



SUSTAINABLE RESOURCES
Verification Scheme GmbH

Scheme principles for the production of waste and residues from biomass

Version: SSP-WaR-en-1.0
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1 Introduction

Directive (EU) 2018/2001 (RED II) sets political targets for the EU member states to significantly increase the share of renewable energy in our energy consumption by 2030. The use of biomass as a renewable raw material will play an important role in these efforts.

In addition to biomass from agriculture and forestry, biogenic waste and residues are valuable resources, as they lower the pressure on cultivated biomass and gain new value and benefits consistent with the principles of a holistically designed circular economy. In many EU member states, special incentives are therefore provided for the use of waste and residues from biomass to increase their use for the generation of electricity and heat¹.

This requires clear rules and definitions for handling and using waste and residues from biomass, specifications for the categorisation and classification of the materials, their traceability to the origin of the waste and plausibility checks of the corresponding volume flows in order to ensure sustainable handling of biogenic waste and residues and to effectively prevent misuse. It is also important to keep issues related to resource efficiency in mind.

The European Union has adopted these kinds of sustainability requirements for the generation of electricity and heat from biomass fuels in Directive (EU) 2018/2001, which must be complied with by the economic operators. Voluntary certification schemes are regarded here as a particularly suitable way of providing this evidence of compliance in an objective, transparent and credible manner.

The SURE-EU system is this kind of certification scheme, which translates the requirements of RED II into a practical verification scheme for the market and ensures compliance.

2 Scope of application

The requirements for the production of waste and residues from biomass set out in this document apply to all producers participating in the SURE-EU scheme that supply or use waste and residues from solid or gaseous biomass for the generation of electricity and heat.²

Agricultural or forest waste and residues before processing are considered agricultural or forest biomass in the SURE-EU scheme and fall outside the scope of these scheme principles. The requirements for agricultural and forestry waste and residues can be found in the SURE scheme principles for the production of agricultural biomass or the SURE scheme principles for the production of forestry biomass.

The neutral inspection of these operations includes all of the requirements outlined below in this document. Exceptions to this are indicated at the appropriate places. All relevant SURE documents as well as Directive (EU) 2018/2001 apply to the scope of this scheme.

3 Definitions

In order to establish a common understanding of the terms and definitions used in these scheme principles, reference is made to the SURE document “Definitions in the SURE system”. All SURE scheme principles relate to this document.

4 Generally applicable principles and requirements

Producers who supply waste or residues from biomass to collection points, treatment and processing or conversion plants for the purpose of generating electricity and heat must demonstrate that they comply with the requirements of Directive (EU) 2018/2001 and the SURE-EU system. This includes above all the identification of the waste/residue characteristics, the proof of origin of the biomass and the plausibility check of the quantities of waste and residues produced. In the SURE-EU system, producers are therefore subject to inspection.

Certification bodies approved and accredited by national authorities in the SURE-EU system check compliance with the scheme requirements along the entire production, processing and supply chain as part of a neutral inspection.

4.1 Verifying and monitoring scheme conformity

Waste and residue producers before the first collection by the collector are subject to (random) *inspections*. With regard to the inspection of transshipment points, special conditions apply, which can be found in the SURE document “Scheme principles for neutral inspections”.

In the SURE-EU system, scheme compliance for waste and residues from biomass can be verified by inspecting the producers using the SURE checklist for waste and residues from biomass.

The traceability of the waste and residues from biomass to the producer must be ensured and it must be possible to prove this with suitable documents (e.g. invoices, contracts, etc.). In addition, the producer must grant access to these documents and keep the documentation for at least 5 years as long as no other laws apply with regard to retention periods.

In addition, the requirements from section 4.2 “Traceability and documentation” apply.

Waste and residue producers that supply waste or residues to collection/treatment or processing operations must confirm to the recipient that the supplied waste or residual material is only biomass as defined by Directive (EU) 2018/2001. To this end, the SURE form “Self-declaration for the supply of waste and residues for the production of biomass fuels” should be filled out and provided to the biomass recipient as an active self-declaration. This form can be found on the SURE website at www.sure-system.org.

The form can be used for every individual consignment or all consignments arising from an agreement or contract. If the self-declaration is used for all consignments in an agreement or contract, the contract number or agreement number must be indicated on the self-declaration.

It is also possible to incorporate the same wording in the self-declaration as text in the contract between the collector and the waste and residue producer. The self-declaration as such or as part of the contract is valid for a maximum of one year starting from the date of issue.

The respective documents verifying that the individual criteria of the SURE-EU system have been met must either be kept by the first gathering point or be able to be provided by the producer at any time.

In the declaration, the producer of waste and residues from biomass also confirms and accepts that within the scope of audits of the collector to which it verifiably supplies sustainable biomass, inspections can be performed by its certification scheme or the executing certification body.

A valid self-declaration (copy or original) must be available with the producer.

4.1.1 Individual certification

Economic operators along the entire biomass chain who want to be certified under the SURE-EU system as part of a neutral inspection must register in the SURE-EU system. This can be done online at www.sure-system.org. The individual steps for joining the scheme are described in detail in the SURE document “Scope and basic scheme requirements of the SURE system”.

A detailed description of the requirements for neutral inspection can be found in the SURE document “Scheme principles for neutral inspections”.

4.1.2 Group certification of the producers

In the SURE-EU system, producers of waste and residues can be inspected as an individual company or as a group. A group inspection is performed for a group of producers that have similar waste characteristics and are subject to similar waste management requirements, where the inspection applies to the group as a whole. In these cases, a selection of various operations in the group can be spot checked as a representative sample as proof that all units comply.

A detailed description of the requirements for group certification can be found in the SURE document “Scheme principles for neutral inspections”.

4.2 Traceability and documentation

The SURE-EU system requires all economic operators to have a document management system that can be checked as part of an inspection. Proper documentation is mandatory for all economic operators to ensure compliance with the legal provisions. The documentation must allow a plausibility check of the type and quantity of the biomass delivered as well as a clear allocation of delivered quantities. All of the documents in the document management system must be kept for at least 5 years regardless of any other legal requirements relating to retention period.

All economic operators in the SURE-EU system are required to provide data to SURE on request (e.g. when necessary to verify the full traceability of sustainable biomass and biomass fuels).

When transmitting sensitive company data, proof must be provided that this data is handled confidentially.

The requirements for traceability and documentation apply for all economic operators in the area of waste and residues. Other specific requirements of the SURE-EU system regarding interfaces, collectors, suppliers and last interfaces are described in the SURE document “Scheme principles for the use, processing and distribution/trade of biomass fuels and their conversion to electricity and heat”.

4.3 Qualification requirements

Waste and residue producers must have qualified (expert) personnel. The expertise requires at least knowledge of the legal basis for handling biomass from waste and residues, as well as operational implementation and application.

The knowledge includes at the very least the European Waste Framework³ Directive as well as the national List of Waste as per European requirements.⁴ In addition, depending on the material flow, knowledge about handling waste wood or biowaste is required.

Furthermore, qualifications in handling data relating to waste and residual materials, such as weighing data, registers for non-hazardous waste and other data is indispensable (electronic records).

Knowledge of permit law (especially when importing biomass) is an advantage.

Proof of expertise can be provided by the professional qualification. It can also be provided as part of an initial training plan or through successful participation in a relevant course.

4.4 Social responsibility requirement

Participants in the SURE-EU system assume social responsibility and undertake to comply with at least Core Labour Standards of the International Labour Organisation (ILO⁵), based on the fundamental principles of

- ✓ Freedom of association and collective bargaining
- ✓ Elimination of forced labour
- ✓ Abolition of child labour
- ✓ Elimination of discrimination in respect of employment and occupation

which in turn are reflected in eight conventions and have been ratified by currently 139 states⁶:

- ✓ ***Convention 87 concerning Freedom of Association and Protection of the Right to Organise, 1948***

Convention 87 concerning Freedom of Association and Protection of the Right to Organise of 1948 guarantees the right of workers and employers to form associations without previous authorisation. These organisations must have the right to draw up their constitutions and rules, to elect their representatives in full freedom, to organise their administration and activities and to formulate their programmes.

- ✓ ***Convention 98 concerning the Application of the Principles of the Right to Organise and to Bargain Collectively, 1949***

Convention 87 is supplemented by Convention 98 concerning the Application of the Principles of the Right to Organise and to Bargain Collectively, 1949. It calls for adequate protection of workers against any discrimination contrary to freedom of association in respect of their employment. This includes, in particular, acts calculated to

make the employment of a worker subject to the condition that he shall not join a union or that cause the dismissal of a worker by reason of union membership or because of participation in union activities. The possibility of concluding collective labour agreements between employers or organisations of employers and organisations of employees to regulate pay and working conditions shall be encouraged.

✓ ***Convention 29 - Forced Labour, 1930***

Convention 29 on forced labour calls for the elimination of forced and compulsory labour as soon as possible, whereby forced and compulsory labour for the benefit of private individuals is completely prohibited, especially products in which they trade. If forced or compulsory labour cannot be eliminated immediately, it is subject to certain conditions and must be remunerated at the prevailing rates.

✓ ***Convention 105 concerning the Abolition of Forced Labour, 1957***

Convention 105 on the Abolition of Forced Labour adds that forced or compulsory labour shall not be used as a means of political coercion or education or as a punishment for holding views ideologically opposed to the established system, as a method of mobilising and using labour for purposes of economic development, as a means of labour discipline, as a punishment for having participated in strikes or as a means of racial, social, national or religious discrimination.

✓ ***Convention 100 concerning Equal Remuneration of Men and Women Workers for Work of Equal Value, 1951***

Convention 100 seeks to promote and, where possible, ensure equal pay for men and women for work of equal value.

✓ ***Convention 111: concerning Discrimination in Respect of Employment and Occupation, 1958***

According to Convention 111, all forms of discrimination must be eliminated. Discrimination means any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin. It also includes any such other distinction, exclusion or preference which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.

✓ ***Convention 138 concerning Minimum Age for Admission to Employment, 1973***

Convention 138 on the minimum age is designed to ensure the effective abolition of child labour and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons. The minimum age for less developed countries is 14 years, otherwise 15 years, and 18 years for jobs that are likely to jeopardise the health, safety or morals of young persons. Considerable derogations from these principles are

permitted, firstly for less developed countries, secondly for persons aged 14 years or over for training purposes and finally for persons aged 13 to 15 years who perform light work which is not likely to be harmful to their health or development or prejudice their attendance at school, their participation in vocational orientation or training programmes.

✓ ***Convention 182 concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, 1999***

The most recent ILO core labour standard on child labour supplements Convention 138 and covers all persons under 18 years of age. States ratifying the Convention shall ensure that all forms of slavery and practices similar to slavery (such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour), the use, procuring or offering of a child for prostitution, for the production of pornography or for illicit activities, in particular for the trafficking of drugs, and work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children are prohibited and eliminated.

The social responsibility requirements of the scheme participant can be considered fulfilled if the country where the economic operator operates has ratified ILO core labour standards 29, 87, 98, 100, 105, 111, 138 and 182. An overview of the states that have ratified the ILO core labour standards is available on the ILO website⁷. This list is updated on a regular basis.

5 Requirements for waste and residues from biomass

The classification of biomass as waste or residues can result in different requirements for the proof of sustainability and the calculation of greenhouse gas savings:

- ✓ Waste and residues do not need to prove compliance with land-related sustainability criteria.
- ✓ In the case of waste, no upstream emissions from waste production are counted in the greenhouse gas balance of the electricity or heat generated from waste. It is not possible to allocate greenhouse gas emissions of the main product to waste.
- ✓ Residues can be defined as a co-product depending on the option for use. In this case, the greenhouse gas emissions of the main product can be allocated to the co-product.

In the SURE-EU system, a precise definition of the waste or residue characteristic is therefore necessary.

5.1 Definition of the terms “waste” and “residues”

According to the European Waste Framework Directive, “waste” means any substance or object which the holder discards or intends or is required to discard.⁸ “Substances that have been intentionally modified or contaminated to meet that definition are not covered by this definition.”⁹ This means that “raw materials [or substances] that have been intentionally modified [or contaminated] to count as waste (e.g. by adding waste material to a material that was not waste)”¹⁰ should not be considered as qualifying as waste.

In addition, the law distinguishes between waste and residues. In this context, “residues” are substances that are not the end product(s) that a production process directly seeks to produce. Residues are thus not the primary aim of the production process and the process has not been deliberately modified to produce it.¹¹ In this context, residues are also often referred to as production residues.

To determine whether a material can be classified as “waste”, the main question is the holder’s intention to discard the material, i.e. whether the holder intends or is required to discard the material.¹² Substances or materials with valid and unambiguous waste codes are generally considered waste (for example, as per the European List of Waste, etc.).

Since some substances or materials that are produced in a production process (but are not the target product of the process) can regain economic value, waste materials may well lose their waste characteristics (non-waste) and thus become residues.

Wastes and residues that are *directly* generated by agriculture, aquaculture, fisheries or forestry are considered *agricultural or forest biomass* under Directive (EU) 2018/2001. The SURE scheme principles for the production of agricultural biomass or forest biomass apply.

If, on the other hand, the waste and residues are from *processing residues from the downstream processing phases* of agriculture, forestry and related industries, it is called *biomass from residues and waste*.

Waste and residues can inevitably arise in production processes. In SURE’s view, the proper handling of these materials is an important component of sustainable management. European legislators are also promoting greater use of biogenic residues and waste materials by creating economic incentives for their use as energy sources.¹³

In this context, when a material can be clearly classified as waste or a residue, this affects both its eligibility for financial support and the calculation of greenhouse gas emissions. In practice, however, it has been shown that there are often uncertainties in the classification of materials as waste or residues.

It is SURE's view that there is therefore a need for a detailed analysis, although the SURE-EU system is closely aligned with European legislation and methodology. In line with COM Communication 2010/C 160/02, the SURE-EU system provides for a differentiated case-by-case assessment based on the following methodology. SURE shares the view expressed in the COM Communication that other conceivable solutions, such as establishing lists that define materials as waste across the board, are neither practicable nor clear in their application and enforcement. Within the scope of the legally binding criteria defined by the European Court of Justice (ECJ), however, guidelines are a flexible instrument which can be adapted to reflect new knowledge and technologies and make it possible to perform assessments on a case-by-case basis.¹⁴

5.2 Guidelines for the classification of a material as waste, residue (production residue), product or by-product

A residue (production residue) is a result not directly intended by the production process. The most important distinguishing characteristic that determines whether a material is classified as a residue or product is therefore the question of whether the material is produced intentionally or unintentionally:

- ✓ If the material is *produced intentionally*, the ECJ says that it can no longer be considered *a residue (production residue)*, but a product.

If, therefore, a material is “the result of a technical decision” (to intentionally produce this material), it cannot be classified as a production residue according to the ECJ. Similarly, if the producer had the opportunity to produce main primary product without the material in question, but deliberately did not use it, it cannot be classified as a production residue in the SURE-EU system. The same applies if the production process of the primary product has been changed to give the material special technical properties.

- ✓ If the material occurs *unintentionally and inevitably* during the production process, this material is classified as a residue (*production residue*). It may, however, be suitable for economic reuse, so that it has an economic value - provided there is demand for it - and must therefore be regarded as a by-product.

If the following three criteria (cumulative) are met, a production residue is no longer classified as waste to be discarded but as a *by-product*:

- Real certainty exists about how the material will subsequently be used, this is not just a theoretical possibility. For example, certainty can be established through the existence of long-term contracts with the subsequent user of the material, from which the use of the material (and not its disposal/removal) can be

assumed. If a producer can sell the material in question at a profit, this can also be seen as an indication that the material is being used with certainty. However, if certainty about the use of the material cannot be established, it must be declared as waste for reasons of preventive environmental protection.

- No further processing is necessary before the material is used again. A material that can theoretically be reused but requires prior processing remains waste until the end of this process, even if it is certain how it will be subsequently used later on.
- The material and/or its preparation for reuse is an integral part of the production process and it is actually subject to this reuse.

If there is a possibility that residues (production residues) are actually unusable, do not meet the necessary technical requirements for usability or there is no demand for the material, they continue to be regarded as waste. If it turns out afterwards that the waste can nevertheless perform a useful task, it loses its status as waste if it has been made reusable as raw material. Annex I contains a decision tree which is intended to help assess material properties with regard to classification as waste or non-waste. In addition, the Commission identifies other characteristics used in the assessment of a material (Annex II). However, these characteristics are only guidelines and not decisive in every case.

6 Acceptance of other certification schemes for waste and residues

To import waste and residues or biomass fuels produced from them, SURE expressly reserves the right to explicitly recognise other individual certification schemes, provided that they meet the requirements defined by SURE at least equivalently. The accepted schemes will be published by SURE in the newsletter and on SURE's website.

7 Relevant documents

With regard to the documentation (scheme documents) in the SURE-EU system, reference is made here to the document "Scope and basic scheme requirements".

SURE reserves the right to create and publish additional supplementary scheme principles if necessary.

The legal EU regulations and provisions for sustainable biomass and biomass fuels including other relevant references that represent the basis of the SURE documentation are published separately on SURE's website at www.sure-system.org. References to legal regulations always relate to the current version.

8 References

1

Heat or waste heat is also used to generate cooling with absorption chillers. “Heat” in this case therefore also encompasses “cooling” or “refrigeration”, regardless of whether the end use of the heat is actual heating or cooling via absorption machines.

2

pursuant to **EUROPEAN COMMISSION (2018)**: EU Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (new version) to recast and repeal Directives 2009/28/EC, 2013/18/EU and 2015/1513/EU.

3

EUROPEAN COMMISSION (2008): Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives.

4

EUROPEAN COMMISSION (2000): 2000/532/EC: Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Directive 91/689/EEC on hazardous waste (notified under document number C(2000) 1147).

5

An overview of all standards adopted by the ILO is available on its website at <https://www.ilo.org/global/standards/lang--en/index.htm> (last accessed on 08.04.2020).

6

An overview of the countries that have ratified the ILO Core Labour Standards can be found at https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:10011:0::NO::P10011_DISPLAY_BY,P10011_CONVENTION_TYPE_CODE:2,F (last accessed on 08.04.2020).

7

An overview of the countries that have ratified the ILO Core Labour Standards can be found at https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:10011:0::NO::P10011_DISPLAY_BY,P10011_CONVENTION_TYPE_CODE:2,F (last accessed on 14.04.2020).

8

EUROPEAN COMMISSION (2008): Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives. Article 3 (1).

9

EUROPEAN COMMISSION (2015): Directive (EU) 2015/1513 of the European Parliament and of the Council of 9 September 2015 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources. Article 2 (p).

10

EUROPEAN COMMISSION (2010): 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). Subsection 5.2.

11

pursuant to **EUROPEAN COMMISSION (2018):** EU Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (new version) to recast and repeal Directives 2009/28/EC, 2013/18/EU and 2015/1513/EU. Article 2 (43).

12

EUROPEAN COMMISSION (2008): Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives.

13

I EUROPEAN COMMISSION (2009): Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC. (“RED”)

II EUROPEAN COMMISSION (2018): EU Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (new version) to recast and repeal Directives 2009/28/EC, 2013/18/EU and 2015/1513/EU. (“RED II”)

14

EUROPEAN COMMISSION (2007): Communication from the Commission to the Council and the European Parliament on the Interpretative Communication on waste and by-products of 21 February 2007 (COM (2007) 59).

Annex I: Decision tree for the classification of a material as waste, residue (production residue), product or by-product

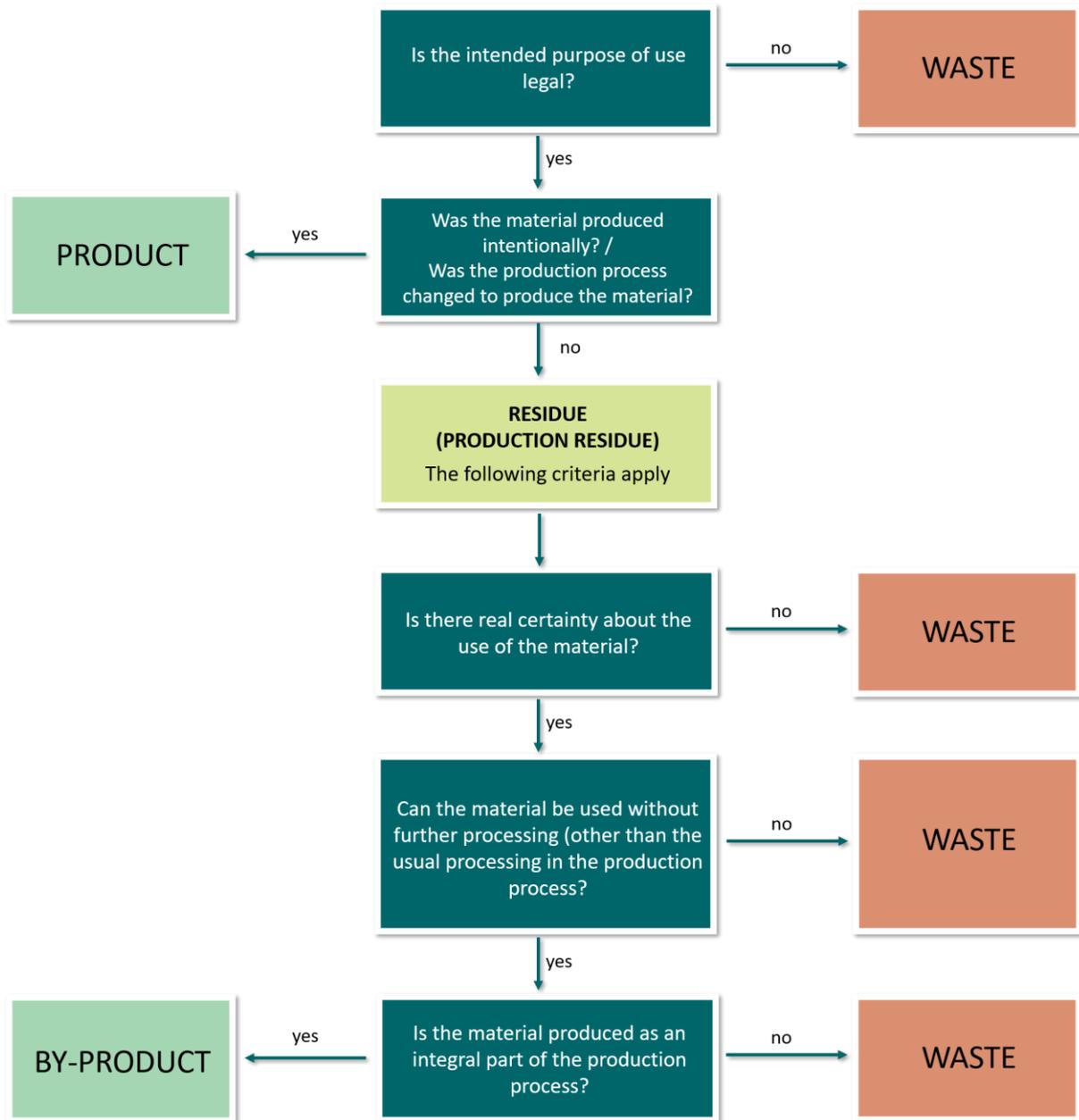


Figure 1: Decision tree for the classification of a material as waste, residue (production residue), product or by-product (changed as per EU COM (2007) 59).

Appendix II: Characteristics for the assessment of a material as waste or non-waste

Characteristics for classification as waste and residue	Characteristics for classification as non-waste
<ul style="list-style-type: none"> ✓ the material does not meet the necessary technical requirements for further use ✓ there is no demand for the material ✓ the material is stored for an indefinite period of time until it can be used ✓ the material must be subject to prior processing before its subsequent use ✓ the material is moved to another place for material processing ✓ the material has a purpose ✓ the material does not meet the standards of the relevant product regulations for its potential use ✓ the material is only produced in very small quantities 	<ul style="list-style-type: none"> ✓ the material has characteristics that make it suitable for economic reuse ✓ there are long-term contracts between the holder and the future user of the material ✓ the material can be sold at a profit ✓ the material is required in the main activity of the manufacturer ✓ the material meets the standards of the relevant product regulations for its possible use ✓ the material is only produced in very large quantities

Table 1: Indications for an assessment of a material as waste or non-waste (as per EU COM (2007) 59).

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