stakeholders (5.1.3.2);
- calculation of greenhouse gas emissions (5.2.1);
- default and actual values (5.2.1);
- exclusion of areas for new production units (5.2.2);
- determination of carbon stocks (5.2.2 a);
- measurement of measures preventing emissions of greenhouse gases from the soil (5.2.2 d);
- government request concerning competition with other applications (5.3);
- exclusion of areas for new production units (5.4.2 and 5.4.3);
- biomass production in 'gazetted protected areas' and/or 'high conservation value' areas and/or in a zone of 5 km around these areas (5.4.2 and 5.4.3);
- demonstration of not affecting HCV areas (5.4.3);
- area for conservation of biodiversity (5.4.4 a);
- measures for strengthening biodiversity (5.4.5);
- demonstration of compliance with the Stockholm convention (5.5.1.1 b);
- yearly measurements (5.5.1.2, 5.5.2.2 and 5.5.3.2);
- use of residual products (5.5.1.3);
- no burning during planning or management (5.5.3.3);
- implementing practices in accordance with ILO declaration and UDHR (5.7.1 a and 5.7.2 a);
- provision of information and competitive position (5.7.3 a);
- places of particular cultural, ecological, economical or religious importance (5.7.3 g);
- compensation of local population (5.7.3 h);

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- segregation (7.2.1);
- mass balance (7.2.2);
- book and claim (7.2.3);
- logos and labels (7.3).

In this interpretation document reference is made on several places to activities of the organization that are within the scope of the European Directive for the promotion of the use of energy from renewable sources (further: Directive 2009/28/EC). The production of biofuels and bioliquids are meant with these activities. Organizations that are part of the value chain for the production of biofuels and bioliquids shall comply with this European Directive from January 2011. The interpretations that are given in this context apply to all organizations that are part of the value chain for the production of biofuels and bioliquids, also if the products are not made for the European Community. The European Directive applies the following definitions:

- biofuels means liquid or gaseous fuel for transport produced from biomass;
- bioliquids means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass.

**NOTE** Declaring the interpretations related to Directive 2009/28/EC applicable to the whole value chain of biofuels and bioliquids results from the requirement of the European Commission to qualify a certification scheme as a voluntary scheme to demonstrate compliance with the European Directive concerned.

Concerning solid or gaseous biomass (other than transport), the European Commission published in February 2010 a report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling (further: COM(2010)11). This report states that the European Commission will not yet develop a legal framework for sustainability requirements for solid and gaseous biomass and includes recommendations to Member States that wish to implement sustainability requirements for solid and gaseous biomass.

### 1 Scope

NTA 8080 describes that the sustainability requirements of NTA 8080, clause 5 are applicable to organizations that produce the primary biomass (in NTA 8081 referred to as 'producers'), with which organizations that solely collect residual flows representing a negligible economic value, as included in NTA 8080, annex A, shall only comply with the greenhouse gas balance (5.2.1) and the preservation and improvement of the soil quality (5.5.1.2). The other organizations that are part of the bio-energy chain (in NTA 8081 referred to as 'processors', 'traders' and 'end-users') shall only comply with the greenhouse gas balance (5.2.1).

This means that all organization in the bio-energy chain (in NTA 8081 referred to as 'producers', 'processors', 'traders' and 'end-users') shall also comply with the requirements for traceability (7.2) and the general requirements for documentation (5.1) and general requirements concerning (inter)national and regional laws and regulations (5.1.2).

To smallholders it applies that they are exempted from the requirements concerning consultation of stakeholders (5.1.3), prosperity (5.6), labour conditions (5.7.1), contribution to social well-being of local population (5.7.4) and integrity of the company (5.7.5). As included in this interpretation document, smallholders are also exempted from the requirements concerning places of particular cultural, ecological, economical or religious importance (5.7.3 g) and compensation of local population (5.7.3 h). For the purpose of certification smallholders can make use of group certification, in which the group shall comply with all sustainability requirements. In regard to above-mentioned exemptions for the individual smallholder, it applies to group certification that all the requirements are applicable to the management of the group but not to the associated group members. The management of the group shall carry out a consultation of stakeholders with respect to the activities of its group members, as far as (parts of) the consultation of stakeholders is not excluded (see 5.1.3). The requirements concerning prosperity (5.6), labour conditions (5.7.1), places of particular cultural, ecological, economical or religious importance (5.7.3 g) and compensation of local population (5.7.3 h), contribution to social

well-being of local population (5.7.4) and integrity of the company (5.7.5) are applicable to the activities that are centrally organized by the management of the group.

NOTE NTA 8081, 7.4 includes the requirements for the management of the group.

### 3.26 production unit

The part of the definition that production unit is also a plant for the conversion of biomass into half or final products includes also the trade of these products (in NTA 8081 this part of the definition relates to 'processors', 'traders' and 'end-users').

### 3.28 small-holder

An organization may be called small-holder, if:

- a) it can demonstrate that at least two-third of the structural workforce, expressed in fte, consists of next of kin; additional personnel may be hired during peak periods;
- b) the total surface area for cultivation is not over 50 hectare in case of arable farming and not over 100 hectare in case of forestry; in the case of combined arable farming and forestry, the total surface area for cultivation may not exceed 100 hectare, of which a maximum of 50 hectare for arable farming.

NOTE 1 This definition replaces the description in NTA 8080.

NOTE 2 The total surface area for cultivation needs not to be totally used for biomass production for energy purposes.

NOTE 3 Region specific interpretations for small-holder may become available in future.

### 5.1.1 Documentation

With respect to the general requirements to documentation a small-holder shall at least:

- a) describe how the organization will record continuing compliance with the requirements of NTA 8080;
- b) retain documents for a period of at least five years or longer if required by prevailing laws and regulations.

NOTE Where NTA 8080 requires documents to comply with the sustainability requirements a small-holder needs to hand over these documents, unless exemption has been granted.

### 5.1.2 a Enforcing all applicable national and regional laws and regulations

In the case of woody biomass flows, the legality of the origin of the timber shall be ensured if the activities are within the scope of the European regulation laying down the obligations of operators who place timber and timber products on the market (no 995/2010) or the American 'Lacey Act'. It concerns here also residual flows as included in NTA 8080, Annex A.

NOTE The European regulation laying down the obligations of operators who place timber and timber products on the market is related to the Forest law enforcement, governance and trade (FLEGT).

### 5.1.2 d Managing conflicts between laws and regulations and provisions of NTA 8080

In case of a conflict between laws and regulations and provision(s) of NTA 8080, the auditor decides if a provision exceeds the requirement of the laws and regulations. If the organization takes a different view, it can file a complaint according to the procedure as described in NTA 8081.

### 5.1.2 f Evidence of long time involvement

If the manager can demonstrate compliance with the requirements of NTA 8080, 5.2 up to 5.7, that is sufficient evidence of long time involvement.

#### 5.1.3.1 and 5.1.3.2 Direct stakeholders

Direct stakeholders of the producer of primary biomass include at least:

- a) landowner(s) and land user(s);
- b) local residents.

Both the producer of primary biomass and the certifying body shall consult the above-mentioned stakeholders, if a consultation of stakeholders is required.

#### 5.1.3.1 and 5.1.3.2 Range of influence of the producer of primary biomass

The range of influence of the producer of primary biomass concerns the area (and stakeholders in the area), in which changes occur as a consequence of carrying out the activities. These changes can be both physical, by land use change and construction of infrastructure and buildings, and non-physical, by causing changes in the relation between the local population and the producer of primary biomass.

#### 5.1.3.2 c Second source of proof

If the auditor has not consulted or was not able to consult a second source, the information obtained will not be considered in the assessment. The second source covers a different type of evidence than the first source.

#### 5.1.3.2 Feedback on consultation of stakeholders

In the feedback to the stakeholders who have provided information or proof, it is indicated per item in which way the information or proof is dealt with in the assessment. If information or proof has not been considered in the assessment, this shall be justified in the feedback. If the information is confidential, the source shall be protected.

NOTE See also direct stakeholders and second source of proof.

### 5.2.1 Calculation of greenhouse gas emissions

It is stated that the calculation methodology as included in the CO<sub>2</sub> tool shall be used to calculate the greenhouse gas emissions. This calculation methodology is similar to the methodology as included in Directive 2009/28/EC, Annex V. As long as the European Commission has not recognized calculation tools for greenhouse gas emissions, the organization shall calculate the greenhouse gas emissions by using the following methodologies:

- a) Greenhouse gas emissions from the production and use of transport fuels, biofuels and bioliquids shall be calculated as:

$$E = e_{ec} + e_l + e_p + e_{td} + e_u - e_{sca} - e_{ccs} - e_{ccr} - e_{ee} \quad (1)$$

where

$E$  is total emissions from the use of the fuel expressed in terms of grams of CO<sub>2</sub> equivalent per MJ of fuel [gCO<sub>2eq</sub>/MJ];

$e_{ec}$  is emissions from the extraction or cultivation of raw materials;

- $e_l$  is annualised emissions from carbon stock changes caused by land-use change;
- $e_p$  is emissions from processing;
- $e_{td}$  is emissions from transport and distribution;
- $e_u$  is emissions from the fuel in use;
- $e_{sca}$  is emission saving from soil carbon accumulation via improved agricultural management;
- $e_{ccs}$  is emission saving from carbon capture and geological storage;
- $e_{ccr}$  is emission saving from carbon capture and replacement;
- $e_{ee}$  is emission saving from excess electricity from cogeneration.

Emissions from the manufacture of machinery and equipment shall not be taken into account.

Greenhouse gas emission saving from biofuels and bioliquids shall be calculated as:

$$SAVING = (E_F - E_B) / E_F \quad (2)$$

where

- $E_B$  is total emissions from the biofuel or bioliquid;
- $E_F$  is total emissions from the fossil fuel comparator.

The organization shall calculate the emission factors according to Directive 2009/28/EC, Annex V.

NOTE In the Communication from the Commission on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels (2010/C 160/02) additional guidelines are given for calculating the greenhouse gas impact.

- b) Greenhouse gas emissions from the production of solid and gaseous biomass fuels, before conversion into electricity, heating and cooling, shall be calculated as:

$$E_P = e_{ec} + e_l + e_p + e_{td} + e_u - e_{sca} - e_{ccs} - e_{ccr} \quad (3)$$

where

- $E_P$  is total emissions from the production of the fuel before energy conversion;

NOTE In COM(2010)11, the symbol  $E$  is used. Since this symbol has already been used in Equation (1) with a different meaning, in Equation (3) and further the symbol  $E_P$  is used.

- $e_{ec}$  is emissions from the extraction or cultivation of raw materials;
- $e_l$  is annualised emissions from carbon stock changes caused by land use change;
- $e_p$  is emissions from processing;
- $e_{td}$  is emissions from transport and distribution;
- $e_u$  is emissions from the fuel in use;

NOTE That is greenhouse gases emitted during the combustion of solid and gaseous biomass.

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$e_{sca}$  is emission savings from soil carbon accumulation via improved agricultural management;

$e_{ccs}$  is emission savings from carbon capture and geological storage;

$e_{ccr}$  is emission savings from carbon capture and replacement.

Emissions from the manufacture of machinery and equipment shall not be taken into account.

Greenhouse gas emissions from the use of solid and gaseous biomass in producing electricity, heating or cooling including the energy conversion to electricity and/or heat or cooling produced shall be calculated as follows:

- For energy installations delivering only useful heat:

$$EC_h = E_p / \eta_h \quad (4)$$

- For energy installations delivering only electricity:

$$EC_{el} = E_p / \eta_{el} \quad (5)$$

- For energy installations delivering only useful cooling:

$$EC_c = E_p / \eta_c \quad (6)$$

where

$EC_h$  is total greenhouse gas emissions from the final energy commodity expressed in terms of grams of CO<sub>2</sub> equivalent per MJ of final energy commodity [gCO<sub>2eq</sub>/MJ], that is heating;

$EC_{el}$  is total greenhouse gas emissions from the final energy commodity expressed in terms of grams of CO<sub>2</sub> equivalent per MJ of final energy commodity [gCO<sub>2eq</sub>/MJ], that is electricity;

$EC_c$  is total greenhouse gas emissions from the final energy commodity expressed in terms of grams of CO<sub>2</sub> equivalent per MJ of final energy commodity [gCO<sub>2eq</sub>/MJ], that is cooling;

$\eta_h$  is the thermal efficiency, defined as the annual useful heat output, that is heat generated to satisfy an economically justifiable demand for heat, divided by the annual fuel input;

$\eta_{el}$  is the electrical efficiency, defined as the annual electricity produced divided by the annual fuel input;

$\eta_c$  is the thermal efficiency, defined as the annual useful cooling output, that cooling generated to satisfy an economically justifiable demand for cooling, divided by the annual fuel input.

Economically justifiable demand shall mean the demand that does not exceed the needs of heat or cooling and which would otherwise be satisfied at market conditions.

- For the electricity coming from energy installations delivering useful heat:

$$EC_{el} = \frac{E_p}{\eta_{el}} \left( \frac{C_{el} \times \eta_{el}}{C_{el} \times \eta_{el} + C_h \times \eta_h} \right) \quad (7)$$

- For the useful heat coming from energy installations delivering electricity:

$$EC_h = \frac{E_p}{\eta_h} \left( \frac{C_h \times \eta_h}{C_{el} \times \eta_{el} + C_h \times \eta_h} \right) \quad (8)$$

where

$C_{el}$  is fraction of exergy in the electricity, or any other energy carrier other than heat, set to 100 % ( $C_{el} = 1$ );

$C_h$  is Carnot efficiency (fraction of exergy in the useful heat).

Carnot efficiency,  $C_h$ , for useful heat at different temperatures:

$$C_h = \frac{T_h - T_0}{T_h} \quad (9)$$

where

$T_h$  is temperature, measured in absolute temperature (kelvin) of the useful heat at point of delivery as final energy;

$T_0$  is temperature of surroundings, set at 273 kelvin (equal to 0 °C);

For  $T_h < 150$  °C (423 kelvin),  $C_h$  is defined as Carnot efficiency in heat at 150 °C (423 kelvin), which is 0,354 6.

Greenhouse gas emission savings from heat, cold and electricity being generated from solid and gaseous biomass shall be calculated as:

$$SAVING = (EC_{F(h,el,c)} - EC_{h,el,c}) / EC_{F(h,el,c)} \quad (10)$$

where

$EC_{h,el,c}$  is total emissions from the heat, cooling or the electricity;

$EC_{F(h,el,c)}$  is total emissions from the fossil fuel comparator for heat, cooling or electricity.

The organization shall calculate the emission factors according to COM(2010)11, Annex I.

The organization can use the following calculation tools:

- BioGrace tool: determination of greenhouse gas emissions from the production of transport fuels made from biomass; see further: [www.biograce.net/content/ghgcalculationtools/excelghgcalculations](http://www.biograce.net/content/ghgcalculationtools/excelghgcalculations);
- CO<sub>2</sub> tool: determination of greenhouse gas emissions from the production of bio-electricity and heat made from biomass; see further: [www.senternovem.nl/mmfiles/CO2-tool%20v1.1\\_tcm24-330601.zip](http://www.senternovem.nl/mmfiles/CO2-tool%20v1.1_tcm24-330601.zip).

The BioGrace tool is a European harmonised calculation tool that has been developed by a European consortium under coordination by NL Agency (formerly known as SenterNovem). The BioGrace tool has adopted the calculation methodology as laid down in Directive 2009/28/EC, The CO<sub>2</sub> tool for bio-electricity and heat is managed by NL Agency. This CO<sub>2</sub> tool has adopted the calculation methodology as included in COM(2010)11.

If an organization uses a calculation tool, it shall ensure that the calculation methodology has been applied as described under a) or b), depending on the scope. This means that NL Agency does not

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have to approve the results if organizations have used other calculation tools than the BioGrace tool or CO<sub>2</sub> tool.

NOTE 1 The BioGrace tool has been submitted as voluntary scheme to the European Commission for assessment to be recognized as voluntary scheme concerning greenhouse gas calculations.

NOTE 2 CEN/TC 383 "Sustainably produced biomass for energy applications" is developing a European standard in which the calculation methodologies for greenhouse gas emission by using actual values will be described. It concerns EN 16214-4, *Sustainably produced biomass for energy applications — Principles, criteria, indicators and verifiers for biofuels and bioliquids — Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle approach*, which is expected to be published in 2012.

In the calculation methodology a bonus is attributed if restored degraded land is used. As long as the European Commission has not defined what is meant by degraded land, this bonus may not be attributed.

NOTE In Directive 2009/28/EC the possibility of 'grand fathering' is offered. This means that if in the biomass chain installations are used that were in operation on 23 January 2008, the requirement concerning the reduction of greenhouse gas emission will be effective from 1 April 2013. In NTA 8080 the possibility of 'grand fathering' is however not offered.

The fossil fuel comparators used in COM(2010)11 and the CO<sub>2</sub> tool differ from the fossil fuel comparators used in NTA 8080, 5.2.1 concerning the requirements of greenhouse gas savings. In order to achieve the same performance requirements, Table ID-1 shall be applied.

**Table ID-1 — Greenhouse gas emission saving requirements for solid and gaseous biomass for electricity, heating and cooling**

Fossil fuel comparator	NTA 8080 requirement	NTA 8080 reference gCO <sub>2eq</sub> /MJ	Source	Absolute gCO <sub>2eq</sub> /MJ	European reference gCO <sub>2eq</sub> /MJ	Source	Requirement based on European reference
Coal	70 %	333	CML <sup>b</sup>	99,9	198	COM (2010)11	50 %
Natural gas	50 %	153	CML <sup>b</sup>	76,5	198	COM (2010)11	61 %
Other <sup>a</sup>	70 %	199	CML <sup>b</sup>	59,6	198	COM (2010)11	70 %
<sup>a</sup> In NTA 8080 specified as Dutch electricity mix <sup>b</sup> CML is Institute of Environmental Sciences, part of Leiden University							
NOTE For example, if NTA 8080 requires 70 % greenhouse gas emission savings based on the comparison with a Dutch coal fired power plant (70 % savings of 333 gCO <sub>2eq</sub> /MJ results in a maximum absolute emission of 99,9 gCO <sub>2eq</sub> /MJ), this requirement corresponds with 50 % greenhouse gas emission savings based on the European fossil fuel comparator (calculated by $((198-99,9)/198) * 100\%$ is 50 %).							

### 5.2.1 Default and actual values

If the activities of the organization are within the scope of Directive 2009/28/EC, the default values as included in this Directive may only be used if the raw materials meet one of the following conditions:

- the raw materials are cultivated outside the European Community;
- the raw materials are cultivated in the European Community in areas included in the lists that are formulated by the European member states as part of this European Directive;

NOTE It concerns a list of areas in which the greenhouse gas performance is at least equivalent to the typical values as included in the European Directive.

c) the raw materials are waste or residues other than agricultural, aquaculture and fisheries residues.

In other cases actual values for cultivation shall be used.

In case the activities of the organization are related to solid or gaseous biomass (other than transport), the default values may be used as included in COM(2010)11.

If the organization shall use actual values or the organization decides to use actual values for own reasons, the organization shall make reference to the method and source used for determining actual values (e.g. average values based on representative yields, fertilizer input, N<sub>2</sub>O emissions and changes in carbon stock).

For emissions from agricultural management,  $e_{ec}$  and  $a_i$  in Equations (1) and (3), either measured or aggregated values may be used. If an organization uses aggregated values the provisions below shall be taken into account:

- a) The regional differences for aggregated values shall be considered when using this data. For the countries of the European Union, a value relevant for the NUTS-2 level or more fine-grained level shall be used, for other countries a similar level is applicable.
- b) Aggregated values should primarily be based on official statistical data from government bodies, if available and of good quality. If not available, statistical data published by independent bodies may be used. Alternatively, the values may be based on scientifically peer-reviewed work, with the precondition that data used lies within the commonly accepted data range, if available.
- c) The data used shall be based on the most recent available data from the above-mentioned sources. Typically, the data should be updated over time, unless there is no significant variability of the data over time.
- d) For fertilizer use, the typical type and quantity of fertilizer used for the crop in the region concerned may be used. Emissions from the production of fertilizer should either be based on measured values or on technical specifications of the production facility. If the range of emission values for a group of fertilizer production facilities to which the facility concerned belongs is available, the most conservative emission value (highest) of that group shall be used.

If a measured value for yields is used (as supposed to an aggregated value) for the calculations, it is required to also use a measured value for fertilizer input and vice versa.

For emissions from processing,  $e_p$  in Equations (1) and (3), actual values throughout the production chain shall be measured or based on technical specifications of the processing facility. If the range of emission values for a group of processing facilities to which the facility concerned belongs is available, the most conservative value (highest) of that group shall be used.

### 5.2.2 Exclusion of areas for new production units

If the activities of the organization are within the scope of Directive 2009/28/EC, the following areas are excluded for biomass production, if they are not yet excluded according to NTA 8080:

- a) wetlands, namely land that is covered with or saturated by water permanently or for a significant part of the year;
- b) continuously forested areas, namely 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; it does not include land that is predominantly under agricultural or urban land use, in which land under agricultural use in this context refers to tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems when crops are grown under tree cover;

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- c) 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 area before and after conversion is such that, when the emission reduction of greenhouse gases according to Equation (1) complies with the minimum requirement of NTA 8080, 5.2.1;
- d) peatlands, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.

NOTE CEN/TC 383 "Sustainably produced biomass for energy applications" is developing a European standard, which goes in more detail on whether biomass production in peatlands is excluded or not. It concerns EN 16214-3, *Sustainably produced biomass for energy applications — Principles, criteria, indicators and verifiers for biofuels and bioliquids — Part 3: Biodiversity and environmental aspects*, which is expected to be published in 2012.

As reference date 1 January 2007 applies, with the exception of those biomass flows for which already a reference date applies from other certification systems (operational or currently under development). If the organization applies a reference date from other certification systems (operational or currently under development), this date shall be before 1 January 2007. If another certification system (operational or currently under development) applies a reference date after 1 January 2007, the reference date of 1 January 2007 shall be adhered.

NOTE Directive 2009/28/EC applies 1 January 2008 as reference date, but the reference date of NTA 8080 is leading.

### 5.2.2 a Determination of carbon stocks

If the organization shall make use of a satisfying specified and recognized procedure for the purpose of determining carbon stocks, this procedure shall meet the guidelines for the calculation of land carbon stocks according to the decision of the European Commission on 10 June 2010 (Decision 2010/335/EU).

### 5.2.2 d Measurement of measures preventing emissions of greenhouse gases from the soil

When formulating measures the organization shall at least specify how the result will be measured and who will carry out and validate the measurement. Measures that are not measurable can not be considered as measure, unless they can be demonstrated to be good practice by an independent authority that the measure is good practice.

NOTE Scientific publications can be considered in case of an independent authority.

### 5.3 Government request concerning competition with other applications

Since it will not always be known if a government requests the information as described in NTA 8080, 5.3, the auditor shall always ask for this information. Some parts of this information are also needed for the (public) audit report. The content of the information provided can not result in a non-conformity.

### 5.4.2 and 5.4.3 Exclusion of areas for new production units

If the activities of the organization are within the scope of Directive 2009/28/EC, the following areas are excluded for biomass production, if they are not yet excluded according to NTA 8080:

- a) primary forest and other wooded land, namely forest and other wooded land of native species, where there is no clearly visible indication of human activity and the ecological processes are not significantly disturbed;
- b) 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 recognition in accordance with the procedure as included in the European Directive;

unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes;

c) highly biodiverse grassland that is:

- 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;
- 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.

NOTE The European Commission will publish in the course of 2010 a further elaboration on highly biodiverse grasslands. CEN/TC 383 "Sustainably produced biomass for energy applications" is developing a European standard, which goes in more detail on whether biomass production in certain areas with high biodiversity value is excluded or not. It concerns *EN 16214-3, Sustainably produced biomass for energy applications — Principles, criteria, indicators and verifiers for biofuels and bioliquids — Part 3: Biodiversity and environmental aspects*, which is expected to be published in 2012.

As reference date 1 January 2007 applies, with the exception of those biomass flows for which already a reference date applies from other certification systems (operational or currently under development). If the organization applies a reference date from other certification systems (operational or currently under development), this date shall be before 1 January 2007. If another certification system (operational or currently under development) applies a reference date after 1 January 2007, the reference date of 1 January 2007 shall be adhered.

NOTE Directive 2009/28/EC applies 1 January 2008 as reference date, but the reference date of NTA 8080 is leading.

In NTA 8080 it is stated that biomass production in 'gazetted protected areas' and high conservation value areas is among other things allowed if the biomass production has started before 1 January 2007 and has taken place since in a continuous series of production cycles. If the activities of the organization are within the scope of Directive 2009/28/EC, than as from 1 January 2008 raw materials may not be obtained from production units that are in above-mentioned areas a) up to and including c), taken into account the there mentioned exceptions.

#### **5.4.2 and 5.4.3 Biomass production in 'gazetted protected areas' and/or 'high conservation value' areas and/or in a zone of 5 km around these areas**

The installation of a production unit for biomass production before 1 January 2007 or a reference date from other certification systems (operational or currently under development) implies that the cultivation of the production unit concerned shall have taken place before that date, cultivation being defined as the conversion from the natural condition to the agricultural use.

NOTE See also exclusion of areas for new production units.

#### **5.4.3 Demonstration of not affecting HCV areas**

The producer of primary biomass shall specify before starting the activities how the HCV will be preserved (or improved). This shall have the consent of the direct stakeholders and shall be judged positively by an independent authority. Also if an organization needs not to carry out a consultation of stakeholders, an organization shall demonstrate that is not located in a HCV area or shall ensure that it does not affect the high conservation values.

#### **5.4.4 a Area for conservation of biodiversity**

The organization shall leave at least 10 % of the functional area of the production unit covered with the original vegetation, representative for the area, for conservation of biodiversity, if the organization has cultivated the production unit from 1 January 2007 or a reference date before from other certification systems (operational or currently under development). In the case of group certification, this requirement applies to each group member.

#### **5.4.5 Measures for strengthening biodiversity**

The organization needs already to record the necessary data as part of the recovery and conservation of biodiversity. These data describe the condition of biomass production unit and this basis can be used to formulate measures for strengthening biodiversity. It is conceivable that an organization can not take measures that will specifically result in the improvement of biodiversity. If this is the case, the organization shall be able to indicate why it has drawn this conclusion.

NOTE External factors can also influence the biodiversity within the organization's production unit.

#### **5.5.1.1 b Demonstration of compliance with the Stockholm convention**

If it appears that the organization is familiar with the laws and regulations as described in NTA 8080, 5.5.1.1 a), the organization has demonstrated in this way to be familiar with the provisions of the "Stockholm convention".

#### **5.5.1.2, 5.5.2.2 and 5.5.3.2 Yearly measurements**

An organization shall carry out measurements yearly to monitor the soil, water and air quality. In the case of group certification, the management of the group may take over this responsibility and carry out measurements amongst the group members on the basis of sampling. The sample size is at least  $\sqrt{y}$ , where y is the number of associated smallholders, and shall be representative for the composition of the group. The management of the group shall establish this scheme. Only after the yearly sample the group members within this sample will be informed about this.

#### **5.5.1.3 Use of residual products**

Also if an organization needs not to carry out a consultation of stakeholders, an organization shall make a reasonable case that the use of agricultural residual products is not in violation of other local essential functions for the preservation of the soil and the soil quality.

#### **5.5.3.3 No burning during planning or management**

The organization may not apply burning of the stubble or stand during the construction or management of the production unit, unless it is demonstrated that this is the most effective and less harmful method to minimize the risk of harm by disease and plagues. Burning of the stubble or stand can be an effective method to conserve the ecological values. An organization is allowed to burn the stubble or stand on site as fuel for energy application, since this application is considered useful.

NOTE Examples are burning as cooking fuel or for energy generation for private use.

#### **5.7.1 a and 5.7.2 a Implementation of practices in accordance with ILO declaration and UDHR**

Countries that have signed the conventions should have implemented the declarations in their laws and regulations. The organization shall comply with laws and regulations. The organization shall take appropriate measures to meet the declarations if it operates in a country that has not signed the convention(s).

NOTE Provisions concerning labour conditions and human rights may exceed those in national and/or local laws and regulations.

### **5.7.3 a Provision of information and competitive position**

The organization shall provide confidential information, if relevant, during the audit and shall show and justify that this information is sensitive to competition. The auditor can assess on this basis whether the organization has acted correctly or has withheld information that causes the original users harm.

During the consultation of stakeholders by the producer of primary biomass the organization shall provide the users with information about the planned activities and the consequences for the users and shall adequately settle the matters that are brought up by the users. The producer of primary biomass shall be able to demonstrate this. During the consultation of stakeholders the certifying body verifies if the original users have been consulted about property rights and if the matters have been adequately settled.

### **5.7.3 g Places of particular cultural, ecological, economical or religious importance**

In line with the exemptions for smallholders, a smallholder needs not to identify, in dialogue with the local population, unambiguous places that are of particular cultural, ecological, economical or religious importance for the local population and have recognition and protection by the responsible managers.

NOTE Also in this case it is assumed that smallholders will usually have a local background (see NTA 8080, Annex B). See also scope.

### **5.7.3 h Compensation of local population**

The way in which compensation is arranged, is a matter between the organization and the local population. The organization shall be able to demonstrate that the local population has agreed with free, prior and informed consent the compensation measures before starting the activities. During the consultation of stakeholders the certifying body verifies if this process has occurred as such.

In line with the exemptions for smallholders, a smallholder needs not to compensate the local population for the application of their traditional knowledge of the use of species of plants or management systems for land use.

NOTE Also in this case it is assumed that smallholders will usually have a local background (see NTA 8080, Annex B). See also scope.

## **7.2.1 Segregation**

All organizations in the biomass chain (in NTA 8081 referred to as 'producer', 'processor', 'trader' and 'end-user') shall have the certificate 'NTA 8080 approved' for a sound segregation along the whole chain.

In the section below, reference is made to NTA 8080. In the case of the 'NTA RED' certificate, NTA RED shall be read for NTA 8080. In addition, reference is made to NTA 8080 or equivalent. So far, no other certification systems have been endorsed. If certification systems will be endorsed and an organization wishes to demonstrate compliance with Directive 2009/28/EC only certification systems (voluntary schemes) with the corresponding scope and version as recognized by the European Commission may be applied for this purpose.

In order to be able to ensure the traceability within the framework of NTA 8080, each organization shall provide at least the following information in a transaction certificate by each delivery:

- a) name, address details and identification mark of organization;
- b) unique identification number of the delivery, also to trace the issued certificate in the internal traceability system;
- c) the certificate number linked to the certificate with which it is demonstrated that the organization complies with NTA 8080 or equivalent, and the certification body that has issued this certificate;

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- d) amount of delivery [in tonnes];
- e) amount of carbon equivalents [in gCO<sub>2eq</sub>/MJ] (either applicable default values or actual values);

NOTE See also default and actual values.

- f) declaration that no mixing has occurred with material that has not been certified according to NTA 8080 or equivalent; if the organization applies identity preserved, the declaration shall also include that no mixing has occurred with material that originate from different sources;
- g) date of delivery;
- h) product description including whether the production processes are in compliance with Directive 2009/28/EC or not.

NOTE 1 Since the transaction certificate includes the declaration that no mixing has occurred with material that has not been certified according to NTA 8080 or equivalent, it is evident that the organization applies the chain model 'segregation'.

NOTE 2 By including information about verification within the scope of Directive 2009/28/EC, it is clear whether the product is suitable for production of biofuels and bioliquids or not.

A delivery is a transaction of one or more batches of products with similar characteristics. The transaction certificate shall be traceable in the administration.

NOTE The transaction certificate includes the administrative amount of biomass in accordance with NTA 8080 or equivalent. In total, the amount of biomass that is obtained from the chain cannot exceed the amount of biomass that has entered the chain, taking into account the possible conversion losses and the differences between initial and final stocks per period.

The organization shall be able to produce at least the following information (at request), where it is not necessary that all information is recorded in an administration designed for that purpose, but the information shall be demonstrable or traceable:

- a) all received and issued transaction certificates;
- b) all agreements with suppliers and buyers, as far as it is related to the biomass flows;
- c) evidence of calibrated measure equipment used;
- d) registrations per received consignment that includes at least the information from the above-mentioned transaction certificate;
- e) registrations of the raw materials in storage, where at least the following is included for each storage facility:
  - the description of the storage facility including location, maximum capacity and safeguarding that no mixing occurs with raw materials that have not been certified according to NTA 8080 or equivalent, and if identity preserved is applied, also that no mixing occurs with raw materials that originate from different sources;
  - the description of the raw materials in storage;
  - the amount of raw materials in storage;
- f) description of the internal processes, where at least the following is described:
  - the raw materials that are used in the process;
  - the processing and converting steps that these materials undergo during the process;

- the safeguarding that no mixing occurs in the process with materials that have not been certified according to NTA 8080 or equivalent;
  - the safeguarding that no mixing occurs in the process with materials that originate from different sources, as far as identity preserved is applied;
  - the main and co-products, residues and waste that are produced during the process including the usual yields or converting losses;
- g) registrations of the end products in storage (main products, co-products, residues, waste), where at least the following is included for each storage facility:
- the description of the storage facility including location, maximum capacity and safeguarding that no mixing occurs with end products that have not been certified according to NTA 8080 or equivalent, and if identity preserved is applied, also that no mixing occurs with end products that originate from different sources;
  - the description of the end products in storage;
  - the amount of end products in storage;
- h) registrations per shipped delivery, where at least the following is included:
- the information from the above-mentioned transaction certificate;
  - the identification number of the organization that buys the delivery.

Organizations at the beginning of the chain ('producer') do not receive transaction certificates, but only issue transaction certificates. Organizations at the end of the chain ('end-user') do not issue transaction certificates, but only receive transaction certificates. The valorised biomass in accordance with NTA 8080 or equivalent shall be recorded in the mass balance. If a sustainability declaration is related to valorisation, the sustainability declaration shall be linked to the matching biomass.

NOTE            A sustainability declaration can be: evidence for delivering of green electricity of heat, green gas, of biofuel for transportation.

The segregation system shall be designed in such a way that consignments would normally be in contact, such as in a container, processing or logistical facility or site (defined as a geographical location with precise boundaries).

It shall unambiguously be proved from the organization's administration that the amount of bought, stored and supplied biomass in accordance with NTA 8080 or equivalent is balanced taking into account possible conversion losses. No temporary deficits of biomass according to NTA 8080 or equivalent, as a consequence of having delivered more biomass according to NTA 8080 or equivalent than is being supplied and stored, are allowed on the balance.

Small differences in mass may occur between point of delivery and point of reception due to various factors of influence. An increase in mass is not allowed for the purpose of the chain of custody.

## 7.2.2 Mass balance

All organizations in the biomass chain (in NTA 8081 referred to as 'producer', 'processor', 'trader' and 'end-user') shall have the certificate 'NTA 8080 approved' for a sound mass balance along the whole chain.

In the section below, reference is made to NTA 8080. In the case of the 'NTA RED' certificate, NTA RED shall be read for NTA 8080. In addition, reference is made to NTA 8080 or equivalent. So far, no other certification systems have been endorsed. If certification systems will be endorsed and an organization wishes to demonstrate compliance with Directive 2009/28/EC only certification systems

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(voluntary schemes) with the corresponding scope and version as recognized by the European Commission may be applied for this purpose.

In order to be able to ensure the traceability within the framework of NTA 8080, each organization shall provide at least the following information in a transaction certificate by each delivery:

- a) name, address details and identification mark of organization;
- b) unique identification number of the delivery, also to trace the issued certificate in the internal traceability system;
- c) the certificate number linked to the certificate with which it is demonstrated that the organization complies with NTA 8080 or equivalent, and the certification body that has issued this certificate;
- d) amount of delivery and its percentage of sustainable according to NTA 8080 or equivalent [in tonnes];
- e) amount of carbon equivalents [in gCO<sub>2eq</sub>/MJ] (either applicable default values or actual values);

NOTE See also default and actual values.

- f) date of delivery;
- g) product description including whether the production processes are in compliance with Directive 2009/28/EC or not.

NOTE 1 Since the transaction certificate includes the amount of delivery and its percentage of sustainable material according to NTA 8080 or equivalent, it is evident that the organization applies the chain model 'mass balance'.

NOTE 2 By including information about verification within the scope of Directive 2009/28/EC, it is clear whether the product is suitable for production of biofuels and bioliquids or not.

A delivery is a transaction of one or more batches of products with similar characteristics. The transaction certificate shall be traceable in the administration.

NOTE The transaction certificate includes the administrative amount of biomass in accordance with NTA 8080 or equivalent. In total, the amount of biomass that is obtained from the chain cannot exceed the amount of biomass that has entered the chain, taking into account the possible conversion losses and the differences between initial and final stocks per period.

The organization shall be able to produce at least the following information (at request), where it is not necessary that all information is recorded in an administration designed for that purpose, but the information shall be demonstrable or traceable:

- a) all received and issued transaction certificates;
- b) all agreements with suppliers and buyers, as far as it is related to the biomass flows;
- c) evidence of calibrated measure equipment used;
- d) registrations per received consignment that includes at least the information from the above-mentioned transaction certificate;
- e) registrations of the raw materials in storage, where at least the following is included for each storage facility:
  - the description of the storage facility including location and maximum capacity;
  - the description of the raw materials in storage;

- the amount of raw materials in storage;
- f) description of the internal processes, where at least the following is described:
- the raw materials that are used in the process;
  - the processing and converting steps that these materials undergo during the process;
  - the main and co-products, residues and waste that are produced during the process including the usual yields or converting losses;
- g) registrations of the end products in storage (main products, co-products, residues, waste), where at least the following is included for each storage facility:
- the description of the storage facility including location and maximum capacity;
  - the description of the end products in storage;
  - the amount of end products in storage and its percentage of sustainable according to NTA 8080 or equivalent;
- h) registrations per shipped delivery, where at least the following is included:
- the information from the above-mentioned transaction certificate;
  - the identification number of the organization that buys the delivery.

The mass balance system shall be designed in such a way that consignments would 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).

Organizations at the beginning of the chain ('producer') do not receive transaction certificates, but only issue transaction certificates. Organizations at the end of the chain ('end-user') do not issue transaction certificates, but only receive transaction certificates. The valorised biomass in accordance with NTA 8080 or equivalent shall be recorded in the mass balance. If a sustainability declaration is related to valorisation, the sustainability declaration shall be linked to the matching biomass.

**NOTE** A sustainability declaration can be: evidence for delivering of green electricity of heat, green gas, of biofuel for transportation.

It shall unambiguously be proved from the organization's administration that the amount of bought, stored and supplied biomass in accordance with NTA 8080 or equivalent is balanced taking into account possible conversion losses. If the organization uses a number of sustainability systems, it shall unambiguously be proved that the corresponding sustainability claims are balanced. No temporary deficits of biomass according to NTA 8080 or equivalent, as a consequence of having delivered more biomass according to NTA 8080 or equivalent than is being supplied and stored, are allowed on the mass balance.

In NTA 8080 it is included that both mass balance claim and percentage based claim are allowed. If the activities of the organization are within the scope of Directive 2009/28/EC only the mass balance claim is allowed.

The mass balance does not allow averaging of greenhouse gas performances. The sustainability characteristics of a mixture shall be traced back to the separate consignments.

Small differences in mass may occur between point of delivery and point of reception due to various factors of influence. An increase in mass is not allowed for the purpose of the chain of custody.

### **7.2.3 Book and claim**

In NTA 8080 the possibility has been left to declare the sustainability at the end of the chain by means of a book and claim system. Book and claim is excluded from NTA 8081. Organizations that wish to be certified against NTA 8080 according to NTA 8081 shall apply segregation or mass balance as traceability system.

**NOTE** A book and claim system needs different requirements to the chain concerning infrastructure and administration than a system based on segregation and mass balance given the separation of the product and the sustainability claim.

### **7.3 Logos and labels**

In NTA 8080 it is stated that a certification system can make use of logos and labels. Certified organizations receive a certificate that includes the information as described in NTA 8081, 8.2.1. A logo with 'NTA 8080 approved' will be placed on the certificate.

Certified organizations may put their certificates with logo on their website. The logo shall always be linked with the relevant certificate, so that it is clear for which part of the activities the organization has been certified. Organizations are not allowed to use this logo for other purposes.

### **Annex A List with exceptions**

Residual flows are defined as biomass flows which are released during the production of other (main) products and which represent an economic value of less than 10 % of the value of the main product. This means that the organization shall not deliberately modify its processes to produce the residual flows.

NTA 8080, annex A describes that organizations that collect residual flows that are included in the list with exceptions shall only comply with the greenhouse gas balance (5.2.1) and the preservation and improvement of the soil quality (5.5.1.2).

**NOTE** See also scope and for woody biomass flows enforcing all applicable national and regional laws and regulations.

The requirement of preservation and improvement of the soil quality needs not to be applied to all residual flows on the list with exceptions. This requirement applies only to residual flows that may contribute to the soil quality. It concerns primary residual flows, being residual flows that are released from agriculture including forestry, and that could be used over there to preserve or improve the soil quality.

The organization that collects these primary residual flows shall demonstrate that the residual flows, which the organization collects, have not previously been used to preserve or improve the soil quality. If the organization can demonstrate this, the organization complies with NTA 8080, 5.5.1.2 in the case of the list with exceptions.

**NOTE 1** Laws and regulations on soil quality that are applicable to the organization that disposes the biomass flows can be considered in case of demonstration.

**NOTE 2** This means that for secondary and tertiary residual flows the requirement to preserve and improve the soil quality is not applicable.

If the organization collects waste and residues from agriculture, aquaculture, fisheries and forestry that are included in NTA 8080, annex A, but that are within the scope of Directive 2009/28/EC, the organization shall also comply with the sustainability criteria as included in this European Directive.

**NOTE** It concerns the following sustainability criteria in Directive 2009/28/EC:

- Greenhouse gas emission saving (art. 17, paragraph 2). The requirements of NTA 8080, 5.2.1 apply concerning greenhouse gas emission saving.
- Biodiversity (art. 17, paragraph 3). The corresponding requirements related to biodiversity and land use are included in NTA 8080, 5.4.2 and 5.4.3. For the purposes of this certification scheme these requirements have been interpreted in this interpretation document in more detail.
- Carbon stocks (art. 17, paragraph 4). The corresponding requirements related to carbon stocks and land use are included in NTA 8080, 5.2.2. For the purposes of this certification scheme these requirements have been interpreted in this interpretation document in more detail.
- Peatlands (art. 17, paragraph 5). The corresponding requirements related to peatland are included in NTA 8080, 5.2.2. For the purposes of this certification scheme these requirements have been interpreted in this interpretation document in more detail.
- Environment (art. 17, paragraph 6), only in the European Community. Requirements are included in NTA 8080, 5.5 subdivided into soil, water and air.

The corresponding requirements in NTA 8080 may exceed the European Directive on aspects.

As stated in NTA 8080, provisions from laws and regulations overrule provisions of NTA 8080 when dealing with the same topic, but with conflicting requirements. In the case of the list of residual flows in NTA 8080, annex A, it applies that biomass flows that are not considered a residue by Directive 2009/28/EC may not be considered a residual flow in the framework of NTA 8080 as well. Based on Directive 2009/28/EC, the following biomass flows listed in NTA 8080, annex A may not be considered a residual flow within the scope of Directive 2009/28/EC and shall comply with all sustainability criteria as included in this European Directive:

- pulp from manufacturing of sugar [532] as far as it concerns the press pulp of beets;
- beet pulp [533] as far as it concerns beet heads, beet tails and/or leaves.

NOTE                    The sustainability criteria concerned in Directive 2009/28/EC are listed in the note above this paragraph.

The organization that solely collects residual flows according to NTA 8080, annex A and wishes to be certified as such, shall ensure that mixing with other biomass flows does not occur. The organization shall record and document the procedure chosen. It shall unambiguously be proved from the organization's administration that only residual flows according to NTA 8080, annex A have been collected and delivered, possibly after processing.

NOTE                    As part of the safeguarding, the organization can:

- include clear product specifications with respect to residual flows in the conditions for acceptance or collection;
- perform a visual inspection on the plausibility of origin during physical collection of the residual flow. The quality aspects are often standard verified during collection, to which the inspection on the plausibility of origin can be included.