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EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

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II

(Non-legislative acts)

REGULATIONS

COMMISSION DELEGATED REGULATION (EU) 2018/1145

of 7 June 2018

amending Delegated Regulation (EU) 2017/891 as regards producer organisations in the fruit and vegetables sector

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 ⁽¹⁾, and in particular Article 37 thereof,

Whereas:

- (1) Commission Delegated Regulation (EU) 2017/891 ⁽²⁾ supplements Regulation (EU) No 1308/2013 with regard to the fruit and vegetables and processed fruit and vegetables sectors. Regulation (EU) 2017/2393 of the European Parliament and of the Council ⁽³⁾ has amended Regulation (EU) No 1308/2013 in particular as regards the aid to the producer organisations in the fruit and vegetables sector. Therefore, Delegated Regulation (EU) 2017/891 should reflect the amendments to the relevant provisions of Regulation (EU) No 1308/2013.
- (2) Provisions on national financial assistance in the fruit and vegetables sector should be updated.
- (3) Provisions concerning the cases in which producer members of a producer organisation should be allowed to sell a certain percentage of their products outside the producer organisation where the producer organisation so authorises in its statutes and where this is in compliance with the terms and conditions of the Member State need to be clarified. The threshold of the sales outside the producer organisation needs to be clarified.
- (4) New measures on coaching between producer organisations and on replenishment of mutual funds in operational programmes should be eligible for Union financial assistance.
- (5) Member States may continue to provide national financial assistance from national budget to producer organisations in regions of the Union where the organisation degree is particularly low. Consequently, conditions under which national financial assistance may be granted in the fruit and vegetables sector as well as the method of calculation of the degree of organisation referred to in Article 34(3) of Regulation (EU) No 1308/2013 should be laid down to avoid distortions of the internal market in the Union.

⁽¹⁾ OJ L 347, 20.12.2013, p. 671.

⁽²⁾ Commission Delegated Regulation (EU) 2017/891 of 13 March 2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to penalties to be applied in those sectors and amending Commission Implementing Regulation (EU) No 543/2011 (OJ L 138, 25.5.2017, p. 4).

⁽³⁾ Regulation (EU) 2017/2393 of the European Parliament and of the Council of 13 December 2017 amending Regulations (EU) No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), (EU) No 1306/2013 on the financing, management and monitoring of the common agricultural policy, (EU) No 1307/2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy, (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products and (EU) No 652/2014 laying down provisions for the management of expenditure relating to the food chain, animal health and animal welfare, and relating to plant health and plant reproductive material (OJ L 350, 29.12.2017, p. 15).

- (6) Provisions concerning eligibility of certain investments for Union financial assistance need to be clarified.
- (7) Eligible and non-eligible actions related to promotion and communication, including actions and activities aimed at diversification and consolidation on the fruit and vegetable markets, whether for prevention of a crisis or during a crisis period, need to be clarified as regards the eligibility of actions and activities for Union financial assistance.
- (8) Provisions relating to the annual reports on producer organisations, associations of producers organisations, including transnational associations of producer organisations, and producer groups, and on operational funds, operational programmes and recognition plans should be simplified. They need to enable the Commission to adequately monitor the sector.
- (9) Delegated Regulation (EU) 2017/891 should therefore be amended accordingly.
- (10) Transitional provisions should be laid down to ensure a smooth transition from the existing requirements, measures and actions laid down in Delegated Regulation (EU) 2017/891 to the new ones provided for in this Regulation.
- (11) This Regulation should apply from the same date as Regulation (EU) 2017/2393. However, the provisions concerning national financial assistance, indicators and monitoring should apply from 1 January 2019 to allow Member States and economic operators time to adapt to the new rules,
- (12) The conditions for the application of the new measures and actions eligible for Union financial assistance set out in Regulation (EU) No 1308/2013 should apply from the date of application of the amendments to that Regulation introduced by Regulation (EU) 2017/2393 to ensure market stability for producer organisations and their members, in particular given that those measures concern mainly crisis management and prevention and to enable them to fully benefit from the new measures. To safeguard legitimate expectations, producer organisations may choose to continue the ongoing operational programmes under the rules applicable at the time of the approval of the programmes or to modify their operational programmes to benefit from the new measures and actions eligible for Union financial assistance, as set out in Regulation (EU) No 1308/2013,

HAS ADOPTED THIS REGULATION:

Article 1

Amendments to Delegated Regulation (EU) 2017/891

Delegated Regulation (EU) 2017/891 is amended as follows:

- (1) Article 2(e) is replaced as follows:

‘(e) “transnational association of producer organisations” means any association of producer organisations in which at least one of the associated organisations or associations is located in a Member State other than where the association has its head office;’;

- (2) Article 12 is replaced as follows:

‘Article 12

Marketing of the production outside the producer organisation

1. Where the producer organisation so authorises in its statutes and where this is in compliance with the terms and conditions laid down by the Member State and the producer organisation, the producer members may:

- (a) sell products directly or outside their holdings to consumers for their personal needs;
- (b) market by themselves or through another producer organisation designated by their own producer organisation, quantities of products which, in terms of volume or value, are marginal compared to the volume or value of marketable production of their organisation of the products concerned;
- (c) market by themselves or through another producer organisation designated by their own producer organisation, products which because of their characteristics or because of the limited production in volume or in value of the producer members, are normally not covered by the commercial activities of the producer organisation.

2. The percentage of the production that the producer members market outside the producer organisation, as referred to in paragraph 1 shall not exceed 25 % in volume or in value of the marketable production of each producer member.

However, Member States may set a lower percentage of the production that the producer members may market outside the producer organisation than the one set out in the first subparagraph. Member States may increase that percentage up to 40 % in case of products covered by Council Regulation (EC) No 834/2007 (*) or where producer members market their production through another producer organisation designated by their own producer organisation.

(*) Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91 (OJ L 189, 20.7.2007, p. 1).;

(3) in Article 22, paragraph 10 is replaced as follows:

‘10. Where a reduction in production occurs due to a natural disaster, climatic event, animal or plant diseases or pest infestations, any insurance indemnification received in respect of harvest insurance actions covered by Section 7 of Chapter III, or equivalent actions managed by the producer organisation or its producer members, due to those causes may be included in the value of marketed production.’;

(4) in Article 30, paragraph 2 is replaced by the following:

‘2. Producer organisations or associations of producer organisations which have been granted the support provided in Article 27 of Regulation (EU) No 1305/2013 or Article 19 of Commission Regulation (EU) No 702/2014 (*) may implement an operational programme in the same period provided that the Member State concerned ensures that the beneficiaries receive support for any given action only under one scheme.

(*) Commission Regulation (EU) No 702/2014 of 25 June 2014 declaring certain categories of aid in the agricultural and forestry sectors and in rural areas compatible with the internal market in application of Articles 107 and 108 of the Treaty on the Functioning of the European Union (OJ L 193, 1.7.2014, p. 1).;

(5) in the first subparagraph of Article 31(6), the first sentence is replaced by the following:

‘Investments, including those under leasing contracts, may be financed through the operational fund in one amount or in instalments that were approved in the operational programme.’;

(6) in Chapter III of Title II, Section 3 is replaced by the following:

‘Section 3

Support related to mutual funds

Article 40

Support related to mutual funds

1. Member States shall adopt detailed provisions concerning support for the administrative cost of setting up mutual funds and the replenishment of mutual funds, as referred to in point (d) of the first subparagraph of Article 33(3) of Regulation (EU) No 1308/2013.

2. The support for the administrative cost of setting up mutual funds referred to in paragraph 1 shall comprise both the Union financial assistance and the contribution from the producer organisation. The total amount of that support shall not exceed 5 %, 4 % or 2 % of the contribution of the producer organisation to the mutual fund in the first, second and third year of its operation, respectively.

3. A producer organisation may receive the support for the administrative cost of setting up mutual funds referred to in paragraph 1, only once and only within the three first years of the operation of the mutual fund. Where a producer organisation only asks for that support in the second or the third year of operation of the mutual funds, the support shall be 4 % or 2 % of the contribution of the producer organisation to the mutual fund in the second and third year of its operation, respectively.

4. Member States may fix ceilings for the amounts that may be received by a producer organisation as a support related to mutual funds.’;

(7) in Chapter III of Title II, the following Section 8 is added:

‘Section 8

Support related to coaching

Article 51a

Implementation of coaching measures

1. For the purposes of Article 33(3)(i) of Regulation (EU) No 1308/2013, the following coaching measures shall be eligible for support:

- (a) exchange of best practices related to crisis prevention and management measures referred to in Article 33(3) of Regulation (EU) No 1308/2013, helping recognised producer organisations, producer groups or individual producers to benefit from experience with implementation of crisis prevention and management measures;
- (b) promoting the setting-up of new producer organisations, merging existing ones or enabling individual producers to join an existing producer organisation;
- (c) creating networking opportunities for coaching providers and recipients, to strengthen in particular marketing channels as a means of crisis prevention and management.

2. The coaching provider shall be the association of producer organisations or the producer organisation. The coaching provider shall be the beneficiary of the support for coaching measures.

3. The coaching recipient shall be a recognised producer organisation or a producer group located in regions with an organisation rate lower than 20 %, for the three consecutive years preceding the implementation of the operational programme.

Individual producers, non-members of a producer organisation or their associations, may be coaching recipients even if they are located in regions with organisation rate above 20 %.

4. The expenditure related to coaching shall be part of the crisis prevention and management measures of the operational programme referred to in Article 33(3) of Regulation (EU) No 1308/2013.

Eligible costs related to coaching are listed in Annex III to this Regulation.

All costs identified in Annex III shall be paid to the coaching provider.

5. Coaching measures shall not be outsourced.’;

(8) Article 52 is replaced by the following:

‘Article 52

Conditions for the application of national financial assistance

1. For the purposes of Article 35(1) of Regulation (EU) No 1308/2013, the degree of organisation of producers in a region of a Member State shall be calculated on the basis of the value of fruit and vegetables produced in the region concerned and marketed by:

- (a) recognised producer organisations and associations of producer organisations; and
- (b) producer groups recognised in accordance with Article 125e of Regulation (EC) No 1234/2007 or producer organisations and producer groups recognised in accordance with Article 27 of Regulation (EU) No 1305/2013.

For the purpose of the calculation, the value established as referred to in the first subparagraph shall be divided by the total value of the fruit and vegetables produced in that region.

2. The value of fruit and vegetables produced in the region concerned and marketed by the organisations, associations and groups referred to in points (a) and (b) of the first subparagraph of paragraph 1 shall only include those products for which those organisations, associations and groups are recognised. Article 22 shall apply *mutatis mutandis*.

For the calculation of the total value of the fruit and vegetables produced in that region, the methodology set out in Annex I to Regulation (EC) No 138/2004 of the European Parliament and of the Council (*) shall apply *mutatis mutandis*.

3. Only fruit and vegetables produced in the region referred to in paragraph 4 shall benefit from national financial assistance.

4. Member States shall define the regions as a distinct part of their territory in accordance with objective and non-discriminatory criteria, such as their agronomic and economic characteristics and their regional agricultural/fruit and vegetable potential, or their institutional or administrative structure and for which data are available in order to calculate the degree of organisation referred to in paragraph 1.

The regions defined by a Member State shall not be amended at least for five years unless such amendment is objectively justified, in particular for reasons that are not related to the calculation of the degree of organisation of producers in the region or regions concerned.

5. Before granting national financial assistance, Member States shall notify the Commission of the list of the region(s) that meet the criteria referred to in paragraphs (1) and (2) of Article 35 of Regulation (EU) No 1308/2013, and of the amount of national financial assistance to be granted to the producer organisations in those regions.

Member States shall notify the Commission of any amendment of the region(s) that meet the criteria referred to in paragraphs (1) and (2) of Article 35 of Regulation (EU) No 1308/2013.

(*) Regulation (EC) No 138/2004 of the European Parliament and of the Council of 5 December 2003 on the economic accounts for agriculture in the Community (OJ L 33, 5.2.2004, p. 1).;

(9) Article 56 is replaced by the following:

'Article 56

Indicators

1. The operational programmes and the national strategies shall be subject to monitoring and evaluation aimed at assessing the progress made in achieving the objectives set in the operational programmes, as well as their efficiency and the effectiveness in relation to those objectives.

2. Progress, efficiency and effectiveness referred to in paragraph 1 shall be assessed throughout the implementation of the operational programme on the basis of indicators, set out in Section 4 of Annex II to Implementing Regulation (EU) 2017/892, relating to actions and measures implemented by recognised producer organisations, associations of producer organisations, transnational associations of producer organisations and producer groups during the operational programmes.;

(10) Article 57 is modified as follows:

(a) in paragraph (2), point (c) is replaced by the following:

'(c) provide information for reporting requirements.'

(b) paragraph (3) is amended as follows:

(i) the second subparagraph is replaced by the following:

'The evaluation exercise shall examine the progress made in relation to the overall objectives of the programme, based on indicators set out in Section 4 of Annex II to Implementing Regulation (EU) 2017/892';

(ii) the last subparagraph is replaced by the following:

'The evaluation report shall be attached to the corresponding annual report referred to in Article 21 of the Implementing Regulation (EU) 2017/892';

(11) Annex II, III and V are amended in accordance with the Annex to this Regulation.

Article 2

Transitional provisions

Without prejudice to Article 34 of Commission Implementing Regulation (EU) 2017/891, an operational programme approved under Commission Implementing Regulation (EU) No 543/2011 ⁽¹⁾ or Delegated Regulation (EU) 2017/891 before 20 January 2018 shall continue to operate until its end under the conditions applicable before 1 January 2018.

⁽¹⁾ Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors (OJ L 157, 15.6.2011, p. 1).

However, at the request of a producer organisation or association of producer organisations, Member States may approve amendments of operational programme approved under Implementing Regulation (EU) No 543/2011 or Delegated Regulation (EU) 2017/891 before 20 January 2018. Those amendments shall comply with the requirements of Regulation (EU) No 1308/2013 as amended by Regulation (EU) 2017/2393, of Delegated Regulation (EU) 2017/891 as amended by Article 1 of this Regulation and of Implementing Regulation (EU) 2017/892 as amended by Implementing Regulation (EU) 2018/1146 ⁽¹⁾.

Article 3

Entry into force and application

This Regulation shall enter into force the day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2018.

However, points (8), (9) and (10) of Article 1 and point (3) of the Annex shall apply from 1 January 2019.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 7 June 2018.

For the Commission

The President

Jean-Claude JUNCKER

⁽¹⁾ Commission Implementing Regulation (EU) 2018/1146 of 7 June 2018 amending Implementing Regulation (EU) 2017/892 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and Regulation (EC) No 606/2009 laying down certain detailed rules for implementing Council Regulation (EC) No 479/2008 as regards the categories of grapevine products, oenological practices and the applicable restrictions (see page 9 of this Official Journal).

ANNEX

The Annexes to Delegated Regulation (EU) 2017/891 are amended as follows:

(1) Annex II is amended as follows:

(a) point 20 is replaced as follows:

‘20. Measures outsourced by the producer organisation or their associations outside the Union, except where a promotion is implemented outside the Union according to Article 14 of Implementing Regulation (EU) 2017/892.’;

(b) the following new point 21 is added:

‘21. Export credit linked to actions and activities aimed at diversification and consolidation on the fruit and vegetable markets, whether for prevention or during a crisis period.’;

(2) in Annex III, the following new points 12, 13 and 14 are added:

‘12. Costs related to coaching as part of the crisis prevention and management measures of the operational programme.

Eligible costs under this measure shall be:

(a) costs of organising and delivering coaching; and

(b) costs of travel, accommodation and *per diem* expenses of coaching provider.

13. Costs related to the negotiation and to implementation and management of third country phytosanitary protocols in the territory of the Union if borne by the producer organisation or association of producer organisations as a part of crisis prevention and management measures referred to in Article 33(3)(a) and (c) of Regulation (EU) No 1308/2013, except for reimbursement of third country expenses.

14. Costs related to promotion and communication measures referred to in Article 14 of Implementing Regulation (EU) 2017/892. Eligible costs under these measures shall be costs related to the organisation and participation in promotion and information events, including public relations work, promotion and information campaigns and may take the form of participation in events, fairs and exhibitions of national, European and international importance. Costs related to technical advisory services are eligible if they are necessary for the organisation or participation of these events or for promotion and information campaigns.’;

(3) Annex V is replaced by the following:

‘ANNEX V

Information to be included in the annual report of Member States as referred to in Article 54(b)

All information shall relate to the calendar year being reported on. It shall cover information on checks executed and administrative penalties applied in respect of that. As regards the information that varies during the year the annual report should reflect the state of play on 31 December of the year reported on.

PART A — INFORMATION FOR MARKET MANAGEMENT

1. Administrative information:

(a) changes to national legislation adopted in order to implement Section 3 of Chapter II of Title I and Sections 1, 2 and 3 of Chapter III of Title II of Regulation (EU) No 1308/2013;

(b) changes relating to the national strategy for sustainable operational programmes applicable to operational programmes.

2. Information related to producer organisations, associations of producer organisations, transnational associations of producer organisations, and producer groups:

(a) total number of recognised/suspended producer organisations, associations of producer organisations, transnational associations of producer organisations, and producer groups. In addition:

(i) for associations of producer organisations: number of producer organisations members;

(ii) for transnational associations of producer organisations: number of producer organisations members and the Member States where these members have their head office;

- (b) total number of producer organisations, associations of producer organisations, transnational associations of producer organisations, and producer groups for which recognition was withdrawn. In addition for transnational associations of producer organisations: number of organisations members and the Member States where these members have their head office;
 - (c) total number of mergers between organisations (broken down between total, number of new organisation(s) and new ID number(s));
 - (d) number of members (total and broken down between legal entities, natural persons and fruit and vegetables producers);
 - (e) total number of organisations/groups with an operational programme/recognition plan (broken down between recognised, suspended and subject to a merger);
 - (f) part of the production of products intended for the fresh market (with the indication of their value and volume);
 - (g) part of the production of products intended for processing (with the indication of their value and volume);
 - (h) area under fruit and vegetable production.
3. Information related to expenditures:
- (a) expenditures related to producer organisations, associations of producer organisations and transnational associations of producer organisations (broken down between operational fund, final operational fund and national financial assistance);
 - (b) total actual expenditures of operational programmes for producer organisations, associations of producer organisations and transnational associations of producer organisations (broken down between actions and measures linked to their objectives);
 - (c) total actual expenditures for producer groups;
 - (d) withdrawals broken down between categories of products (volume, total expenditure, amount of EU financial assistance and destinations (free distribution, composting, processing industry and others)).
4. Information relating to monitoring of operational programmes and recognition plans:
- (a) indicators as regards producer organisations, associations of producer organisations and transnational associations of producer organisations (broken down between actions and measures linked to their objectives);
 - (b) indicators as regards producer groups.

PART B — INFORMATION FOR THE CLEARANCE OF ACCOUNTS

Information on checks and administrative penalties:

- (a) checks carried out by the Member State: details of bodies visited and dates of visiting;
 - (b) checking rates;
 - (c) results of checks;
 - (d) administrative penalties applied.'
-

COMMISSION IMPLEMENTING REGULATION (EU) 2018/1146**of 7 June 2018**

amending Implementing Regulation (EU) 2017/892 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors and Regulation (EC) No 606/2009 laying down certain detailed rules for implementing Council Regulation (EC) No 479/2008 as regards the categories of grapevine products, oenological practices and the applicable restrictions

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 ⁽¹⁾, and in particular Article 38, Article 182(1) and (4) and Article 223 thereof,

Having regard to Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agriculture policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008 ⁽²⁾, and in particular Article 62(2) thereof

Whereas:

- (1) Commission Implementing Regulation (EU) 2017/892 ⁽³⁾ establishes rules for the application of Regulation (EU) No 1308/2013 with regard to the fruit and vegetables and processed fruit and vegetables sectors. Regulation (EU) 2017/2393 of the European Parliament and of the Council ⁽⁴⁾ has amended Regulation (EU) No 1308/2013 in particular as regards the aid in the fruit and vegetables sector. Therefore, Implementing Regulation (EU) 2017/892 should reflect the amendments to the relevant provisions of Regulation (EU) No 1308/2013.
- (2) Implementing rules regarding national financial assistance in the fruit and vegetables sector should be updated.
- (3) Details for implementation of the increase of the limit of Union financial assistance from 50 % to 60 % in Member States where producer organisations market less than 20 % of fruit and vegetables production referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 and in particular the details of the calculation of the degree of organisation of producers in a Member State should be laid down to ensure that the applications for aid and the verification of the conditions for the increase are implemented coherently throughout the Union.
- (4) It should also be clarified that promotion of the products as a crisis measure includes diversifying and consolidating the fruit and vegetables markets.
- (5) Provisions relating to annual reports on producer organisations, associations of producers organisations, including transnational organisations, and producer groups, and on operational funds, operational programmes and recognition plans should be simplified. These reports should enable the Commission to adequately monitor the sector.
- (6) Conditions for the application of the import duties referred to in Article 182 of Regulation (EU) No 1308/2013 which may apply to imports of certain fruit and vegetables should be clarified.

⁽¹⁾ OJ L 347, 20.12.2013, p. 671.

⁽²⁾ OJ L 347, 20.12.2013, p. 549.

⁽³⁾ Commission Implementing Regulation (EU) 2017/892 of 13 March 2017 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors (OJ L 138, 25.5.2017, p. 57).

⁽⁴⁾ Regulation (EU) 2017/2393 of the European Parliament and of the Council of 13 December 2017 amending Regulations (EU) No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), (EU) No 1306/2013 on the financing, management and monitoring of the common agricultural policy, (EU) No 1307/2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy, (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products and (EU) No 652/2014 laying down provisions for the management of expenditure relating to the food chain, animal health and animal welfare, and relating to plant health and plant reproductive material (OJ L 350, 29.12.2017, p. 15).

- (7) Where an association of producer organisations or transnational association of producer organisation implements an operational programme Member States should ensure that double funding is avoided, and that appropriate checks are carried out for the actions implemented at the level of the association of producer organisations as well as at the level of its producer organisation members, as required under Regulation (EU) No 1306/2013.
- (8) Annexes I and II to Implementing Regulation (EU) 2017/892 should be updated to simplify Part A of the Annual Report of Member States, common performance indicators and to remove the common baseline indicators.
- (9) Implementing Regulation (EU) 2017/892 should therefore be amended accordingly.
- (10) Point 3 of Section A of Part I of Annex VIII of Regulation (EU) No 1308/2013 sets out an obligation for Member States to notify the Commission of any increase in the limits laid down in point 2 of that section. Commission Regulation (EC) No 606/2009 ⁽¹⁾ should be amended to provide for the details concerning the submission of this information by Member States to the Commission.
- (11) This Regulation should apply from the same day as Regulation (EU) 2017/2393. However, provisions that concern reporting should apply from 1 January 2019 to give Member States and the economic operators concerned sufficient time to implement the amendments set out in this Regulation. The flexibility for producer organisations provided for by the new measures and actions should apply brought by the transitional provisions must be implemented together with retroactivity in order to coincide with the application date of Regulation (EU) 2017/2393 so that the application of the amendments in Regulation (EU) No 1308/2013 is respected.
- (12) The conditions for the application of the new measures and actions eligible for Union financial assistance set out in Regulation (EU) No 1308/2013 should apply from the date of application of the amendments to that Regulation introduced by Regulation (EU) 2017/2393 to ensure market stability for producer organisations and their members, in particular given that those measures concern mainly crisis management and prevention and to enable them to fully benefit from the new measures. To safeguard legitimate expectations, producer organisations may choose to continue their operational programmes under the previous legal framework or to modify their operational programmes to benefit from the new measures and actions eligible for Union financial assistance as set out in Regulation (EU) No 1308/2013.
- (13) The measures provided for in this Regulation are in accordance with the opinion of the Committee for the Common Organisation of the Agricultural Markets,

HAS ADOPTED THIS REGULATION:

Article 1

Amendments to Implementing Regulation (EU) 2017/892

Implementing Regulation (EU) 2017/892 is amended as follows:

- (1) The following new Article 8a is inserted:

‘Article 8a

Implementation of increase of the limit of the Union financial assistance from 50 % to 60 %

1. The increase of the limit of the Union financial assistance from 50 % to 60 % for an operational programme or part of an operational programme of a recognised producer organisation as referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 shall be granted if:

- (a) the conditions as referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 are met in each year of implementation of the operational programme and subject to the procedure referred to Article 9(2)(g) of this Regulation;
- (b) a request is made by a recognised producer organisation at the time of submission of its operational programme.

⁽¹⁾ Commission Regulation (EC) No 606/2009 of 10 July 2009 laying down certain detailed rules for implementing Council Regulation (EC) No 479/2008 as regards the categories of grapevine products, oenological practices and the applicable restrictions (OJ L 193, 24.7.2009, p. 1).

2. For the purposes of the increase of the limit of the Union financial assistance from 50 % to 60 % for an operational programme or part of it, the rate of marketing of fruit and vegetable production by producer organisations referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 shall be calculated for each year of the duration of operational programme, as a portion of the value of production marketed by producer organisations in a given Member State, of the total value of the production of fruit and vegetables marketed in the given Member State for the reference period set out in Article 23(1) of Delegated Regulation (EU) 2017/891.

However, Member States applying the alternative method set out in Article 23(3) of Delegated Regulation (EU) 2017/891 shall calculate the rate of marketing of fruit and vegetable production by producer organisations referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 for each year of the duration of operational programme, as a portion of the value of production marketed by producer organisations in a given Member State, of the total value of the production of fruit and vegetables marketed in the given Member State for the period from 1 January until 31 December of the year preceding the year in which the aid is approved according to Article 8 of this Regulation.

3. Member States shall notify the requesting producer organisation of the approved amount of aid, including the amount of the increase granted pursuant to Article 34(3)(f) of Regulation (EU) No 1308/2013, at the latest by 15 December of the year preceding the implementation of the operational programme, as set out in Article 8 of this Regulation.

4. Member States shall verify each year of the duration of the operational programme that the conditions for increase of the limit of the Union financial assistance from 50 % to 60 % as referred to in Article 34(3)(f) of Regulation (EU) No 1308/2013 are met.;

(2) In Article 4, paragraph (1)(a) is amended as follows:

‘(a) a description of the initial situation, based, where relevant, on the indicators listed in Table 4.1 of Annex II;’

(3) In Article 9, paragraphs 6 and 7 are replaced by the following:

‘6. Producer organisations shall submit an application for aid regarding actions that are implemented at the level of the producer organisations in the Member State where they are recognised. If they are members of a transnational association of producer organisations, the producer organisations shall provide the Member State where the transnational association of producer organisations has its headquarters with a copy of the application.

7. Transnational associations of producer organisations shall submit an application for aid regarding actions implemented at the level of the transnational association in the Member State where that association has its headquarters. Member States shall ensure that there is no double funding risk.’;

(4) In Article 14, paragraph 1 is replaced by the following:

‘1. Member States shall adopt provisions on the conditions to be fulfilled by promotion and communication measures, including actions and activities aimed at diversification and consolidation on the fruit and vegetable markets, whether those measures relate to crisis prevention or crisis management. Those provisions shall allow for the rapid application of the measures when required.

The principal aim of those measures shall be enhancing the competitiveness of the products marketed by the producer organisations and their associations in the case of serious market disturbance, loss of consumer confidence or other related problems.

The specific objectives of the promotion and communication measures implemented by the producer organisations and their associations shall be:

- (a) increasing awareness about the quality of agricultural products produced in the Union and about the high quality standards applicable to their production in the Union;
- (b) increasing the competitiveness and consumption of agricultural products and of certain processed products produced in the Union and raising awareness about their quality both inside and outside the Union;
- (c) increasing awareness about Union quality schemes both inside and outside the Union;
- (d) increasing the market share of agricultural products and certain processed products produced in the Union, focusing on the markets in third countries that have the highest growth potential; and
- (e) contributing to the recovery of normal market conditions in the Union market in the event of serious market disturbance, loss of consumer confidence or other related problems.’;

- (5) Chapter III is deleted;
- (6) Article 21 is replaced by the following:

‘Article 21

Information and annual reports from producer groups, producer organisations and associations of producer organisations and annual reports from Member States

At the request of a competent authority of a Member State, producer groups formed pursuant to Article 125e of Regulation (EC) No 1234/2007, recognised producer organisations, associations of producer organisations, transnational associations of producer organisations and producer groups shall provide any relevant information needed for drawing up of the annual report referred to in Article 54(b) of Delegated Regulation (EU) 2017/891. The structure of the annual report is set out in Annex II to this Regulation.

Member States shall take the measures necessary to gather information on the number of members, the volume and the value of marketed production of producer organisations which have not submitted operational programmes. Producer organisations and producer groups referred to in Article 27 of Regulation (EU) No 1305/2013 shall be requested to provide the number of members, the volume and the value of the marketed production.’;

- (7) In Article 33, paragraphs 3 and 4 are replaced by the following:

- ‘3. The Member State in which the transnational association of producer organisations has its head office shall:
- (a) have overall responsibility for the organisation of checks in respect of actions of the operational programme implemented at the level of the transnational association and of the operational fund of the transnational association and for the application of administrative penalties where such checks demonstrate that obligations have not been met; and
- (b) ensure the coordination of checks and payments in respect of the actions of the operational programme of the transnational association implemented outside the territory of the Member State where its head office is.
4. The actions of the operational programmes shall comply with the national rules and with the national strategy of the Member State where, in accordance with Article 9, paragraphs 6 and 7, the application for aid is submitted.

However, environmental and phytosanitary measures and crisis prevention and management measures shall be subject to the rules of the Member State where these measures and actions are actually carried out.’;

- (8) In Article 39, paragraph 1 is replaced by the following:

‘1. An additional import duty as referred to in Article 182(1) of Regulation (EU) No 1308/2013 may be applied to the products and during the periods listed in Annex VII to this Regulation. That additional import duty shall apply if the quantity of any of the products put into free circulation for any of the periods of application set out in that Annex exceeds the trigger volume for that product unless the imports are unlikely to disturb the Union market, or the effects of the additional import duty would be disproportionate to the intended objective.’;

- (9) Annexes I and II are replaced by the text set out in the Annex to this Regulation.

Article 2

Amendment to Regulation (EC) No 606/2009

In Regulation (EC) No 606/2009 the following new Article 12a is inserted:

‘Article 12a

Notifications of Member States’ decisions allowing an increase in natural alcoholic strength

1. Member States deciding to make use of the possibility to allow an increase in the natural alcoholic strength by volume pursuant to Point 3 of Section A of Part I of Annex VIII of Regulation (EU) No 1308/2013 shall notify the Commission of this before they adopt the decision. In the notification the Member States shall specify the percentages by which the limits laid down in Point 2 of Section A of Part I of Annex VIII of Regulation (EU) No 1308/2013 have been raised, the regions and the varieties concerned by the decision and submit data and evidence showing that the climatic conditions have been exceptionally unfavourable in the regions concerned.

2. The notification shall be made in accordance with Delegated Regulation (EU) 2017/1183 (*) and Implementing Regulation (EU) 2017/1185 (**).

3. The notification shall be communicated by the Commission to the authorities of the other Member States through the information system put in place by the Commission.

(*) Commission Delegated Regulation (EU) 2017/1183 of 20 April 2017 on supplementing Regulations (EU) No 1307/2013 and (EU) No 1308/2013 of the European Parliament and of the Council with regards to the notifications to the Commission of information and documents (OJ L 171, 4.7.2017, p. 100).

(**) Commission Implementing Regulation (EU) 2017/1185 of 20 April 2017 laying down rules for the application of Regulations (EU) No 1307/2013 and (EU) No 1308/2013 of the European Parliament and of the Council as regards notifications to the Commission of information and documents and amending and repealing several Commission Regulations (OJ L 171, 4.7.2017, p. 113).

Article 3

Entry into force and application

This Regulation shall enter into force on the day after its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2018.

However, points (5), (6) and (9) of Article 1 shall apply from 1 January 2019.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 7 June 2018.

For the Commission

The President

Jean-Claude JUNCKER

ANNEX

'ANNEX I

Structure and content of a national strategy for sustainable operational programmes as referred to in Article 2

1. Duration of the national strategy

To be indicated by the Member State.

2. Analysis of the situation in terms of strengths and weaknesses and potential for development, the strategy chosen to meet them and the justification of the priorities chosen as referred to in Article 36(2)(a) and (b) of Regulation (EU) No 1308/2013.

2.1. Analysis of the situation

Description of the current situation of the fruit and vegetable sector using quantified data, highlighting strengths and weaknesses, disparities, needs and gaps and potential for development on the basis of the relevant indicators set out in Table 4.1 of Annex II. This description shall concern at least:

- the performances of the fruit and vegetables sector: strengths and weaknesses of the sector, competitiveness and the potential for development of the producer organisations;
- the environmental effects (impacts, pressures and benefits) of the fruit and vegetables production, including key trends.

2.2. The strategy chosen to meet strengths and weaknesses

Description of the key areas where intervention is expected to bring the maximum value added:

- relevance of the objectives set for the operational programmes, of the expected results and the extent to which they can be realistically achieved;
- internal coherence of the strategy, existence of mutually reinforcing interactions and possible conflicts or contradictions between the operational objectives of different actions selected;
- complementarity and consistency of the actions selected with other national or regional actions, and with activities supported through Union funds, in particular with the rural development and promotion programmes;
- expected results and impact compared to the baseline situation and their contribution to Union objectives.

2.3. Impact from the previous national strategy (where applicable)

Description of results and impact of operational programmes implemented in the recent past.

3. Objectives of operational programmes and performance indicators as referred to in Article 36(2)(c) of Regulation (EU) No 1308/2013

Description of the types of actions selected as eligible for support (non-exhaustive list), the objectives pursued, the verifiable targets and the indicators that allow the progress towards achievement of the objectives, efficiency and effectiveness to be assessed.

3.1. Requirements concerning all or several types of actions

Member States shall ensure that all the actions included in the national strategy and in the national framework are verifiable and controllable. Where the assessment during the implementation of the operational programmes reveals that the requirements of verifiability and controllability are not met, the actions concerned shall be adjusted accordingly or deleted. Where support is granted on the basis of standard flat rates or scales of unit costs, Member States shall ensure that the relevant calculations are adequate and accurate and established in advance on the basis of a fair, equitable and verifiable calculation. Environmental actions shall comply with the requirements set out in Article 33(5) of Regulation (EU) No 1308/2013.

Member States shall adopt safeguards, provisions and checks for ensuring that actions selected as eligible for support are not also supported by other relevant instruments of the common agricultural policy, in particular by rural development and promotion programmes or other national or regional schemes. Effective safeguards in place pursuant to Article 33(6) of Regulation (EU) No 1308/2013, to protect the environment from possible increased pressures coming from investments supported under operational programmes, and eligibility criteria adopted pursuant to Article 36(1) of that Regulation, for ensuring that investments on individual holdings supported under operational programmes respect the objectives set out in Article 191 TFEU and in the seventh Union environment action programme.

- 3.2. Specific information required for types of actions aimed at the attainment of the objectives set out or referred to in Article 33(1) of Regulation (EU) No 1308/2013 (to be filled only for the types of actions selected).

3.2.1. Acquisition of fixed assets

- types of investments eligible for support,
- other forms of acquisition eligible for support, e.g. renting, leasing,
- details on eligibility conditions for support.

3.2.2. Other actions

- description of the types of actions eligible for support,
- details on eligibility conditions for support.

4. Designation of competent authorities and responsible bodies

Designation by the Member State of the national authority responsible for the management, monitoring and evaluation of the national strategy.

5. A description of the monitoring and evaluation systems

The performance indicators set out by the national strategy shall comprise the indicators provided for in Article 4 and listed in Table 4.1 of Annex II. Where deemed appropriate, the national strategy shall specify additional indicators reflecting national or regional needs, conditions and objectives specific to the national operational programmes.

5.1. Assessment of the operational programmes and reporting obligations for producer organisations as referred to in Article 36(2)(d) and (e) of Regulation (EU) No 1308/2013.

Description of the monitoring and evaluation requirements and procedures in relation to operational programmes, including the reporting obligations for producer organisations.

5.2. Monitoring and evaluation of the national strategy

Description of the monitoring and evaluation requirements and procedures in relation to the national strategy.

ANNEX II

Annual Report Part A

STRUCTURE OF THE ANNUAL REPORT – PART A

These forms constitute the part A of the annual report that the competent authorities of the Member States are required to transmit to the European Commission by 15 November each year in the year following the calendar year covered by the report.

These forms are based on the reporting requirements set out in Article 54(b) and in Annex V to Commission Delegated Regulation (EU) 2017/891, laying down detailed rules for the application of Regulation (EU) No 1308/2013 in respect of the fruit and vegetables and processed fruit and vegetables sectors.

1. Administrative information

Table 1.1.	Changes to national legislation adopted to implement Section 3 of Chapter II of Title I and Sections 1, 2 and 3 of Chapter III of Title II of Regulation (EU) No 1308/2013 (for the fruit and vegetables sector)
Table 1.2.	Changes relating to the national strategy for sustainable operational programmes applicable to operational programmes

2. Information on producer organisations, transnational producer organisations, associations of producer organisations, transnational association of producer organisations and producer groups

Table 2.1.	Producer organisations
Table 2.2.	Transnational producer organisations
Table 2.3.	Associations of producer organisations
Table 2.4.	Transnational associations of producer organisations
Table 2.5.	Producer groups

3. Information related to expenditures

Table 3.1.	Expenditures related to producer organisations, transnational producer organisations, associations of producer organisations and transnational associations of producer organisations
Table 3.2.	Total expenditures of operational programmes for producer organisations, transnational producer organisations, associations of producer organisations and transnational associations of producer organisations
Table 3.3.	Total expenditures for producer groups
Table 3.4.	Withdrawals

4. Monitoring of operational programmes/recognition plans

Table 4.1.	Indicators as regards producer organisations and transnational producer organisations, associations of producer organisations and transnational associations of producer associations
Table 4.2.	Indicators for producer groups

Explanatory notes**Abbreviations**

Common market organisation	CMO
Producer group	PG
Producer organisation	PO
Transnational producer organisation	TPO
Association of producers organisation	APO
Transnational association of producers organisation	TAPO

Operational fund	OF
Operational programme	OP
Value of marketed production	VMP
Member State	MS

Country codes

Country name (source language)	Short name (English)	Code
Belgique/België	Belgium	BE
България (*)	Bulgaria	BG
Česká republika	Czech Republic	CZ
Danmark	Denmark	DK
Deutschland	Germany	DE
Eesti	Estonia	EE
Éire/Ireland	Ireland	IE
Ελλάδα (*)	Greece	EL
España	Spain	ES
France	France	FR
Italia	Italy	IT
Κύπρος (*)	Cyprus	CY
Latvija	Latvia	LV
Lietuva	Lithuania	LT
Luxembourg	Luxembourg	LU
Magyarország	Hungary	HU
Malta	Malta	MT
Nederland	Netherlands	NL
Österreich	Austria	AT
Polska	Poland	PL
Portugal	Portugal	PT
Republika Hrvatska	Croatia	HR
România	Romania	RO
Slovenija	Slovenia	SI
Slovensko	Slovakia	SK
Suomi/Finland	Finland	FI
Sverige	Sweden	SE
United Kingdom	United Kingdom	UK

(*) Latin transliteration: България = Bulgaria; Ελλάδα = Elláda; Κύπρος = Kýpros.

Region codes

Vlaams Gewest	BE2
Région Wallonne	BE3

The indication of the region concerned on the cover page of each section and at the beginning of each table is an option for any Member State that finds it more appropriate to provide a regional breakdown.

Code number (ID) of POs, TPOs, APOs, TAPOs and PGs

The code number of each PO, TPO, APO, TAPO or PG is UNIQUE. If a PO, TPO, APO, TAPO or PG has its recognition withdrawn, the same code number should never be used again.

Monetary values

All monetary values should be expressed in euro, except for those Member States that use a national currency. A "NATIONAL CURRENCY" box is present at the TOP of Tables.

Currency	
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The box should indicate the code of the national currency used.

	CODE
Euro	EUR
Pound sterling	GBP

Contact point for communication

Member State: Year:

Region:

Organisation	Name	
	Postal address	
Contact person 1	Family name	
	First name	
	Job Title	
	Email address	
	Business phone	
	Business fax	
Contact person 2	Family name	
	First name	
	Job Title	
	Email address	
	Business phone	
	Business fax	

Annual Report – Part A

Member State:

Year:

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Region:

SECTION 1

ADMINISTRATIVE INFORMATION

Table 1.1. **Changes to national legislation adopted in order to implement Section 3 of Chapter II of Title I of Regulation (EU) No 1308/2013 (for the fruit and vegetables sector)**

National legislation		
Title	Publication in the OJ of the Member State	Hyperlink

Table 1.2. **Changes to the national strategy for sustainable operational programmes applicable to operational programmes**

National strategy	
Changes to the national strategy ⁽¹⁾	Hyperlink

⁽¹⁾ Summary of the changes introduced to the national strategy during the year reported.

Annual Report – Part A

Member State:

Year:

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Region:

SECTION 2

INFORMATION RELATED TO POs, TPOs, APOs, TAPOs AND PGs

Table 2.1. **Producer organisations**

Total number of recognised POs		
Total number of suspended POs		
Total number of POs for which the recognition was withdrawn		
Total number of POs that merged with another (or more) PO(s)/APO(s)/TPO(s)/TAPO(s)	Total number of POs concerned	
	Total number of new PO(s)/APO(s)/TPO(s)/TAPO(s)	
	New ID number(s)	
Number of members of POs	Total	
	Legal entities	
	Natural persons	
	Number of fruit and/or vegetable producers	
Total number of POs implementing an operational programme	— recognised POs	
	— suspended POs	
	— POs subject to merger	
Part of the production intended for the fresh market	Value	
	Volume (tonnes)	

Part of the production intended for processing	Value	
	Volume (<i>tonnes</i>)	
Total area under fruit and vegetables production (<i>ha</i>) (*)		
(*) <i>excluding mushrooms</i>		

Table 2.2. **Transnational producer organisations** ⁽¹⁾

Total number of recognised TPOs		
— Number of PO members		
— List of MS where PO members have their head office		
Total number of suspended TPOs		
— Number of PO members		
— List of MS where PO members have their head office		
Total number of TPOs for which the recognition was withdrawn		
— Number of PO members		
— List of MS where PO members have their head office		
Total number of TPOs that merged with another (or more) TPO(s)/TAPO(s)	Total number of TPOs concerned	
	Total number of new TPO(s)/TAPO(s)	
	New ID number(s)	
Number of members of TPOs	Total	
	Legal entities	
	Natural persons	
	Number of fruit and/or vegetable producers	

(1) This table refers to Member States where the head offices of TPOs are located.
The total area refers to areas exploited by TPOs' members, namely POs, growers belonging to POs members to the TPO and growers members to the TPO.

Total number of TPOs implementing an operational programme	— recognised TPOs		with entire OP		
			with partial OP		
	— suspended TPOs		with entire OP		
			with partial OP		
	— TPOs subject to merger		with entire OP		
			with partial OP		
Part of the production intended for the fresh market		Value			
		Volume (<i>tonnes</i>)			
Part of the production intended for processing		Value			
		Volume (<i>tonnes</i>)			
Total area under fruit and vegetables production (<i>ha</i>) (*)					
(*) <i>excluding mushrooms</i>					

Table 2.3. **Associations of producer organisations** ⁽¹⁾

Total number of recognised APOs		
— Number of PO members		
Total number of suspended APOs		
— Number of PO members		
Total number of APOs for which the recognition was withdrawn		
— Number of PO members		
Total number of APOs that merged with another (or more) APO(s)/TAPO(s)	Total number of APOs concerned	
	Total number of new APO(s)/TAPO(s)	
	New ID number(s)	

⁽¹⁾ This table refers to Member States where the head offices of APOs are located.

The total area refers to areas exploited by APOs' members, namely POs, growers belonging to POs members to the APOs.

Number of members of APOs		Total		
		Legal entities		
		Natural persons		
		Number of fruit and/or vegetable producers		
Total number of APOs implementing an operational programme	— recognised APOs	with entire OP		
		with partial OP		
	— suspended APOs	with entire OP		
		with partial OP		
	— APOs subject to merger	with entire OP		
		with partial OP		
Part of the production intended for the fresh market		Value		
		Volume (<i>tonnes</i>)		
Part of the production intended for processing		Value		
		Volume (<i>tonnes</i>)		
Total area under fruit and vegetables production (<i>ha</i>) (*)				
(*) <i>excluding mushrooms</i>				

Table 2.4. **Transnational associations of producer organisations** ⁽¹⁾

Total number of recognised TAPOs	
— Number of PO/TPO/APO members	
— List of MS where PO/TPO/APO members have their head office	
Total number of suspended TAPOs	
— Number of PO/TPO/APO members	
— List of MS where PO/TPO/APO members have their head office	

(1) This table refers to Member States where the head offices of TAPOs are located.
The total area refers to areas exploited by TAPOs' members, namely POs, growers belonging to POs members to the TAPOs.

Total number of TAPOs for which the recognition was withdrawn			
— Number of PO/TPO/APO members			
— List of MS where PO/TPO/APO members have their head office			
Total number of TAPOs that merged with another (or more) TAPO(s)	Total number of TAPO(s) concerned		
	Total number of new TAPO(s)		
	New ID number(s)		
Number of members of TAPOs	Total		
	Legal entities		
	Natural persons		
	Number of fruit and/or vegetable producers		
Total number of TAPOs implementing an operational programme	— recognised TAPOs	with entire OP	
		with partial OP	
	— suspended TAPOs	with entire OP	
		with partial OP	
	— TAPOs subject to merger	with entire OP	
		with partial OP	
Part of the production intended for the fresh market	Value		
	Volume (<i>tonnes</i>)		
Part of the production intended for processing	Value		
	Volume (<i>tonnes</i>)		
Total area under fruit and vegetables production (<i>ha</i>) (*)			
(*) <i>excluding mushrooms</i>			

Table 2.5. **Producer groups**

Total number of recognised PGs		
Total number of suspended PGs		
Total number of PGs for which the recognition was withdrawn		
Total number of PGs which have become POs		
Total number of PGs that merged with another (or more) PG(s)	Total number of PGs concerned	
	Total number of new PGs	
	New ID number(s)	
Number of members of PGs	Total	
	Legal entities	
	Natural persons	
	Number of fruit and/or vegetable producers	
Part of the production intended for the fresh market	Value	
	Volume (<i>tonnes</i>)	
Part of the production intended for processing	Value	
	Volume (<i>tonnes</i>)	
Total area under fruit and vegetables production (<i>ha</i>) (*)		
(*) <i>excluding mushrooms</i>		

Annual Report – Part A

Member State:

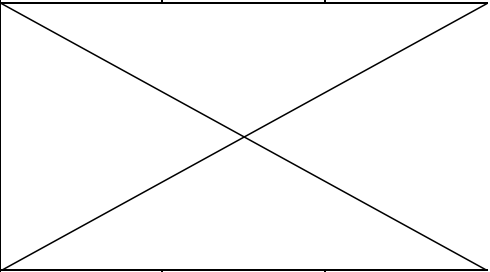
Year:

Region:

SECTION 3

EXPENDITURES INFORMATION

Table 3.1. **Expenditures related to POs, TPOs, APOs and TAPOs**

		All POs	All TPOs	All APOs	All TAPOs
Operational Fund	Total approved				
	— Amount of the financial contribution of the organisation and/or organisation's members				
	— Amount of the Union financial assistance				
Final Operational Fund	Total spent				
	— Amount of the financial contribution of the organisation's members				
	— Amount of the Union financial assistance				
National financial assistance	Amount of the National financial assistance actually paid				
	Estimated amount of the National financial assistance actually paid to be reimbursed by the EU				
	List of the beneficiary regions under Article 35 of Regulation (EU) No 1308/2013				
Value of marketed production <i>(calculated in accordance with Article 22 of Regulation (EU) 2017/891)</i>					

(Data in Euro or national currency)

Table 3.2. **Total actual expenditures of operational programmes for POs, TPOs, APOs and TAPOs**

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Total actual expenditures (<i>Euro or national currency</i>)			
		All POs	All TPOs	All APOs	All TAPOs
Investments	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				
	Crisis prevention and management				
	Research				
Research and experimental production	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				
Quality schemes (EU and national) and measures related to quality improvement	Improvement of product quality				
Promotion and communications	Boosting products' commercial value				
	Promotion of the products				
	Crisis prevention and management				
Training and exchange of best practices	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				
	Crisis prevention and management				

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Total actual expenditures (<i>Euro or national currency</i>)			
		All POs	All TPOs	All APOs	All TAPOs
Advisory services and technical assistance	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				
Organic production	Environmental measures				
Integrated production					
Improved use or management of water, including water saving and drainage					
Actions to conserve soil					
Actions to create or maintain habitat favourable for biodiversity or to maintain the landscape, including the conservation of historical features					
Actions favouring energy saving (excluding transport)					
Action related to reduction of waste production and to improve waste management					
Transport					
Marketing					
Setting-up mutual funds	Crisis prevention and management				
Replenishment of mutual funds					
Replanting of orchards					

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Total actual expenditures (<i>Euro or national currency</i>)			
		All POs	All TPOs	All APOs	All TAPOs
Market withdrawal					
— Free distribution					
— Other					
Green-harvesting					
Non-harvesting					
Harvest insurance					
Coaching					
Administrative costs	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				
	Crisis prevention and management				
	Research				
Others	Planning of production				
	Improvement of product quality				
	Boosting products' commercial value				
	Environmental measures				

Note: Regulation (EU) No 1308/2013 provides for the following objectives:

- Planning of production Articles 33(1)(a) and 152(1)(c)(i),(ii) and (xi)
- Improvement of product quality Articles 33(1)(b) and 152(1)(c)(i),(iv) and (vi)
- Boosting products' commercial value Articles 33(1)(c) and 152(1)(c)(i),(ii),(iii),(iv),(ix) and (xi)
- Promotion of the products Article 33(1)(d) and 152(1)(c)(vi) and (ix)
- Environmental measures Articles 33(1)(e) and 152(1)(c)(iii),(iv), (v),(vii) and (viii)
- Crisis prevention and management Articles 33(1)(f), 33(3)(a) and 152(1)(c)(iv) and (xi)
- Research Article 152(1)(c)(iv)

Table 3.3. **Total actual expenditures for Producer Groups**

		Total actual expenditures for all PGs (Euro or national currency)
PG investments	Investments required to attain recognition for PGs	
	— amount of the Union financial assistance	
	— amount of the MS financial assistance	
	— amount of the PG's/PG member contribution	

Table 3.4. **Withdrawals**

		Total annual volume (tonnes)	Total expenditure (Euro or national currency)	Amount of EU financial assistance	Free distribution (tonnes)	Composting (tonnes)	Processing industry (tonnes)	Other destination (tonnes)
Products in Annex IV to Regulation (EU) 2017/891	Cauliflowers							
	Tomatoes							
	Apples							
	Grapes							
	Apricots							
	Nectarines							
	Peaches							
	Pears							
	Aubergines							
	Melons							
	Watermelons							
	Oranges							
	Mandarins							

		Total annual volume (tonnes)	Total expenditure (Euro or national currency)	Amount of EU financial assistance	Free distribution (tonnes)	Composting (tonnes)	Processing industry (tonnes)	Other destination (tonnes)
	Clementines							
	Satsumas							
	Lemons							
Other products								
Total								

Annual Report – Part A

Member State:

Year:

Region:

SECTION 4

MONITORING OF OPERATIONAL PROGRAMMES

The indicators related to actions undertaken by recognised producer organisations, associations of producer organisations, transnational organisations and producer groups under an operational programme/recognition plan does not necessarily capture all the factors that may intervene and affect the outputs, results and impact of an operational programme/recognition plan. In this context, the information provided by the indicators should be interpreted in the light of quantitative and qualitative information relating to other key factors contributing to the success or failure of the programme/plan's implementation.

In case Member States use samples for the calculation of indicators, the size of the sample, its representativeness and its other constituting elements shall be communicated to the Commission services, together with the annual report.

Table 4.1. **Indicators as regards POs, TPOs, APOs and TAPOs**

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Indicators	All POs	All TPOs	All APOs	All TAPOs
Investments ⁽¹⁾	Planning of production	Number of holdings				
		Total value				
	Improvement of product quality	Number of holdings				
		Total value				
	Boosting products' commercial value	Number of holdings				
		Total value				
		Total value of marketed production/Total volume of marketed production (<i>Euro or national currency/kg</i>)				
	Environmental measures	Number of holdings				
		Total value				

⁽¹⁾ Including non-productive investments linked to the achievement of commitments undertaken under the operational programme.

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Indicators	All POs	All TPOs	All APOs	All TAPOs
	Crisis prevention and management	Number of holdings				
		Total value				
	Research	Number of holdings				
		Total value				
Research and experimental production	Planning of production	Total value				
		Number of holdings				
	Improvement of product quality	Total value				
		Number of holdings				
	Boosting products' commercial value	Total value				
		Number of holdings				
	Environmental measures	Number of holdings				
		Total value				
Quality schemes (EU and national) ⁽¹⁾ and measures related to quality improvement	Improvement of product quality	Area of PDO/PGI/TSG ⁽²⁾ (ha)				
		Number of holdings				
		Volume (tonnes)				
Promotion and communications ⁽³⁾	Boosting products' commercial value	Number of holdings				
		Number of promotion campaigns				

⁽¹⁾ Refers to a set of detailed obligations concerning the production methods (a) the respect of which is subject to independent inspection, and (b) that result in a final product the quality of which (i) goes significantly beyond the normal commercial standards as regards public health, plant health or environmental standards and (ii) responds to current and foreseeable market opportunities. It is proposed that the main types of "quality schemes" cover the following: (a) certified organic production; (b) protected geographical indications and protected designations of origin, (c) certified integrated production, (d) private certified product quality schemes.

⁽²⁾ Protected designations of origin/Protected Geographical Indications/Traditional Speciality Guaranteed

⁽³⁾ Each day of a promotion/communication campaign counts as one action.

Actions/Measures <i>Article 2(f) and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Indicators	All POs	All TPOs	All APOs	All TAPOs
	Promotion of the products	Number of holdings				
		Number of promotion campaigns				
	Crisis prevention and management	Number of holdings				
		Number of promotion campaigns				
Training and exchange of best practices	Planning of production	Number of holdings				
		Number of actions				
	Improvement of product quality	Number of holdings				
		Number of actions				
	Boosting products' commercial value	Number of holdings				
		Number of actions				
	Environmental measures	Number of holdings				
		Number of actions				
	Crisis prevention and management	Number of holdings				
		Number of actions				
	Planning of production	Number of holdings				
		Number of actions				
Advisory services and technical assistance	Improvement of product quality	Number of holdings				
		Number of actions				
	Boosting products' commercial value	Number of holdings				
		Number of actions				
	Planning of production	Number of holdings				
		Number of actions				

Actions/Measures Article 2(f)and (g) of Regulation (EU) 2017/891	Objectives Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013	Indicators	All POs	All TPOs	All APOs	All TAPOs
	Environmental measures	Number of holdings				
		Number of actions				
Organic production	Environmental measures	Area under organic production of fruit and/or vegetables (<i>ha</i>)				
Integrated production		Number of holdings				
		Area under integrated production of fruit and/or vegetables (<i>ha</i>)				
		Number of holdings				
		Improved use or management of water, including water saving and drainage	Area under fruit and vegetable production subject to reduction in use of water (<i>ha</i>)			
Number of holdings						
Difference of volume (m³) (<i>n – 1/n</i>)						
Actions to conserve soil		Area under fruit and vegetable production at risk of soil erosion where anti-erosion measures are implemented (<i>ha</i>) ⁽¹⁾				
		Number of holdings				
		Difference of fertiliser use per ha (<i>tonnes/ha</i>) (<i>n – 1/n</i>)				
		Actions to create or maintain habitat favourable for biodiversity or to maintain the landscape, including the conservation of historical features	Area concerned by actions contributing to habitat and biodiver- sity protection (<i>ha</i>)			
Number of holdings						

⁽¹⁾ "At risk of soil erosion" shall mean any sloping plot with an inclination higher than 10 %, whether or not anti-erosion measures (e.g. soil cover, crop rotation, etc.) have been taken. Where the relevant information is available, a Member State may instead use the following definition: "At risk of soil erosion" shall mean any plot with a predicted loss of soil exceeding the rate of natural soil formation, whether or not anti-erosion measures (e.g. soil cover or crop rotation) have been taken.

Actions/Measures Article 2(f)and (g) of Regulation (EU) 2017/891	Objectives Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013	Indicators		All POs	All TPOs	All APOs	All TAPOs
Actions favouring energy saving (ex- cluding transport)		Area under fruit and vegetable production subject to reduction in use of energy (ha)					
		Number of holdings					
		Difference of energy consumption (n – 1/n):					
		Solids	(tonnes/volume of marketed production)				
		Liquids	(L/volume of marketed production)				
		Gas	(m³/volume of marketed production)				
		Electricity	(kwh/volume of marketed production)				
Action related to reduction of waste production and to improve waste management		Number of holdings					
		Difference of volume of waste (m³/volume of marketed production) (n – 1/n)					
		Difference of volume of packaging (m³/volume of marketed produc- tion) (n – 1./n)					
Transport		Difference of energy consumption (n – 1./n):					
		Liquids	(L/volume of marketed production)				
		Gas	(m³/volume of marketed production)				
		Electricity	(kwh/volume of marketed production)				
	Marketing	Number of holdings					
Number of actions							

Actions/Measures <i>Article 2(f)and (g) of Regulation (EU) 2017/891</i>	Objectives <i>Articles 33(1) and (3) and 152(1)(c) of Regulation (EU) No 1308/2013</i>	Indicators	All POs	All TPOs	All APOs	All TAPOs
Setting-up mutual funds ⁽¹⁾	Crisis prevention and manage- ment	Number of holdings				
Replenishment of mutual funds ⁽²⁾		Number of holdings				
Replanting of orchards		Areas concerned (<i>ha</i>)				
Market withdrawal ⁽²⁾		Number of actions undertaken				
Green-harvesting ⁽³⁾		Number of actions undertaken				
		Area concerned (<i>ha</i>)				
		Non-harvesting ⁽³⁾	Number of actions undertaken			
Area concerned (<i>ha</i>)						
Harvest insurance		Number of holdings				
Coaching		Number of actions undertaken				
Others	Planning of production	Number of holdings				
	Improvement of product quality	Number of holdings				
	Boosting products' commercial value	Number of holdings				
	Environmental measures	Number of holdings				

Table 4.2. **Indicators as regards Producer Groups**

		Indicator	Number
PG investments	Investments required to attain recognition for PGs	Number of members of PGs	
		Number of PGs which have been recognised as POs'	

⁽¹⁾ Actions relating to the setting up/refilling of different mutual funds count as different actions.

⁽²⁾ Market withdrawal of the same product in different periods of the year and market withdrawals of different products count as different actions. Each market withdrawal operation for a given product counts as one action.

⁽³⁾ Green-harvesting and non-harvesting of different products count as different actions. Green harvesting and non-harvesting of the same product count as one action, regardless of the number of days they take, the number of holdings participating and the number of plots or hectares concerned.

DECISIONS

COMMISSION IMPLEMENTING DECISION (EU) 2018/1147

of 10 August 2018

establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council

(notified under document C(2018) 5070)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) ⁽¹⁾, and in particular Article 13(5) thereof,

Whereas:

- (1) Best available techniques (BAT) conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU and competent authorities should set emission limit values which ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions.
- (2) The forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection, established by Commission Decision of 16 May 2011 ⁽²⁾, provided the Commission on 19 December 2017 with its opinion on the proposed content of the BAT reference document for waste treatment. That opinion is publicly available.
- (3) The BAT conclusions set out in the Annex to this Decision are the key element of that BAT reference document.
- (4) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 75(1) of Directive 2010/75/EU,

HAS ADOPTED THIS DECISION:

Article 1

The best available techniques (BAT) conclusions for waste treatment, as set out in the Annex, are adopted.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 10 August 2018.

For the Commission

Karmenu VELLA

Member of the Commission

⁽¹⁾ OJ L 334, 17.12.2010, p. 17.

⁽²⁾ Commission Decision of 16 May 2011 establishing a forum for the exchange of information pursuant to Article 13 of Directive 2010/75/EU on industrial emissions (OJ C 146, 17.5.2011, p. 3).

ANNEX

BEST AVAILABLE TECHNIQUES (BAT) CONCLUSIONS FOR WASTE

SCOPE

These BAT conclusions concern the following activities specified in Annex I to Directive 2010/75/EU, namely:

- 5.1. Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities:
 - (a) biological treatment;
 - (b) physico-chemical treatment;
 - (c) blending or mixing prior to submission to any of the other activities listed in points 5.1 and 5.2 of Annex I to Directive 2010/75/EU;
 - (d) repackaging prior to submission to any of the other activities listed in points 5.1 and 5.2 of Annex I to Directive 2010/75/EU;
 - (e) solvent reclamation/regeneration;
 - (f) recycling/reclamation of inorganic materials other than metals or metal compounds;
 - (g) regeneration of acids or bases;
 - (h) recovery of components used for pollution abatement;
 - (i) recovery of components from catalysts;
 - (j) oil re-refining or other reuses of oil;
- 5.3. (a) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC ⁽¹⁾:
 - (i) biological treatment;
 - (ii) physico-chemical treatment;
 - (iii) pre-treatment of waste for incineration or co-incineration;
 - (iv) treatment of ashes;
 - (v) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.
 - (b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, and excluding activities covered by Directive 91/271/EEC:
 - (i) biological treatment;
 - (ii) pre-treatment of waste for incineration or co-incineration;
 - (iii) treatment of ashes;
 - (iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

When the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day.

- 5.5. Temporary storage of hazardous waste not covered under point 5.4 of Annex I to Directive 2010/75/EU pending any of the activities listed in points 5.1, 5.2, 5.4 and 5.6 of Annex I to Directive 2010/75/EU with a total capacity exceeding 50 tonnes, excluding temporary storage, pending collection, on the site where the waste is generated.
- 6.11. Independently operated treatment of waste water not covered by Directive 91/271/EEC and discharged by an installation undertaking activities covered under points 5.1, 5.3 or 5.5 as listed above.

⁽¹⁾ Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40).

Referring to independently operated treatment of waste water not covered by Directive 91/271/EEC above, these BAT conclusions also cover the combined treatment of waste water from different origins if the main pollutant load originates from the activities covered under points 5.1, 5.3 or 5.5 as listed above.

These BAT conclusions do not address the following:

- Surface impoundment.
- Disposal or recycling of animal carcasses or of animal waste covered by the activity description in point 6.5 of Annex I to Directive 2010/75/EU when this is covered by the BAT conclusions on the slaughterhouses and animal by-products industries (SA).
- On-farm processing of manure when this is covered by the BAT conclusions for the intensive rearing of poultry or pigs (IRPP).
- Direct recovery (i.e. without pretreatment) of waste as a substitute for raw materials in installations carrying out activities covered by other BAT conclusions, e.g.:
 - Direct recovery of lead (e.g. from batteries), zinc or aluminium salts or recovery of the metals from catalysts. This may be covered by the BAT conclusions for the non-ferrous metals industries (NFM).
 - Processing of paper for recycling. This may be covered by the BAT conclusions for the production of pulp, paper and board (PP).
 - Use of waste as fuel/raw material in cement kilns. This may be covered by the BAT conclusions for the production of cement, lime and magnesium oxide (CLM).
- Waste (co-)incineration, pyrolysis and gasification. This may be covered by the BAT conclusions for waste incineration (WI) or the BAT conclusions for large combustion plants (LCP).
- Landfill of waste. This is covered by Council Directive 1999/31/EC ⁽¹⁾. In particular, underground permanent and long-term storage (≥ 1 year before disposal, ≥ 3 years before recovery) are covered by Directive 1999/31/EC.
- *In situ* remediation of contaminated soil (i.e. unexcavated soil).
- Treatment of slags and bottom ashes. This may be covered by the BAT conclusions for waste incineration (WI) and/or the BAT conclusions for large combustion plants (LCP).
- Smelting of scrap metals and metal-bearing materials. This may be covered by the BAT conclusions for non-ferrous metals industries (NFM), the BAT conclusions for iron and steel production (IS), and/or the BAT conclusions for the smitheries and foundries industry (SF).
- Regeneration of spent acids and alkalis when this is covered by the BAT conclusions for ferrous metals processing.
- Combustion of fuels when it does not generate hot gases which come into direct contact with the waste. This may be covered by the BAT conclusions for large combustion plants (LCP) or by Directive (EU) 2015/2193 of the European Parliament and of the Council ⁽²⁾.

Other BAT conclusions and reference documents which could be relevant for the activities covered by these BAT conclusions are the following:

- Economics and cross-media effects (ECM);
- Emissions from storage (EFS);
- Energy efficiency (ENE);
- Monitoring of emissions to air and water from IED installations (ROM);
- Production of cement, lime and magnesium oxide (CLM);
- Common waste water and waste gas treatment/management systems in the chemical sector (CWW);
- Intensive rearing of poultry or pigs (IRPP).

These BAT conclusions apply without prejudice to the relevant provisions of EU legislation, e.g. the waste hierarchy.

⁽¹⁾ Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1).

⁽²⁾ Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (OJ L 313, 28.11.2015, p. 1).

DEFINITIONS

For the purposes of these BAT conclusions, the following **definitions** apply:

Term used	Definition
General terms	
Channelled emissions	Emissions of pollutants into the environment through any kind of duct, pipe, stack, etc. This also includes emissions from open-top biofilters.
Continuous measurement	Measurement using an 'automated measuring system' permanently installed on site.
Declaration of cleanliness	Written document provided by the waste producer/holder certifying that the empty waste packaging concerned (e.g. drums, containers) is clean with respect to the acceptance criteria.
Diffuse emissions	Non-channelled emissions (e.g. of dust, organic compounds, odour) which can result from 'area' sources (e.g. tanks) or 'point' sources (e.g. pipe flanges). This also includes emissions from open-air windrow composting.
Direct discharge	Discharge to a receiving water body without further downstream waste water treatment.
Emissions factors	Numbers that can be multiplied by known data such as plant/process data or throughput data to estimate emissions.
Existing plant	A plant that is not a new plant.
Flaring	High-temperature oxidation to burn combustible compounds of waste gases from industrial operations with an open flame. Flaring is primarily used for burning off flammable gas for safety reasons or during non-routine operating conditions.
Fly ashes	Particles from the combustion chamber or formed within the flue-gas stream, that are transported in the flue-gas.
Fugitive emissions	Diffuse emissions from 'point' sources.
Hazardous waste	Hazardous waste as defined in point 2 of Article 3 of Directive 2008/98/EC.
Indirect discharge	Discharge which is not a direct discharge.
Liquid biodegradable waste	Waste of biological origin with a relatively high water content (e.g. fat separator contents, organic sludges, catering waste).
Major plant upgrade	A major change in the design or technology of a plant with major adjustments or replacements of the process and/or abatement technique(s) and associated equipment.
Mechanical biological treatment (MBT)	Treatment of mixed solid waste combining mechanical treatment with biological treatment such as aerobic or anaerobic treatment.
New plant	A plant first permitted at the site of the installation following the publication of these BAT conclusions or a complete replacement of a plant following the publication of these BAT conclusions.
Output	The treated waste exiting the waste treatment plant.

Term used	Definition
Pasty waste	Sludge which is not free-flowing.
Periodic measurement	Measurement at specified time intervals using manual or automated methods.
Recovery	Recovery as defined in Article 3(15) of Directive 2008/98/EC.
Re-refining	Treatments carried out on waste oil to transform it to base oil.
Regeneration	Treatments and processes mainly designed to make the treated materials (e.g. spent activated carbon or spent solvent) suitable again for a similar use.
Sensitive receptor	Area which needs special protection, such as: — residential areas; — areas where human activities are carried out (e.g. neighbouring workplaces, schools, daycare centres, recreational areas, hospitals or nursing homes).
Surface impoundment	Placement of liquid or sludgy discards into pits, ponds, lagoons, etc.
Treatment of waste with calorific value	Treatment of waste wood, waste oil, waste plastics, waste solvents, etc. to obtain a fuel or to allow a better recovery of its calorific value.
VFCs	Volatile (hydro)fluorocarbons: VOCs consisting of fluorinated (hydro)carbons, in particular chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs).
VHCs	Volatile hydrocarbons: VOCs consisting entirely of hydrogen and carbon (e.g. ethane, propane, iso-butane, cyclopentane).
VOC	Volatile organic compound as defined in Article 3(45) of Directive 2010/75/EU.
Waste holder	Waste holder as defined in Article 3(6) of Directive 2008/98/EC of the European Parliament and of the Council (1).
Waste input	The incoming waste to be treated in the waste treatment plant.
Water-based liquid waste	Waste consisting of aqueous liquids, acids/alkalis or pumpable sludges (e.g. emulsions, waste acids, aqueous marine waste) which is not liquid biodegradable waste.

Pollutants/parameters

AOX	Adsorbable organically bound halogens, expressed as Cl, include adsorbable organically bound chlorine, bromine and iodine.
Arsenic	Arsenic, expressed as As, includes all inorganic and organic arsenic compounds, dissolved or bound to particles.
BOD	Biochemical oxygen demand. Amount of oxygen needed for the biochemical oxidation of organic and/or inorganic matter in five (BOD ₅) or in seven (BOD ₇) days.
Cadmium	Cadmium, expressed as Cd, includes all inorganic and organic cadmium compounds, dissolved or bound to particles.

Term used	Definition
CFCs	Chlorofluorocarbons: VOCs consisting of carbon, chlorine and fluorine.
Chromium	Chromium, expressed as Cr, includes all inorganic and organic chromium compounds, dissolved or bound to particles.
Hexavalent chromium	Hexavalent chromium, expressed as Cr(VI), includes all chromium compounds where the chromium is in the oxidation state +6.
COD	Chemical oxygen demand. Amount of oxygen needed for the total chemical oxidation of the organic matter to carbon dioxide. COD is an indicator for the mass concentration of organic compounds.
Copper	Copper, expressed as Cu, includes all inorganic and organic copper compounds, dissolved or bound to particles.
Cyanide	Free cyanide, expressed as CN ⁻ .
Dust	Total particulate matter (in air).
HOI	Hydrocarbon oil index. The sum of compounds extractable with a hydrocarbon solvent (including long-chain or branched aliphatic, alicyclic, aromatic or alkyl-substituted aromatic hydrocarbons).
HCl	All inorganic gaseous chlorine compounds, expressed as HCl.
HF	All inorganic gaseous fluorine compounds, expressed as HF.
H ₂ S	Hydrogen sulphide. Carbonyl sulphide and mercaptans are not included.
Lead	Lead, expressed as Pb, includes all inorganic and organic lead compounds, dissolved or bound to particles.
Mercury	Mercury, expressed as Hg, includes elementary mercury and all inorganic and organic mercury compounds, gaseous, dissolved or bound to particles.
NH ₃	Ammonia.
Nickel	Nickel, expressed as Ni, includes all inorganic and organic nickel compounds, dissolved or bound to particles.
Odour concentration	Number of European Odour Units (ou _E) in one cubic metre at standard conditions measured by dynamic olfactometry according to EN 13725.
PCB	Polychlorinated biphenyl.
Dioxin-like PCBs	Polychlorinated biphenyls as listed in Commission Regulation (EC) No 199/2006 ⁽²⁾ .
PCDD/F	Polychlorinated dibenzo- <i>p</i> -dioxin/furan(s).
PFOA	Perfluorooctanoic acid.
PFOS	Perfluorooctanesulphonic acid.
Phenol index	The sum of phenolic compounds, expressed as phenol concentration and measured according to EN ISO 14402.

Term used	Definition
TOC	Total organic carbon, expressed as C (in water), includes all organic compounds.
Total N	Total nitrogen, expressed as N, includes free ammonia and ammonium nitrogen (NH ₄ -N), nitrite nitrogen (NO ₂ -N), nitrate nitrogen (NO ₃ -N) and organically bound nitrogen.
Total P	Total phosphorus, expressed as P, includes all inorganic and organic phosphorus compounds, dissolved or bound to particles
TSS	Total suspended solids. Mass concentration of all suspended solids (in water), measured via filtration through glass fibre filters and gravimetry.
TVOC	Total volatile organic carbon, expressed as C (in air).
Zinc	Zinc, expressed as Zn, includes all inorganic and organic zinc compounds, dissolved or bound to particles.

(¹) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

(²) Commission Regulation (EC) No 199/2006 of 3 February 2006 amending Regulation (EC) No 466/2001 setting maximum levels for certain contaminants in foodstuffs as regards dioxins and dioxin-like PCBs (OJ L 32, 4.2.2006, p. 34).

For the purposes of these BAT conclusions, the following **acronyms** apply:

Acronym	Definition
EMS	Environmental management system
EoLVs	End-of-life vehicles (as defined in Article 2(2) of Directive 2000/53/EC of the European Parliament and of the Council (¹))
HEPA	High-efficiency particle air (filter)
IBC	Intermediate bulk container
LDAR	Leak detection and repair
LEV	Local exhaust ventilation system
POP	Persistent organic pollutant (as listed in Regulation (EC) No 850/2004 of the European Parliament and of the Council (²))
WEEE	Waste electrical and electronic equipment (as defined in Article 3(1) of Directive 2012/19/EU of the European Parliament and of the Council (³))

(¹) Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles (OJ L 269, 21.10.2000, p. 34).

(²) Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC (OJ L 158, 30.4.2004, p. 7).

(³) Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (OJ L 197, 24.7.2012, p. 38).

GENERAL CONSIDERATIONS

Best Available Techniques

The techniques listed and described in these BAT conclusions are neither prescriptive nor exhaustive. Other techniques may be used that ensure at least an equivalent level of environmental protection.

Unless otherwise stated, the BAT conclusions are generally applicable.

Emission levels associated with the best available techniques (BAT-AELs) for emissions to air

Unless stated otherwise, emission levels associated with the best available techniques (BAT-AELs) for emissions to air given in these BAT conclusions refer to concentrations (mass of emitted substances per volume of waste gas) under the following standard conditions: dry gas at a temperature of 273,15 K and a pressure of 101,3 kPa, without correction for oxygen content, and expressed in $\mu\text{g}/\text{Nm}^3$ or mg/Nm^3 .

For averaging periods of BAT-AELs for emissions to air, the following **definitions** apply.

Type of measurement	Averaging period	Definition
Continuous	Daily average	Average over a period of one day based on valid hourly or half-hourly averages.
Periodic	Average over the sampling period	Average value of three consecutive measurements of at least 30 minutes each ⁽¹⁾ .

⁽¹⁾ For any parameter where, due to sampling or analytical limitations, a 30-minute measurement is inappropriate, a more suitable measurement period may be employed (e.g. for the odour concentration). For PCDD/F or dioxin-like PCBs, one sampling period of 6 to 8 hours is used.

Where continuous measurement is used, the BAT-AELs may be expressed as daily averages.

Emission levels associated with the best available techniques (BAT-AELs) for emissions to water

Unless stated otherwise, emission levels associated with the best available techniques (BAT-AELs) for emissions to water given in these BAT conclusions refer to concentrations (mass of emitted substances per volume of water), expressed in $\mu\text{g}/\text{l}$ or mg/l .

Unless stated otherwise, averaging periods associated with the BAT-AELs refer to either of the following two cases:

- in the case of continuous discharge, daily average values, i.e. 24-hour flow-proportional composite samples;
- in the case of batch discharge, average values over the release duration taken as flow-proportional composite samples, or, provided that the effluent is appropriately mixed and homogeneous, a spot sample taken before discharge.

Time-proportional composite samples can be used provided that sufficient flow stability is demonstrated.

All BAT-AELs for emissions to water apply at the point where the emission leaves the installation.

Abatement efficiency

The calculation of the average abatement efficiency referred to in these BAT conclusions (see Table 6.1) does not include, for COD and TOC, initial treatment steps aiming at separating the bulk organic content from the water-based liquid waste, such as evapo-condensation, emulsion breaking or phase separation.

1. GENERAL BAT CONCLUSIONS

1.1. Overall environmental performance

BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:

- I. commitment of the management, including senior management;
- II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation;

- III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment;
- IV. implementation of procedures paying particular attention to:
 - (a) structure and responsibility,
 - (b) recruitment, training, awareness and competence,
 - (c) communication,
 - (d) employee involvement,
 - (e) documentation,
 - (f) effective process control,
 - (g) maintenance programmes,
 - (h) emergency preparedness and response,
 - (i) safeguarding compliance with environmental legislation;
- V. checking performance and taking corrective action, paying particular attention to:
 - (a) monitoring and measurement (see also the JRC Reference Report on Monitoring of emissions to air and water from IED installations – ROM),
 - (b) corrective and preventive action,
 - (c) maintenance of records,
 - (d) independent (where practicable) internal or external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained;
- VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;
- VII. following the development of cleaner technologies;
- VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life;
- IX. application of sectoral benchmarking on a regular basis;
- X. waste stream management (see BAT 2);
- XI. an inventory of waste water and waste gas streams (see BAT 3);
- XII. residues management plan (see description in Section 6.5);
- XIII. accident management plan (see description in Section 6.5);
- XIV. odour management plan (see BAT 12);
- XV. noise and vibration management plan (see BAT 17).

Applicability

The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below.

Technique		Description
a.	Set up and implement waste characterisation and pre-acceptance procedures	These procedures aim to ensure the technical (and legal) suitability of waste treatment operations for a particular waste prior to the arrival of the waste at the plant. They include procedures to collect information about the waste input and may include waste sampling and characterisation to achieve sufficient knowledge of the waste composition. Waste pre-acceptance procedures are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).
b.	Set up and implement waste acceptance procedures	Acceptance procedures aim to confirm the characteristics of the waste, as identified in the pre-acceptance stage. These procedures define the elements to be verified upon the arrival of the waste at the plant as well as the waste acceptance and rejection criteria. They may include waste sampling, inspection and analysis. Waste acceptance procedures are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).
c.	Set up and implement a waste tracking system and inventory	A waste tracking system and inventory aim to track the location and quantity of waste in the plant. It holds all the information generated during waste pre-acceptance procedures (e.g. date of arrival at the plant and unique reference number of the waste, information on the previous waste holder(s), pre-acceptance and acceptance analysis results, intended treatment route, nature and quantity of the waste held on site including all identified hazards), acceptance, storage, treatment and/or transfer off site. The waste tracking system is risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).
d.	Set up and implement an output quality management system	This technique involves setting up and implementing an output quality management system, so as to ensure that the output of the waste treatment is in line with the expectations, using for example existing EN standards. This management system also allows the performance of the waste treatment to be monitored and optimised, and for this purpose may include a material flow analysis of relevant components throughout the waste treatment. The use of a material flow analysis is risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).
e.	Ensure waste segregation	Waste is kept separated depending on its properties in order to enable easier and environmentally safer storage and treatment. Waste segregation relies on the physical separation of waste and on procedures that identify when and where wastes are stored.

Technique		Description
f.	Ensure waste compatibility prior to mixing or blending of waste	Compatibility is ensured by a set of verification measures and tests in order to detect any unwanted and/or potentially dangerous chemical reactions between wastes (e.g. polymerisation, gas evolution, exothermal reaction, decomposition, crystallisation, precipitation) when mixing, blending or carrying out other treatment operations. The compatibility tests are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).
g.	Sort incoming solid waste	Sorting of incoming solid waste ⁽¹⁾ aims to prevent unwanted material from entering subsequent waste treatment process(es). It may include: — manual separation by means of visual examinations; — ferrous metals, non-ferrous metals or all-metals separation; — optical separation, e.g. by near-infrared spectroscopy or X-ray systems; — density separation, e.g. by air classification, sink-float tanks, vibration tables; — size separation by screening/sieving.

⁽¹⁾ Sorting techniques are described in Section 6.4

BAT 3. In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features:

- (i) information about the characteristics of the waste to be treated and the waste treatment processes, including:
 - (a) simplified process flow sheets that show the origin of the emissions;
 - (b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances;
- (ii) information about the characteristics of the waste water streams, such as:
 - (a) average values and variability of flow, pH, temperature, and conductivity;
 - (b) average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances/micropollutants);
 - (c) data on biodegradability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52);
- (iii) information about the characteristics of the waste gas streams, such as:
 - (a) average values and variability of flow and temperature;
 - (b) average concentration and load values of relevant substances and their variability (e.g. organic compounds, POPs such as PCBs);
 - (c) flammability, lower and higher explosive limits, reactivity;
 - (d) presence of other substances that may affect the waste gas treatment system or plant safety (e.g. oxygen, nitrogen, water vapour, dust).

Applicability

The scope (e.g. level of detail) and nature of the inventory will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

BAT 4. In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below.

Technique		Description	Applicability
a.	Optimised storage location	This includes techniques such as: — the storage is located as far as technically and economically possible from sensitive receptors, watercourses, etc.; — the storage is located in such a way so as to eliminate or minimise the unnecessary handling of wastes within the plant (e.g. the same wastes are handled twice or more or the transport distances on site are unnecessarily long).	Generally applicable to new plants.
b.	Adequate storage capacity	Measures are taken to avoid accumulation of waste, such as: — the maximum waste storage capacity is clearly established and not exceeded taking into account the characteristics of the wastes (e.g. regarding the risk of fire) and the treatment capacity; — the quantity of waste stored is regularly monitored against the maximum allowed storage capacity; — the maximum residence time of waste is clearly established.	Generally applicable.
c.	Safe storage operation	This includes measures such as: — equipment used for loading, unloading and storing waste is clearly documented and labelled; — wastes known to be sensitive to heat, light, air, water, etc. are protected from such ambient conditions; — containers and drums are fit for purpose and stored securely.	
d.	Separate area for storage and handling of packaged hazardous waste	When relevant, a dedicated area is used for storage and handling of packaged hazardous waste.	

BAT 5. In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.

Description

Handling and transfer procedures aim to ensure that wastes are safely handled and transferred to the respective storage or treatment. They include the following elements:

- handling and transfer of waste are carried out by competent staff;
- handling and transfer of waste are duly documented, validated prior to execution and verified after execution;

- measures are taken to prevent, detect and mitigate spills;
- operation and design precautions are taken when mixing or blending wastes (e.g. vacuuming dusty/powdery wastes).

Handling and transfer procedures are risk-based considering the likelihood of accidents and incidents and their environmental impact.

1.2. Monitoring

BAT 6. For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pretreatment, at the inlet to the final treatment, at the point where the emission leaves the installation).

BAT 7. BAT is to monitor emissions to water with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

Substance/parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾ ⁽²⁾	Monitoring associated with
Adsorbable organically bound halogens (AOX) ⁽³⁾ ⁽⁴⁾	EN ISO 9562	Treatment of water-based liquid waste	Once every day	BAT 20
Benzene, toluene, ethylbenzene, xylene (BTEX) ⁽³⁾ ⁽⁴⁾	EN ISO 15680	Treatment of water-based liquid waste	Once every month	
Chemical oxygen demand (COD) ⁽⁵⁾ ⁽⁶⁾	No EN standard available	All waste treatments except treatment of water-based liquid waste	Once every month	
		Treatment of water-based liquid waste	Once every day	
Free cyanide (CN ⁻) ⁽³⁾ ⁽⁴⁾	Various EN standards available (i.e. EN ISO 14403-1 and -2)	Treatment of water-based liquid waste	Once every day	
Hydrocarbon oil index (HOI) ⁽⁴⁾	EN ISO 9377-2	Mechanical treatment in shredders of metal waste	Once every month	
		Treatment of WEEE containing VFCs and/or VHCs		
		Re-refining of waste oil		
		Physico-chemical treatment of waste with calorific value		
		Water washing of excavated contaminated soil		
		Treatment of water-based liquid waste	Once every day	

Substance/parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾ ⁽²⁾	Monitoring associated with
Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Zinc (Zn) ⁽³⁾ ⁽⁴⁾	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)	Mechanical treatment in shredders of metal waste	Once every month	
		Treatment of WEEE containing VFCs and/or VHCs		
		Mechanical biological treatment of waste		
		Re-refining of waste oil		
		Physico-chemical treatment of waste with calorific value		
		Physico-chemical treatment of solid and/or pasty waste		
		Regeneration of spent solvents		
		Water washing of excavated contaminated soil		
		Treatment of water-based liquid waste	Once every day	
Manganese (Mn) ⁽³⁾ ⁽⁴⁾		Treatment of water-based liquid waste	Once every day	
Hexavalent chromium (Cr(VI)) ⁽³⁾ ⁽⁴⁾	Various EN standards available (i.e. EN ISO 10304-3, EN ISO 23913)	Treatment of water-based liquid waste	Once every day	
Mercury (Hg) ⁽³⁾ ⁽⁴⁾	Various EN standards available (i.e. EN ISO 17852, EN ISO 12846)	Mechanical treatment in shredders of metal waste	Once every month	
		Treatment of WEEE containing VFCs and/or VHCs		
		Mechanical biological treatment of waste		
		Re-refining of waste oil		
		Physico-chemical treatment of waste with calorific value		
		Physico-chemical treatment of solid and/or pasty waste		
		Regeneration of spent solvents		
		Water washing of excavated contaminated soil		
		Treatment of water-based liquid waste	Once every day	

Substance/parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾ ⁽²⁾	Monitoring associated with
PFOA ⁽³⁾	No EN standard available	All waste treatments	Once every six months	
PFOS ⁽³⁾				
Phenol index ⁽⁶⁾	EN ISO 14402	Re-refining of waste oil	Once every month	
		Physico-chemical treatment of waste with calorific value		
		Treatment of water-based liquid waste	Once every day	
Total nitrogen (Total N) ⁽⁶⁾	EN 12260, EN ISO 11905-1	Biological treatment of waste	Once every month	
		Re-refining of waste oil		
		Treatment of water-based liquid waste	Once every day	
Total organic carbon (TOC) ⁽³⁾ ⁽⁶⁾	EN 1484	All waste treatments except treatment of water-based liquid waste	Once every month	
		Treatment of water-based liquid waste	Once every day	
Total phosphorus (Total P) ⁽⁶⁾	Various EN standards available (i.e. EN ISO 15681-1 and -2, EN ISO 6878, EN ISO 11885)	Biological treatment of waste	Once every month	
		Treatment of water-based liquid waste	Once every day	
Total suspended solids (TSS) ⁽⁶⁾	EN 872	All waste treatments except treatment of water-based liquid waste	Once every month	
		Treatment of water-based liquid waste	Once every day	

⁽¹⁾ Monitoring frequencies may be reduced if the emission levels are proven to be sufficiently stable.

⁽²⁾ In the case of batch discharge less frequent than the minimum monitoring frequency, monitoring is carried out once per batch.

⁽³⁾ The monitoring only applies when the substance concerned is identified as relevant in the waste water inventory mentioned in BAT 3.

⁽⁴⁾ In the case of an indirect discharge to a receiving water body, the monitoring frequency may be reduced if the downstream waste water treatment plant abates the pollutants concerned.

⁽⁵⁾ Either TOC or COD is monitored. TOC is the preferred option, because its monitoring does not rely on the use of very toxic compounds.

⁽⁶⁾ The monitoring applies only in the case of a direct discharge to a receiving water body.

BAT 8. BAT is to monitor channelled emissions to air with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

Substance/Parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾	Monitoring associated with
Brominated flame retardants ⁽²⁾	No EN standard available	Mechanical treatment in shredders of metal waste	Once every year	BAT 25

Substance/Parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾	Monitoring associated with
CFCs	No EN standard available	Treatment of WEEE containing VFCs and/or VHCs	Once every six months	BAT 29
Dioxin-like PCBs	EN 1948-1, -2, and -4 ⁽³⁾	Mechanical treatment in shredders of metal waste ⁽²⁾	Once every year	BAT 25
		Decontamination of equipment containing PCBs	Once every three months	BAT 51
Dust	EN 13284-1	Mechanical treatment of waste	Once every six months	BAT 25
		Mechanical biological treatment of waste		BAT 34
		Physico-chemical treatment of solid and/or pasty waste		BAT 41
		Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil		BAT 49
		Water washing of excavated contaminated soil		BAT 50
HCl	EN 1911	Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil ⁽²⁾	Once every six months	BAT 49
		Treatment of water-based liquid waste ⁽²⁾		BAT 53
HF	No EN standard available	Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil ⁽²⁾	Once every six months	BAT 49
Hg	EN 13211	Treatment of WEEE containing mercury	Once every three months	BAT 32
H ₂ S	No EN standard available	Biological treatment of waste ⁽⁴⁾	Once every six months	BAT 34
Metals and metalloids except mercury (e.g. As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V) ⁽²⁾	EN 14385	Mechanical treatment in shredders of metal waste	Once every year	BAT 25
NH ₃	No EN standard available	Biological treatment of waste ⁽⁴⁾	Once every six months	BAT 34
		Physico-chemical treatment of solid and/or pasty waste ⁽²⁾	Once every six months	BAT 41
		Treatment of water-based liquid waste ⁽²⁾		BAT 53

Substance/Parameter	Standard(s)	Waste treatment process	Minimum monitoring frequency ⁽¹⁾	Monitoring associated with
Odour concentration	EN 13725	Biological treatment of waste ⁽⁵⁾	Once every six months	BAT 34
PCDD/F ⁽²⁾	EN 1948-1, -2 and -3 ⁽³⁾	Mechanical treatment in shredders of metal waste	Once every year	BAT 25
TVOC	EN 12619	Mechanical treatment in shredders of metal waste	Once every six months	BAT 25
		Treatment of WEEE containing VFCs and/or VHCs	Once every six months	BAT 29
		Mechanical treatment of waste with calorific value ⁽²⁾	Once every six months	BAT 31
		Mechanical biological treatment of waste	Once every six months	BAT 34
		Physico-chemical treatment of solid and/or pasty waste ⁽²⁾	Once every six months	BAT 41
		Re-refining of waste oil		BAT 44
		Physico-chemical treatment of waste with calorific value		BAT 45
		Regeneration of spent solvents		BAT 47
		Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil		BAT 49
		Water washing of excavated contaminated soil		BAT 50
		Treatment of water-based liquid waste ⁽²⁾		BAT 53
		Decontamination of equipment containing PCBs ⁽⁶⁾	Once every three months	BAT 51

⁽¹⁾ Monitoring frequencies may be reduced if the emission levels are proven to be sufficiently stable.

⁽²⁾ The monitoring only applies when the substance concerned is identified as relevant in the waste gas stream based on the inventory mentioned in BAT 3.

⁽³⁾ Instead of EN 1948-1, sampling may also be carried out according to CEN/TS 1948-5.

⁽⁴⁾ The odour concentration may be monitored instead.

⁽⁵⁾ The monitoring of NH₃ and H₂S can be used as an alternative to the monitoring of the odour concentration.

⁽⁶⁾ The monitoring only applies when solvent is used for cleaning the contaminated equipment.

BAT 9. BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques given below.

Technique		Description
a	Measurement	Sniffing methods, optical gas imaging, solar occultation flux or differential absorption. See descriptions in Section 6.2.
b	Emissions factors	Calculation of emissions based on emissions factors, periodically validated (e.g. once every two years) by measurements.
c	Mass balance	Calculation of diffuse emissions using a mass balance considering the solvent input, channelled emissions to air, emissions to water, the solvent in the process output, and process (e.g. distillation) residues.

BAT 10. BAT is to periodically monitor odour emissions.

Description

Odour emissions can be monitored using:

- EN standards (e.g. dynamic olfactometry according to EN 13725 in order to determine the odour concentration or EN 16841-1 or -2 in order to determine the odour exposure);
- when applying alternative methods for which no EN standards are available (e.g. estimation of odour impact), ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

The monitoring frequency is determined in the odour management plan (see BAT 12).

Applicability

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 11. BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.

Description

Monitoring includes direct measurements, calculation or recording, e.g. using suitable meters or invoices. The monitoring is broken down at the most appropriate level (e.g. at process or plant/installation level) and considers any significant changes in the plant/installation.

1.3. Emissions to air

BAT 12. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:

- a protocol containing actions and timelines;
- a protocol for conducting odour monitoring as set out in BAT 10;
- a protocol for response to identified odour incidents, e.g. complaints;
- an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.

Applicability

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 13. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
a.	Minimising residence times	Minimising the residence time of (potentially) odorous waste in storage or in handling systems (e.g. pipes, tanks, containers), in particular under anaerobic conditions. When relevant, adequate provisions are made for the acceptance of seasonal peak volumes of waste.	Only applicable to open systems.
b.	Using chemical treatment	Using chemicals to destroy or to reduce the formation of odorous compounds (e.g. to oxidise or to precipitate hydrogen sulphide).	Not applicable if it may hamper the desired output quality.
c.	Optimising aerobic treatment	In the case of aerobic treatment of water-based liquid waste, it may include: — use of pure oxygen; — removal of scum in tanks; — frequent maintenance of the aeration system. In the case of aerobic treatment of waste other than water-based liquid waste, see BAT 36.	Generally applicable.

BAT 14. In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below.

Depending on the risk posed by the waste in terms of diffuse emissions to air, BAT 14d is especially relevant.

Technique		Description	Applicability
a.	Minimising the number of potential diffuse emission sources	This includes techniques such as: — appropriate design of piping layout (e.g. minimising pipe run length, reducing the number of flanges and valves, using welded fittings and pipes); — favouring the use of gravity transfer rather than using pumps; — limiting the drop height of material; — limiting traffic speed; — using wind barriers.	Generally applicable.

	Technique	Description	Applicability
b.	Selection and use of high-integrity equipment	This includes techniques such as: — valves with double packing seals or equally efficient equipment; — high-integrity gaskets (such as spiral wound, ring joints) for critical applications; — pumps/compressors/agitators fitted with mechanical seals instead of packing; — magnetically driven pumps/compressor-s/agitators; — appropriate service hose access ports, piercing pliers, drill heads, e.g. when degassing WEEE containing VFCs and/or VHCs.	Applicability may be restricted in the case of existing plants due to operability requirements.
c.	Corrosion prevention	This includes techniques such as: — appropriate selection of construction materials; — lining or coating of equipment and painting of pipes with corrosion inhibitors.	Generally applicable.
d.	Containment, collection and treatment of diffuse emissions	This includes techniques such as: — storing, treating and handling waste and material that may generate diffuse emissions in enclosed buildings and/or enclosed equipment (e.g. conveyor belts); — maintaining the enclosed equipment or buildings under an adequate pressure; — collecting and directing the emissions to an appropriate abatement system (see Section 6.1) via an air extraction system and/or air suction systems close to the emission sources.	The use of enclosed equipment or buildings may be restricted by safety considerations such as the risk of explosion or oxygen depletion. The use of enclosed equipment or buildings may also be constrained by the volume of waste.
e.	Dampening	Dampening potential sources of diffuse dust emissions (e.g. waste storage, traffic areas, and open handling processes) with water or fog.	Generally applicable.
f.	Maintenance	This includes techniques such as: — ensuring access to potentially leaky equipment; — regularly controlling protective equipment such as lamellar curtains, fast-action doors.	Generally applicable.

Technique		Description	Applicability
g.	Cleaning of waste treatment and storage areas	This includes techniques such as regularly cleaning the whole waste treatment area (halls, traffic areas, storage areas, etc.), conveyor belts, equipment and containers.	Generally applicable.
h.	Leak detection and repair (LDAR) programme	See Section 6.2. When emissions of organic compounds are expected, a LDAR programme is set up and implemented using a risk-based approach, considering in particular the design of the plant and the amount and nature of the organic compounds concerned.	Generally applicable.

BAT 15. BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.

Technique		Description	Applicability
a.	Correct plant design	This includes the provision of a gas recovery system with sufficient capacity and the use of high-integrity relief valves.	Generally applicable to new plants. A gas recovery system may be retrofitted in existing plants.
b.	Plant management	This includes balancing the gas system and using advanced process control.	Generally applicable.

BAT 16. In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.

Technique		Description	Applicability
a.	Correct design of flaring devices	Optimisation of height and pressure, assistance by steam, air or gas, type of flare tips, etc., to enable smokeless and reliable operation and to ensure the efficient combustion of excess gases.	Generally applicable to new flares. In existing plants, applicability may be restricted, e.g. due to maintenance time availability.
b.	Monitoring and recording as part of flare management	This includes continuous monitoring of the quantity of gas sent to flaring. It may include estimations of other parameters (e.g. composition of gas flow, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions (e.g. NO _x , CO, hydrocarbons), noise). The recording of flaring events usually includes the duration and number of events and allows for the quantification of emissions and the potential prevention of future flaring events.	Generally applicable.

1.4. Noise and vibrations

BAT 17. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:

- I. a protocol containing appropriate actions and timelines;
- II. a protocol for conducting noise and vibration monitoring;
- III. a protocol for response to identified noise and vibration events, e.g. complaints;
- IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.

Applicability

The applicability is restricted to cases where a noise or vibration nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 18. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
a.	Appropriate location of equipment and buildings	Noise levels can be reduced by increasing the distance between the emitter and the receiver, by using buildings as noise screens and by relocating building exits or entrances.	For existing plants, the relocation of equipment and building exits or entrances may be restricted by a lack of space or excessive costs.
b.	Operational measures	This includes techniques such as: (i) inspection and maintenance of equipment; (ii) closing of doors and windows of enclosed areas, if possible; (iii) equipment operation by experienced staff; (iv) avoidance of noisy activities at night, if possible; (v) provisions for noise control during maintenance, traffic, handling and treatment activities.	Generally applicable.
c.	Low-noise equipment	This may include direct drive motors, compressors, pumps and flares.	
d.	Noise and vibration control equipment	This includes techniques such as: (i) noise reducers; (ii) acoustic and vibrational insulation of equipment; (iii) enclosure of noisy equipment; (iv) soundproofing of buildings.	Applicability may be restricted by a lack of space (for existing plants).

Technique		Description	Applicability
e.	Noise attenuation	Noise propagation can be reduced by inserting obstacles between emitters and receivers (e.g. protection walls, embankments and buildings).	Applicable only to existing plants, as the design of new plants should make this technique unnecessary. For existing plants, the insertion of obstacles may be restricted by a lack of space. For mechanical treatment in shredders of metal wastes, it is applicable within the constraints associated with the risk of deflagration in shredders.

1.5. Emissions to water

BAT 19. In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques given below.

Technique		Description	Applicability
a.	Water management	Water consumption is optimised by using measures which may include: — water-saving plans (e.g. establishment of water efficiency objectives, flow diagrams and water mass balances); — optimising the use of washing water (e.g. dry cleaning instead of hosing down, using trigger control on all washing equipment); — reducing the use of water for vacuum generation (e.g. use of liquid ring pumps with high boiling point liquids).	Generally applicable.
b.	Water recirculation	Water streams are recirculated within the plant, if necessary after treatment. The degree of recirculation is limited by the water balance of the plant, the content of impurities (e.g. odorous compounds) and/or the characteristics of the water streams (e.g. nutrient content).	Generally applicable.
c.	Impermeable surface	Depending on the risks posed by the waste in terms of soil and/or water contamination, the surface of the whole waste treatment area (e.g. waste reception, handling, storage, treatment and dispatch areas) is made impermeable to the liquids concerned.	Generally applicable.

	Technique	Description	Applicability
d.	Techniques to reduce the likelihood and impact of overflows and failures from tanks and vessels	Depending on the risks posed by the liquids contained in tanks and vessels in terms of soil and/or water contamination, this includes techniques such as: — overflow detectors; — overflow pipes that are directed to a contained drainage system (i.e. the relevant secondary containment or another vessel); — tanks for liquids that are located in a suitable secondary containment; the volume is normally sized to accommodate the loss of containment of the largest tank within the secondary containment; — isolation of tanks, vessels and secondary containment (e.g. closing of valves).	Generally applicable.
e.	Roofing of waste storage and treatment areas	Depending on the risks posed by the waste in terms of soil and/or water contamination, waste is stored and treated in covered areas to prevent contact with rainwater and thus minimise the volume of contaminated run-off water.	Applicability may be constrained when high volumes of waste are stored or treated (e.g. mechanical treatment in shredders of metal waste).
f.	Segregation of water streams	Each water stream (e.g. surface run-off water, process water) is collected and treated separately, based on the pollutant content and on the combination of treatment techniques. In particular, uncontaminated waste water streams are segregated from waste water streams that require treatment.	Generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the water collection system.
g.	Adequate drainage infrastructure	The waste treatment area is connected to drainage infrastructure. Rainwater falling on the treatment and storage areas is collected in the drainage infrastructure along with washing water, occasional spillages, etc. and, depending on the pollutant content, recirculated or sent for further treatment.	Generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the water drainage system.
h.	Design and maintenance provisions to allow detection and repair of leaks	Regular monitoring for potential leakages is risk-based, and, when necessary, equipment is repaired. The use of underground components is minimised. When underground components are used, and depending on the risks posed by the waste contained in those components in terms of soil and/or water contamination, secondary containment of underground components is put in place.	The use of above-ground components is generally applicable to new plants. It may be limited however by the risk of freezing. The installation of secondary containment may be limited in the case of existing plants.

Technique		Description	Applicability
i.	Appropriate buffer storage capacity	Appropriate buffer storage capacity is provided for waste water generated during other than normal operating conditions using a risk-based approach (e.g. taking into account the nature of the pollutants, the effects of downstream waste water treatment, and the receiving environment). The discharge of waste water from this buffer storage is only possible after appropriate measures are taken (e.g. monitor, treat, re-use).	Generally applicable to new plants. For existing plants, applicability may be limited by space availability and by the layout of the water collection system.

BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below.

Technique ⁽¹⁾		Typical pollutants targeted	Applicability
Preliminary and primary treatment, e.g.			
a.	Equalisation	All pollutants	Generally applicable.
b.	Neutralisation	Acids, alkalis	
c.	Physical separation, e.g. screens, sieves, grit separators, grease separators, oil-water separation or primary settlement tanks	Gross solids, suspended solids, oil/grease	
Physico-chemical treatment, e.g.			
d.	Adsorption	Adsorbable dissolved non-biodegradable or inhibitory pollutants, e.g. hydrocarbons, mercury, AOX	Generally applicable.
e.	Distillation/rectification	Dissolved non-biodegradable or inhibitory pollutants that can be distilled, e.g. some solvents	
f.	Precipitation	Precipitable dissolved non-biodegradable or inhibitory pollutants, e.g. metals, phosphorus	
g.	Chemical oxidation	Oxidisable dissolved non-biodegradable or inhibitory pollutants, e.g. nitrite, cyanide	

Technique ⁽¹⁾		Typical pollutants targeted	Applicability
h.	Chemical reduction	Reducible dissolved non-biodegradable or inhibitory pollutants, e.g. hexavalent chromium (Cr(VI))	
i.	Evaporation	Soluble contaminants	
j.	Ion exchange	Ionic dissolved non-biodegradable or inhibitory pollutants, e.g. metals	
k.	Stripping	Purgeable pollutants, e.g. hydrogen sulphide (H ₂ S), ammonia (NH ₃), some adsorbable organically bound halogens (AOX), hydrocarbons	
Biological treatment, e.g.			
l.	Activated sludge process	Biodegradable organic compounds	Generally applicable.
m.	Membrane bioreactor		
Nitrogen removal			
n.	Nitrification/denitrification when the treatment includes a biological treatment	Total nitrogen, ammonia	Nitrification may not be applicable in the case of high chloride concentrations (e.g. above 10 g/l) and when the reduction of the chloride concentration prior to nitrification would not be justified by the environmental benefits. Nitrification is not applicable when the temperature of the waste water is low (e.g. below 12 °C).
Solids removal, e.g.			
o.	Coagulation and flocculation	Suspended solids and particulate-bound metals	Generally applicable.
p.	Sedimentation		
q.	Filtration (e.g. sand filtration, microfiltration, ultrafiltration)		
r.	Flotation		

⁽¹⁾ The descriptions of the techniques are given in Section 6.3.

Table 6.1

BAT-associated emission levels (BAT-AELs) for direct discharges to a receiving water body

Substance/Parameter	BAT-AEL ⁽¹⁾	Waste treatment process to which the BAT-AEL applies
Total organic carbon (TOC) ⁽²⁾	10-60 mg/l	— All waste treatments except treatment of water-based liquid waste
	10-100 mg/l ⁽³⁾ ⁽⁴⁾	— Treatment of water-based liquid waste
Chemical oxygen demand (COD) ⁽²⁾	30-180 mg/l	— All waste treatments except treatment of water-based liquid waste
	30-300 mg/l ⁽³⁾ ⁽⁴⁾	— Treatment of water-based liquid waste
Total suspended solids (TSS)	5-60 mg/l	— All waste treatments
Hydrocarbon oil index (HOI)	0,5-10 mg/l	— Mechanical treatment in shredders of metal waste — Treatment of WEEE containing VFCs and/or VHCs — Re-refining of waste oil — Physico-chemical treatment of waste with calorific value — Water washing of excavated contaminated soil — Treatment of water-based liquid waste
Total nitrogen (Total N)	1-25 mg/l ⁽⁵⁾ ⁽⁶⁾	— Biological treatment of waste — Re-refining of waste oil
	10-60 mg/l ⁽⁵⁾ ⁽⁶⁾ ⁽⁷⁾	— Treatment of water-based liquid waste
Total phosphorus (Total P)	0,3-2 mg/l	— Biological treatment of waste
	1-3 mg/l ⁽⁴⁾	— Treatment of water-based liquid waste
Phenol index	0,05-0,2 mg/l	— Re-refining of waste oil — Physico-chemical treatment of waste with calorific value
	0,05-0,3 mg/l	— Treatment of water-based liquid waste
Free cyanide (CN-) ⁽⁸⁾	0,02-0,1 mg/l	— Treatment of water-based liquid waste
Adsorbable organically bound halogens (AOX) ⁽⁸⁾	0,2-1 mg/l	— Treatment of water-based liquid waste

Substance/Parameter		BAT-AEL ⁽¹⁾	Waste treatment process to which the BAT-AEL applies
Metals and metalloids ⁽⁸⁾	Arsenic (expressed as As)	0,01-0,05 mg/l	— Mechanical treatment in shredders of metal waste — Treatment of WEEE containing VFCs and/or VHCs — Mechanical biological treatment of waste — Re-refining of waste oil — Physico-chemical treatment of waste with calorific value — Physico-chemical treatment of solid and/or pasty waste — Regeneration of spent solvents — Water washing of excavated contaminated soil
	Cadmium (expressed as Cd)	0,01-0,05 mg/l	
	Chromium (expressed as Cr)	0,01-0,15 mg/l	
	Copper (expressed as Cu)	0,05-0,5 mg/l	
	Lead (expressed as Pb)	0,05-0,1 mg/l ⁽⁹⁾	
	Nickel (expressed as Ni)	0,05-0,5 mg/l	
	Mercury (expressed as Hg)	0,5-5 µg/l	
	Zinc (expressed as Zn)	0,1-1 mg/l ⁽¹⁰⁾	
	Arsenic (expressed as As)	0,01-0,1 mg/l	— Treatment of water-based liquid waste
	Cadmium (expressed as Cd)	0,01-0,1 mg/l	
	Chromium (expressed as Cr)	0,01-0,3 mg/l	
	Hexavalent chromium (expressed as Cr(VI))	0,01-0,1 mg/l	
	Copper (expressed as Cu)	0,05-0,5 mg/l	
	Lead (expressed as Pb)	0,05-0,3 mg/l	
	Nickel (expressed as Ni)	0,05-1 mg/l	
	Mercury (expressed as Hg)	1-10 µg/l	
	Zinc (expressed as Zn)	0,1-2 mg/l	

⁽¹⁾ The averaging periods are defined in the General considerations.

⁽²⁾ Either the BAT-AEL for COD or the BAT-AEL for TOC applies. TOC monitoring is the preferred option because it does not rely on the use of very toxic compounds.

⁽³⁾ The upper end of the range may not apply:

- when the abatement efficiency is $\geq 95\%$ as a rolling yearly average and the waste input shows the following characteristics: TOC > 2 g/l (or COD > 6 g/l) as a daily average and a high proportion of refractory organic compounds (i.e. which are difficult to biodegrade); or
- in the case of high chloride concentrations (e.g. above 5 g/l in the waste input).

⁽⁴⁾ The BAT-AEL may not apply to plants treating drilling muds/cuttings.

⁽⁵⁾ The BAT-AEL may not apply when the temperature of the waste water is low (e.g. below 12 °C).

⁽⁶⁾ The BAT-AEL may not apply in the case of high chloride concentrations (e.g. above 10 g/l in the waste input).

⁽⁷⁾ The BAT-AEL only applies when biological treatment of waste water is used.

⁽⁸⁾ The BAT-AELs only apply when the substance concerned is identified as relevant in the waste water inventory mentioned in BAT 3.

⁽⁹⁾ The upper end of the range is 0,3 mg/l for mechanical treatment in shredders of metal waste.

⁽¹⁰⁾ The upper end of the range is 2 mg/l for mechanical treatment in shredders of metal waste.

The associated monitoring is given in BAT 7.

Table 6.2

BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body

Substance/Parameter		BAT-AEL ⁽¹⁾ ⁽²⁾	Waste treatment process to which the BAT-AEL applies
Hydrocarbon oil index (HOI)		0,5-10 mg/l	— Mechanical treatment in shredders of metal waste — Treatment of WEEE containing VFCs and/or VHCs — Re-refining of waste oil — Physico-chemical treatment of waste with calorific value — Water washing of excavated contaminated soil — Treatment of water-based liquid waste
Free cyanide (CN) ⁽³⁾		0,02-0,1 mg/l	— Treatment of water-based liquid waste
Adsorbable organically bound halogens (AOX) ⁽³⁾		0,2-1 mg/l	— Treatment of water-based liquid waste
Metals and metalloids ⁽³⁾	Arsenic (expressed as As)	0,01-0,05 mg/l	— Mechanical treatment in shredders of metal waste — Treatment of WEEE containing VFCs and/or VHCs — Mechanical biological treatment of waste — Re-refining of waste oil — Physico-chemical treatment of waste with calorific value — Physico-chemical treatment of solid and/or pasty waste — Regeneration of spent solvents — Water washing of excavated contaminated soil
	Cadmium (expressed as Cd)	0,01-0,05 mg/l	
	Chromium (expressed as Cr)	0,01-0,15 mg/l	
	Copper (expressed as Cu)	0,05-0,5 mg/l	
	Lead (expressed as Pb)	0,05-0,1 mg/l ⁽⁴⁾	
	Nickel (expressed as Ni)	0,05-0,5 mg/l	
	Mercury (expressed as Hg)	0,5-5 µg/l	
	Zinc (expressed as Zn)	0,1-1 mg/l ⁽⁵⁾	
	Arsenic (expressed as As)	0,01-0,1 mg/l	
	Cadmium (expressed as Cd)	0,01-0,1 mg/l	— Treatment of water-based liquid waste
	Chromium (expressed as Cr)	0,01-0,3 mg/l	

Substance/Parameter		BAT-AEL ⁽¹⁾ ⁽²⁾	Waste treatment process to which the BAT-AEL applies
	Hexavalent chromium (expressed as Cr(VI))	0,01-0,1 mg/l	
	Copper (expressed as Cu)	0,05-0,5 mg/l	
	Lead (expressed as Pb)	0,05-0,3 mg/l	
	Nickel (expressed as Ni)	0,05-1 mg/l	
	Mercury (expressed as Hg)	1-10 µg/l	
	Zinc (expressed as Zn)	0,1-2 mg/l	

⁽¹⁾ The averaging periods are defined in the General considerations.

⁽²⁾ The BAT-AELs may not apply if the downstream waste water treatment plant abates the pollutants concerned, provided this does not lead to a higher level of pollution in the environment.

⁽³⁾ The BAT-AELs only apply when the substance concerned is identified as relevant in the waste water inventory mentioned in BAT 3.

⁽⁴⁾ The upper end of the range is 0,3 mg/l for mechanical treatment in shredders of metal waste.

⁽⁵⁾ The upper end of the range is 2 mg/l for mechanical treatment in shredders of metal waste.

The associated monitoring is given in BAT 7.

1.6. Emissions from accidents and incidents

BAT 21. In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).

Technique		Description
a.	Protection measures	These include measures such as: — protection of the plant against malevolent acts; — fire and explosion protection system, containing equipment for prevention, detection, and extinction; — accessibility and operability of relevant control equipment in emergency situations.
b.	Management of incidental/accidental emissions	Procedures are established and technical provisions are in place to manage (in terms of possible containment) emissions from accidents and incidents such as emissions from spillages, firefighting water, or safety valves.
c.	Incident/accident registration and assessment system	This includes techniques such as: — a log/diary to record all accidents, incidents, changes to procedures and the findings of inspections; — procedures to identify, respond to and learn from such incidents and accidents.

1.7. Material efficiency

BAT 22. In order to use materials efficiently, BAT is to substitute materials with waste.

Description

Waste is used instead of other materials for the treatment of wastes (e.g. waste alkalis or waste acids are used for pH adjustment, fly ashes are used as binders).

Applicability

Some applicability limitations derive from the risk of contamination posed by the presence of impurities (e.g. heavy metals, POPs, salts, pathogens) in the waste that substitutes other materials. Another limitation is the compatibility of the waste substituting other materials with the waste input (see BAT 2).

1.8. Energy efficiency

BAT 23. In order to use energy efficiently, BAT is to use both of the techniques given below.

Technique		Description
a.	Energy efficiency plan	An energy efficiency plan entails defining and calculating the specific energy consumption of the activity (or activities), setting key performance indicators on an annual basis (for example, specific energy consumption expressed in kWh/tonne of waste processed) and planning periodic improvement targets and related actions. The plan is adapted to the specificities of the waste treatment in terms of process(es) carried out, waste stream(s) treated, etc.
b.	Energy balance record	An energy balance record provides a breakdown of the energy consumption and generation (including exportation) by the type of source (i.e. electricity, gas, conventional liquid fuels, conventional solid fuels, and waste). This includes: (i) information on energy consumption in terms of delivered energy; (ii) information on energy exported from the installation; (iii) energy flow information (e.g. Sankey diagrams or energy balances) showing how the energy is used throughout the process. The energy balance record is adapted to the specificities of the waste treatment in terms of process(es) carried out, waste stream(s) treated, etc.

1.9. Reuse of packaging

BAT 24. In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan (see BAT 1).

Description

Packaging (drums, containers, IBCs, pallets, etc.) is reused for containing waste, when it is in good condition and sufficiently clean, depending on a compatibility check between the substances contained (in consecutive uses). If necessary, packaging is sent for appropriate treatment prior to reuse (e.g. reconditioning, cleaning).

Applicability

Some applicability restrictions derive from the risk of contamination of the waste posed by the reused packaging.

2. BAT CONCLUSIONS FOR THE MECHANICAL TREATMENT OF WASTE

Unless otherwise stated, the BAT conclusions presented in Section 2 apply to the mechanical treatment of waste when it is not combined with biological treatment, and in addition to the general BAT conclusions in Section 1.

2.1. General BAT conclusions for the mechanical treatment of waste

2.1.1. Emissions to air

BAT 25. In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description	Applicability
a.	Cyclone	See Section 6.1. Cyclones are mainly used as preliminary separators for coarse dust.	Generally applicable.
b.	Fabric filter	See Section 6.1.	May not be applicable to exhaust air ducts directly connected to the shredder when the effects of deflagration on the fabric filter cannot be mitigated (e.g. by using pressure relief valves).
c.	Wet scrubbing	See Section 6.1.	Generally applicable.
d.	Water injection into the shredder	The waste to be shredded is damped by injecting water into the shredder. The amount of water injected is regulated in relation to the amount of waste being shredded (which may be monitored via the energy consumed by the shredder motor). The waste gas that contains residual dust is directed to cyclone(s) and/or a wet scrubber.	Only applicable within the constraints associated with local conditions (e.g. low temperature, drought).

Table 6.3

BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from the mechanical treatment of waste

Parameter	Unit	BAT-AEL (Average over the sampling period)
Dust	mg/Nm ³	2-5 ⁽¹⁾

⁽¹⁾ When a fabric filter is not applicable, the upper end of the range is 10 mg/Nm³.

The associated monitoring is given in BAT 8.

2.2. BAT conclusions for the mechanical treatment in shredders of metal waste

Unless otherwise stated, the BAT conclusions presented in this section apply to the mechanical treatment in shredders of metal waste, in addition to BAT 25.

2.2.1. Overall environmental performance

BAT 26. In order to improve the overall environmental performance, and to prevent emissions due to accidents and incidents, BAT is to use BAT 14g and all of the techniques given below:

- (a) implementation of a detailed inspection procedure for baled waste before shredding;

- (b) removal of dangerous items from the waste input stream and their safe disposal (e.g. gas cylinders, non-depolluted EoLVs, non-depolluted WEEE, items contaminated with PCBs or mercury, radioactive items);
- (c) treatment of containers only when accompanied by a declaration of cleanliness.

2.2.2. Deflagrations

BAT 27. In order to prevent deflagrations and to reduce emissions when deflagrations occur, BAT is to use technique a. and one or both of the techniques b. and c. given below.

Technique		Description	Applicability
a.	Deflagration management plan	This includes: — a deflagration reduction programme designed to identify the source(s), and to implement measures to prevent deflagration occurrences, e.g. inspection of waste input as described in BAT 26a, removal of dangerous items as described in BAT 26b; — a review of historical deflagration incidents and remedies and the dissemination of deflagration knowledge; — a protocol for response to deflagration incidents.	Generally applicable.
b.	Pressure relief dampers	Pressure relief dampers are installed to relieve pressure waves coming from deflagrations that would otherwise cause major damage and subsequent emissions.	
c.	Pre-shredding	Use of a low-speed shredder installed upstream of the main shredder	Generally applicable for new plants, depending on the input material. Applicable for major plant upgrades where a significant number of deflagrations have been substantiated.

2.2.3. Energy efficiency

BAT 28. In order to use energy efficiently, BAT is to keep the shredder feed stable.

Description

The shredder feed is equalised by avoiding disruption or overload of the waste feed which would lead to unwanted shutdowns and start-ups of the shredder.

2.3. BAT conclusions for the treatment of WEEE containing VFCs and/or VHCs

Unless otherwise stated, the BAT conclusions presented in this section apply to the treatment of WEEE containing VFCs and/or VHCs, in addition to BAT 25.

2.3.1. Emissions to air

BAT 29. In order to prevent or, where that is not practicable, to reduce emissions of organic compounds to air, BAT is to apply BAT 14d, BAT 14h and to use technique a. and one or both of the techniques b. and c. given below.

Technique		Description
a.	Optimised removal and capture of refrigerants and oils	All refrigerants and oils are removed from the WEEE containing VFCs and/or VHCs and captured by a vacuum suction system (e.g. achieving refrigerant removal of at least 90 %). Refrigerants are separated from oils and the oils are degassed. The amount of oil remaining in the compressor is reduced to a minimum (so that the compressor does not drip).
b.	Cryogenic condensation	Waste gas containing organic compounds such as VFCs/VHCs is sent to a cryogenic condensation unit where they are liquefied (see description in Section 6.1). The liquefied gas is stored in pressurised vessels for further treatment.
c.	Adsorption	Waste gas containing organic compounds such as VFCs/VHCs is led into adsorption systems (see description in Section 6.1). The spent activated carbon is regenerated by means of heated air pumped into the filter to desorb the organic compounds. Subsequently, the regeneration waste gas is compressed and cooled in order to liquefy the organic compounds (in some cases by cryogenic condensation). The liquefied gas is then stored in pressurised vessels. The remaining waste gas from the compression stage is usually led back into the adsorption system in order to minimise VFC/VHC emissions.

Table 6.4

BAT-associated emission levels (BAT-AELs) for channelled TVOC and CFC emissions to air from the treatment of WEEE containing VFCs and/or VHCs

Parameter	Unit	BAT-AEL (Average over the sampling period)
TVOC	mg/Nm ³	3-15
CFCs	mg/Nm ³	0,5-10

The associated monitoring is given in BAT 8.

2.3.2. Explosions

BAT 30. In order to prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs, BAT is to use either of the techniques given below.

Technique		Description
a.	Inert atmosphere	By injecting inert gas (e.g. nitrogen), the oxygen concentration in enclosed equipment (e.g. in enclosed shredders, crushers, dust and foam collectors) is reduced (e.g. to 4 vol-%).
b.	Forced ventilation	By using forced ventilation, the hydrocarbon concentration in enclosed equipment (e.g. in enclosed shredders, crushers, dust and foam collectors) is reduced to < 25 % of the lower explosive limit.

2.4. BAT conclusions for the mechanical treatment of waste with calorific value

In addition to BAT 25, the BAT conclusions presented in this section apply to the mechanical treatment of waste with calorific value covered by points 5.3(a)(iii) and 5.3(b)(ii) of Annex I to Directive 2010/75/EU.

2.4.1. Emissions to air

BAT 31. In order to reduce emissions to air of organic compounds, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Biofilter	
c.	Thermal oxidation	
d.	Wet scrubbing	

Table 6.5

BAT-associated emission level (BAT-AEL) for channelled TVOC emissions to air from the mechanical treatment of waste with calorific value

Parameter	Unit	BAT-AEL (Average over the sampling period)
TVOC	mg/Nm ³	10-30 ⁽¹⁾

⁽¹⁾ The BAT-AEL only applies when organic compounds are identified as relevant in the waste gas stream, based on the inventory mentioned in BAT 3.

The associated monitoring is given in BAT 8.

2.5. BAT conclusions for the mechanical treatment of WEEE containing mercury

Unless otherwise stated, the BAT conclusions presented in this section apply to the mechanical treatment of WEEE containing mercury, in addition to BAT 25.

2.5.1. Emissions to air

BAT 32. In order to reduce mercury emissions to air, BAT is to collect mercury emissions at source, to send them to abatement and to carry out adequate monitoring.

Description

This includes all of the following measures:

- equipment used to treat WEEE containing mercury is enclosed, under negative pressure and connected to a local exhaust ventilation (LEV) system;
- waste gas from the processes is treated by dedusting techniques such as cyclones, fabric filters, and HEPA filters, followed by adsorption on activated carbon (see Section 6.1);
- the efficiency of the waste gas treatment is monitored;
- mercury levels in the treatment and storage areas are measured frequently (e.g. once every week) to detect potential mercury leaks.

Table 6.6

BAT-associated emission level (BAT-AEL) for channelled mercury emissions to air from the mechanical treatment of WEEE containing mercury

Parameter	Unit	BAT-AEL (Average over the sampling period)
Mercury (Hg)	µg/Nm ³	2-7

The associated monitoring is given in BAT 8.

3. BAT CONCLUSIONS FOR THE BIOLOGICAL TREATMENT OF WASTE

Unless otherwise stated, the BAT conclusions presented in Section 3 apply to the biological treatment of waste, and in addition to the general BAT conclusions in Section 1. The BAT conclusions in Section 3 do not apply to the treatment of water-based liquid waste.

3.1. General BAT conclusions for the biological treatment of waste

3.1.1. Overall environmental performance

BAT 33. In order to reduce odour emissions and to improve the overall environmental performance, BAT is to select the waste input.

Description

The technique consists of carrying out the pre-acceptance, acceptance and sorting of the waste input (see BAT 2) so as to ensure the suitability of the waste input for the waste treatment, e.g. in terms of nutrient balance, moisture or toxic compounds which may reduce the biological activity.

3.1.2. Emissions to air

BAT 34. In order to reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H₂S and NH₃, BAT is to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Biofilter	See Section 6.1. A pretreatment of the waste gas before the biofilter (e.g. with a water or acid scrubber) may be needed in the case of a high NH ₃ content (e.g. 5-40 mg/Nm ³) in order to control the media pH and to limit the formation of N ₂ O in the biofilter. Some other odorous compounds (e.g. mercaptans, H ₂ S) can cause acidification of the biofilter media and necessitate the use of a water or alkaline scrubber for pretreatment of the waste gas before the biofilter.
c.	Fabric filter	See Section 6.1. The fabric filter is used in the case of mechanical biological treatment of waste.
d.	Thermal oxidation	See Section 6.1.
e.	Wet scrubbing	See Section 6.1. Water, acid or alkaline scrubbers are used in combination with a biofilter, thermal oxidation or adsorption on activated carbon.

Table 6.7

BAT-associated emission levels (BAT-AELs) for channelled NH₃, odour, dust and TVOC emissions to air from the biological treatment of waste

Parameter	Unit	BAT-AEL (Average over the sampling period)	Waste treatment process
NH ₃ ⁽¹⁾ ⁽²⁾	mg/Nm ³	0,3-20	All biological treatments of waste
Odour concentration ⁽¹⁾ ⁽²⁾	ou _E /Nm ³	200-1 000	
Dust	mg/Nm ³	2-5	Mechanical biological treatment of waste
TVOC	mg/Nm ³	5-40 ⁽³⁾	

⁽¹⁾ Either the BAT-AEL for NH₃ or the BAT-AEL for the odour concentration applies.

⁽²⁾ This BAT-AEL does not apply to the treatment of waste mainly composed of manure.

⁽³⁾ The lower end of the range can be achieved by using thermal oxidation.

The associated monitoring is given in BAT 8.

3.1.3. Emissions to water and water usage

BAT 35. In order to reduce the generation of waste water and to reduce water usage, BAT is to use all of the techniques given below.

Technique		Description	Applicability
a.	Segregation of water streams	Leachate seeping from compost piles and windrows is segregated from surface run-off water (see BAT 19f).	Generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the water circuits.
b.	Water recirculation	Recirculating process water streams (e.g. from dewatering of liquid digestate in anaerobic processes) or using as much as possible other water streams (e.g. water condensate, rinsing water, surface run-off water). The degree of recirculation is limited by the water balance of the plant, the content of impurities (e.g. heavy metals, salts, pathogens, odorous compounds) and/or the characteristics of the water streams (e.g. nutrient content).	Generally applicable.
c.	Minimisation of the generation of leachate	Optimising the moisture content of the waste in order to minimise the generation of leachate.	Generally applicable.

3.2. BAT conclusions for the aerobic treatment of waste

Unless otherwise stated, the BAT conclusions presented in this section apply to the aerobic treatment of waste, and in addition to the general BAT conclusions for the biological treatment of waste in Section 3.1.

3.2.1. Overall environmental performance

BAT 36. In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.

Description

Monitoring and/or control of key waste and process parameters, including:

- waste input characteristics (e.g. C to N ratio, particle size);
- temperature and moisture content at different points in the windrow;
- aeration of the windrow (e.g. via the windrow turning frequency, O₂ and/or CO₂ concentration in the windrow, temperature of air streams in the case of forced aeration);
- windrow porosity, height and width.

Applicability

Monitoring of the moisture content in the windrow is not applicable to enclosed processes when health and/or safety issues have been identified. In that case, the moisture content can be monitored before loading the waste into the enclosed composting stage and adjusted when it exits the enclosed composting stage.

3.2.2. Odour and diffuse emissions to air

BAT 37. In order to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques given below.

Technique		Description	Applicability
a.	Use of semipermeable membrane covers	Active composting windrows are covered by semipermeable membranes.	Generally applicable.
b.	Adaptation of operations to the meteorological conditions	This includes techniques such as the following: — Taking into account weather conditions and forecasts when undertaking major outdoor process activities. For instance, avoiding formation or turning of windrows or piles, screening or shredding in the case of adverse meteorological conditions in terms of emissions dispersion (e.g. the wind speed is too low or too high, or the wind blows in the direction of sensitive receptors). — Orientating windrows, so that the smallest possible area of composting mass is exposed to the prevailing wind, to reduce the dispersion of pollutants from the windrow surface. The windrows and piles are preferably located at the lowest elevation within the overall site layout.	Generally applicable.

3.3. BAT conclusions for the anaerobic treatment of waste

Unless otherwise stated, the BAT conclusions presented in this section apply to the anaerobic treatment of waste, and in addition to the general BAT conclusions for the biological treatment of waste in Section 3.1.

3.3.1. Emissions to air

BAT 38. In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.

Description

Implementation of a manual and/or automatic monitoring system to:

- ensure a stable digester operation;
- minimise operational difficulties, such as foaming, which may lead to odour emissions;
- provide sufficient early warning of system failures which may lead to a loss of containment and explosions.

This includes monitoring and/or control of key waste and process parameters, e.g.:

- pH and alkalinity of the digester feed;
- digester operating temperature;
- hydraulic and organic loading rates of the digester feed;
- concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate;
- biogas quantity, composition (e.g. H₂S) and pressure;
- liquid and foam levels in the digester.

3.4. BAT conclusions for the mechanical biological treatment (MBT) of waste

Unless otherwise stated, the BAT conclusions presented in this section apply to MBT, and in addition to the general BAT conclusions for the biological treatment of waste in Section 3.1.

The BAT conclusions for the aerobic treatment (Section 3.2) and anaerobic treatment (Section 3.3) of waste apply, when relevant, to the mechanical biological treatment of waste.

3.4.1. Emissions to air

BAT 39. In order to reduce emissions to air, BAT is to use both of the techniques given below.

Technique		Description	Applicability
a.	Segregation of the waste gas streams	Splitting of the total waste gas stream into waste gas streams with a high pollutant content and waste gas streams with a low pollutant content, as identified in the inventory mentioned in BAT 3.	Generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the air circuits.
b.	Recirculation of waste gas	Recirculation of waste gas with a low pollutant content in the biological process followed by waste gas treatment adapted to the concentration of pollutants (see BAT 34). The use of waste gas in the biological process may be limited by the waste gas temperature and/or the pollutant content. It may be necessary to condense the water vapour contained in the waste gas before re-use. In this case, cooling is necessary, and the condensed water is recirculated when possible (see BAT 35) or treated before discharge.	

4. BAT CONCLUSIONS FOR THE PHYSICO-CHEMICAL TREATMENT OF WASTE

Unless otherwise stated, the BAT conclusions presented in Section 4 apply to the physico-chemical treatment of waste, and in addition to the general BAT conclusions in Section 1.

4.1. BAT conclusions for the physico-chemical treatment of solid and/or pasty waste

4.1.1. Overall environmental performance

BAT 40. In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).

Description

Monitoring the waste input, e.g. in terms of:

- content of organics, oxidising agents, metals (e.g. mercury), salts, odorous compounds;
- H₂ formation potential upon mixing of flue-gas treatment residues, e.g. fly ashes, with water.

4.1.2. Emissions to air

BAT 41. In order to reduce emissions of dust, organic compounds and NH₃ to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Biofilter	
c.	Fabric filter	
d.	Wet scrubbing	

Table 6.8

BAT-associated emission level (BAT-AEL) for channelled emissions of dust to air from the physico-chemical treatment of solid and/or pasty waste

Parameter	Unit	BAT-AEL (Average over the sampling period)
Dust	mg/Nm ³	2-5

The associated monitoring is given in BAT 8.

4.2. BAT conclusions for the re-refining of waste oil

4.2.1. Overall environmental performance

BAT 42. In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).

Description

Monitoring of the waste input in terms of content of chlorinated compounds (e.g. chlorinated solvents or PCBs).

BAT 43. In order to reduce the quantity of waste sent for disposal, BAT is to use one or both of the techniques given below.

Technique		Description
a.	Material recovery	Using the organic residues from vacuum distillation, solvent extraction, thin film evaporators, etc. in asphalt products, etc.
b.	Energy recovery	Using the organic residues from vacuum distillation, solvent extraction, thin film evaporators, etc. to recover energy.

4.2.2. Emissions to air

BAT 44. In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Thermal oxidation	See Section 6.1. This includes when the waste gas is sent to a process furnace or a boiler.
c.	Wet scrubbing	See Section 6.1.

The BAT-AEL set in Section 4.5 applies.

The associated monitoring is given in BAT 8.

4.3. BAT conclusions for the physico-chemical treatment of waste with calorific value

4.3.1. Emissions to air

BAT 45. In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1
b.	Cryogenic condensation	
c.	Thermal oxidation	
d.	Wet scrubbing	

The BAT-AEL set in Section 4.5 applies.

The associated monitoring is given in BAT 8.

4.4. BAT conclusions for the regeneration of spent solvents

4.4.1. Overall environmental performance

BAT 46. In order to improve the overall environmental performance of the regeneration of spent solvents, BAT is to use one or both of the techniques given below.

Technique		Description	Applicability
a.	Material recovery	Solvents are recovered from the distillation residues by evaporation.	Applicability may be restricted when the energy demand is excessive with regards to the quantity of solvent recovered.
b.	Energy recovery	The residues from distillation are used to recover energy.	Generally applicable.

4.4.2. Emissions to air

BAT 47. In order to reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use a combination of the techniques given below.

Technique		Description	Applicability
a.	Recirculation of process off-gases in a steam boiler	The process off-gases from the condensers are sent to the steam boiler supplying the plant.	May not be applicable to the treatment of halogenated solvent wastes, in order to avoid generating and emitting PCBs and/or PCDD/F.
b.	Adsorption	See Section 6.1.	There may be limitations to the applicability of the technique due to safety reasons (e.g. activated carbon beds tend to self-ignite when loaded with ketones).
c.	Thermal oxidation	See Section 6.1.	May not be applicable to the treatment of halogenated solvent wastes, in order to avoid generating and emitting PCBs and/or PCDD/F.
d.	Condensation or cryogenic condensation	See Section 6.1.	Generally applicable.
e.	Wet scrubbing	See Section 6.1.	Generally applicable.

The BAT-AEL set in Section 4.5 applies.

The associated monitoring is given in BAT 8.

4.5. **BAT-AEL for emissions of organic compounds to air from the re-refining of waste oil, the physico-chemical treatment of waste with calorific value and the regeneration of spent solvents**

Table 6.9

BAT-associated emission level (BAT-AEL) for channelled emissions of TVOC to air from the re-refining of waste oil, the physico-chemical treatment of waste with calorific value and the regeneration of spent solvents

Parameter	Unit	BAT-AEL ⁽¹⁾ (Average over the sampling period)
TVOC	mg/Nm ³	5-30

⁽¹⁾ The BAT-AEL does not apply when the emission load is below 2 kg/h at the emission point provided that no CMR substances are identified as relevant in the waste gas stream, based on the inventory mentioned in BAT 3.

4.6. **BAT conclusions for the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil**

4.6.1. Overall environmental performance

BAT 48. In order to improve the overall environmental performance of the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil, BAT is to use all of the techniques given below.

Technique	Description	Applicability
a. Heat recovery from the furnace off-gas	Recovered heat may be used, for example, for preheating of combustion air or for the generation of steam, which is also used in the reactivation of the spent activated carbon.	Generally applicable.
b. Indirectly fired furnace	An indirectly fired furnace is used to avoid contact between the contents of the furnace and the flue-gases from the burner(s).	Indirectly fired furnaces are normally constructed with a metal tube and applicability may be restricted due to corrosion problems. There may be also economic restrictions for retrofitting existing plants.
c. Process-integrated techniques to reduce emissions to air	This includes techniques such as: — control of the furnace temperature and of the rotation speed of the rotary furnace; — choice of fuel; — use of a sealed furnace or operation of the furnace at a reduced pressure to avoid diffuse emissions to air.	Generally applicable.

4.6.2. Emissions to air

BAT 49. In order to reduce emissions of HCl, HF, dust and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Cyclone	See Section 6.1. The technique is used in combination with further abatement techniques.
b.	Electrostatic precipitator (ESP)	See Section 6.1.
c.	Fabric filter	
d.	Wet scrubbing	
e.	Adsorption	
f.	Condensation	
g.	Thermal oxidation ⁽¹⁾	

⁽¹⁾ Thermal oxidation is carried out with a minimum temperature of 1 100 °C and a two-second residence time for the regeneration of activated carbon used in industrial applications where refractory halogenated or other thermally resistant substances are likely to be present. In the case of activated carbon used for potable water- and food-grade applications, an afterburner with a minimum heating temperature of 850 °C and a two-second residence time is sufficient (see Section 6.1).

The associated monitoring is given in BAT 8.

4.7. **BAT conclusions for the water washing of excavated contaminated soil**

4.7.1. Emissions to air

BAT 50. In order to reduce emissions of dust and organic compounds to air from the storage, handling, and washing steps, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Fabric filter	
c.	Wet scrubbing	

The associated monitoring is given in BAT 8.

4.8. **BAT conclusions for the decontamination of equipment containing PCBs**

4.8.1. Overall environmental performance

BAT 51. In order to improve the overall environmental performance and to reduce channelled emissions of PCBs and organic compounds to air, BAT is to use all of the techniques given below.

Technique		Description
a.	Coating of the storage and treatment areas	This includes techniques such as: — resin coating applied to the concrete floor of the whole storage and treatment area.

Technique		Description
b.	Implementation of staff access rules to prevent dispersion of contamination	This includes techniques such as: — access points to storage and treatment areas are locked; — special qualification is required to access the area where the contaminated equipment is stored and handled; — separate ‘clean’ and ‘dirty’ cloakrooms to put on/remove individual protective outfit.
c.	Optimised equipment cleaning and drainage	This includes techniques such as: — external surfaces of the contaminated equipment are cleaned with anionic detergent; — emptying of the equipment with a pump or under vacuum instead of gravity emptying; — procedures are defined and used for filling, emptying and (dis)connecting the vacuum vessel; — a long period of drainage (at least 12 hours) is ensured to avoid any dripping of contaminated liquid during further treatment operations, after the separation of the core from the casing of an electrical transformer.
d.	Control and monitoring of emissions to air	This includes techniques such as: — the air of the decontamination area is collected and treated with activated carbon filters; — the exhaust of the vacuum pump mentioned in technique c. above is connected to an end-of-pipe abatement system (e.g. a high-temperature incinerator, thermal oxidation or adsorption on activated carbon); — the channelled emissions are monitored (see BAT 8); — the potential atmospheric deposition of PCBs is monitored (e.g. through physico-chemical measurements or biomonitoring).
e.	Disposal of waste treatment residues	This includes techniques such as: — porous, contaminated parts of the electrical transformer (wood and paper) are sent to high-temperature incineration; — PCBs in the oils are destroyed (e.g. dechlorination, hydrogenation, solvated electron processes, high-temperature incineration).
f.	Recovery of solvent when solvent washing is used	Organic solvent is collected and distilled to be reused in the process.

The associated monitoring is given in BAT 8.

5. BAT CONCLUSIONS FOR THE TREATMENT OF WATER-BASED LIQUID WASTE

Unless otherwise stated, the BAT conclusions presented in Section 5 apply to the treatment of water-based liquid waste, and in addition to the general BAT conclusions in Section 1.

5.1. Overall environmental performance

BAT 52. In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).

Description

Monitoring the waste input, e.g. in terms of:

- bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge));
- feasibility of emulsion breaking, e.g. by means of laboratory-scale tests.

5.2. **Emissions to air**

BAT 53. In order to reduce emissions of HCl, NH₃ and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.

Technique		Description
a.	Adsorption	See Section 6.1.
b.	Biofilter	
c.	Thermal oxidation	
d.	Wet scrubbing	

Table 6.10

BAT-associated emission levels (BAT-AELs) for channelled emissions of HCl and TVOC to air from the treatment of water-based liquid waste

Parameter	Unit	BAT-AEL ⁽¹⁾ (Average over the sampling period)
Hydrogen chloride (HCl)	mg/Nm ³	1-5
TVOC		3-20 ⁽²⁾

⁽¹⁾ These BAT-AELs only apply when the substance concerned is identified as relevant in the waste gas stream, based on the inventory mentioned in BAT 3.

⁽²⁾ The upper end of the range is 45 mg/Nm³ when the emission load is below 0,5 kg/h at the emission point.

The associated monitoring is given in BAT 8.

6. DESCRIPTION OF TECHNIQUES

6.1. **Channelled emissions to air**

Technique	Typical pollutant(s) abated	Description
Adsorption	Mercury, volatile organic compounds, hydrogen sulphide, odorous compounds	Adsorption is a heterogeneous reaction in which gas molecules are retained on a solid or liquid surface that prefers specific compounds to others and thus removes them from effluent streams. When the surface has adsorbed as much as it can, the adsorbent is replaced or the adsorbed content is desorbed as part of the regeneration of the adsorbent. When desorbed, the contaminants are usually at a higher concentration and can either be recovered or disposed of. The most common adsorbent is granular activated carbon.

Technique	Typical pollutant(s) abated	Description
Biofilter	Ammonia, hydrogen sulphide, volatile organic compounds, odorous compounds	The waste gas stream is passed through a bed of organic material (such as peat, heather, compost, root, tree bark, softwood and different combinations) or some inert material (such as clay, activated carbon, and polyurethane), where it is biologically oxidised by naturally occurring microorganisms into carbon dioxide, water, inorganic salts and biomass. A biofilter is designed considering the type(s) of waste input. An appropriate bed material, e.g. in terms of water retention capacity, bulk density, porosity, structural integrity, is selected. Also important are an appropriate height and surface area of the filter bed. The biofilter is connected to a suitable ventilation and air circulation system in order to ensure a uniform air distribution through the bed and a sufficient residence time of the waste gas inside the bed.
Condensation and cryogenic condensation	Volatile organic compounds	Condensation is a technique that eliminates solvent vapours from a waste gas stream by reducing its temperature below its dew point. For cryogenic condensation, the operating temperature can be down to -120°C, but in practice it is often between -40°C and -80°C in the condensation device. Cryogenic condensation can cope with all VOCs and volatile inorganic pollutants, irrespective of their individual vapour pressures. The low temperatures applied allow for very high condensation efficiencies which make it well-suited as a final VOC emission control technique.
Cyclone	Dust	Cyclone filters are used to remove heavier particulates, which 'fall out' as the waste gases are forced into a rotating motion before they leave the separator. Cyclones are used to control particulate material, primarily PM_{10}.
Electrostatic precipitator (ESP)	Dust	Electrostatic precipitators operate such that particles are charged and separated under the influence of an electrical field. Electrostatic precipitators are capable of operating under a wide range of conditions. In a dry ESP, the collected material is mechanically removed (e.g. by shaking, vibration, compressed air), while in a wet ESP it is flushed with a suitable liquid, usually water.
Fabric filter	Dust	Fabric filters, often referred to as bag filters, are constructed from porous woven or felted fabric through which gases are passed to remove particles. The use of a fabric filter requires the selection of a fabric suitable for the characteristics of the waste gas and the maximum operating temperature.

Technique	Typical pollutant(s) abated	Description
HEPA filter	Dust	HEPA filters (high-efficiency particle air filters) are absolute filters. The filter medium consists of paper or matted glass fibre with a high packing density. The waste gas stream is passed through the filter medium, where particulate matter is collected.
Thermal oxidation	Volatile organic compounds	The oxidation of combustible gases and odorants in a waste gas stream by heating the mixture of contaminants with air or oxygen to above its auto-ignition point in a combustion chamber and maintaining it at a high temperature long enough to complete its combustion to carbon dioxide and water.
Wet scrubbing	Dust, volatile organic compounds, gaseous acidic compounds (alkaline scrubber), gaseous alkaline compounds (acid scrubber)	The removal of gaseous or particulate pollutants from a gas stream via mass transfer to a liquid solvent, often water or an aqueous solution. It may involve a chemical reaction (e.g. in an acid or alkaline scrubber). In some cases, the compounds may be recovered from the solvent.

6.2. Diffuse emissions of organic compounds to air

Leak detection and repair (LDAR) programme	Volatile organic compounds	A structured approach to reduce fugitive emissions of organic compounds by detection and subsequent repair or replacement of leaking components. Currently, sniffing (described by EN 15446) and optical gas imaging methods are available for the identification of leaks. Sniffing method: The first step is the detection using hand-held organic compound analysers measuring the concentration adjacent to the equipment (e.g. using flame ionisation or photo-ionisation). The second step consists of enclosing the component in an impermeable bag to carry out a direct measurement at the source of the emission. This second step is sometimes replaced by mathematical correlation curves derived from statistical results obtained from a large number of previous measurements made on similar components. Optical gas imaging methods: Optical imaging uses small lightweight hand-held cameras which enable the visualisation of gas leaks in real time, so that they appear as 'smoke' on a video recorder together with the normal image of the component concerned, to easily and rapidly locate significant organic compound leaks. Active systems produce an image with a back-scattered infrared laser light reflected on the component and its surroundings. Passive systems are based on the natural infrared radiation of the equipment and its surroundings.
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Measurement of diffuse VOC emissions	Volatile organic compounds	Sniffing and optical gas imaging methods are described under leak detection and repair programme. Full screening and quantification of emissions from the installation can be undertaken with an appropriate combination of complementary methods, e.g. Solar occultation flux (SOF) or Differential absorption LIDAR (DIAL) campaigns. These results can be used for trend evaluation over time, cross-checking and updating/validation of the ongoing LDAR programme. Solar occultation flux (SOF): The technique is based on the recording and spectrometric Fourier Transform analysis of a broadband infrared or ultraviolet/visible sunlight spectrum along a given geographical itinerary, crossing the wind direction and cutting through VOC plumes. Differential absorption LIDAR (DIAL): This is a laser-based technique using differential absorption LIDAR (light detection and ranging), which is the optical analogue of radio wave-based RADAR. The technique relies on the backscattering of laser beam pulses by atmospheric aerosols, and the analysis of the spectral properties of the returned light collected with a telescope.
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6.3. Emissions to water

Technique	Typical pollutant(s) targeted	Description
Activated sludge process	Biodegradable organic compounds	The biological oxidation of dissolved organic pollutants with oxygen using the metabolism of microorganisms. In the presence of dissolved oxygen (injected as air or pure oxygen), the organic components are transformed into carbon dioxide, water or other metabolites and biomass (i.e. the activated sludge). The microorganisms are maintained in suspension in the waste water and the whole mixture is mechanically aerated. The activated sludge mixture is sent to a separation facility from where the sludge is recycled to the aeration tank.
Adsorption	Adsorbable dissolved non-biodegradable or inhibitory pollutants, e.g. hydrocarbons, mercury, AOX	Separation method in which compounds (i.e. pollutants) in a fluid (i.e. waste water) are retained on a solid surface (typically activated carbon).

Technique	Typical pollutant(s) targeted	Description
Chemical oxidation	Oxidisable dissolved non-biodegradable or inhibitory pollutants, e.g. nitrite, cyanide	Organic compounds are oxidised to less harmful and more easily biodegradable compounds. Techniques include wet oxidation or oxidation with ozone or hydrogen peroxide, optionally supported by catalysts or UV radiation. Chemical oxidation is also used to degrade organic compounds causing odour, taste and colour and for disinfection purposes.
Chemical reduction	Reducible dissolved non-biodegradable or inhibitory pollutants, e.g. hexavalent chromium (Cr(VI))	Chemical reduction is the conversion of pollutants by chemical reducing agents into similar but less harmful or hazardous compounds.
Coagulation and flocculation	Suspended solids and particulate-bound metals	Coagulation and flocculation are used to separate suspended solids from waste water and are often carried out in successive steps. Coagulation is carried out by adding coagulants with charges opposite to those of the suspended solids. Flocculation is carried out by adding polymers, so that collisions of microfloc particles cause them to bond to produce larger flocs. The flocs formed are subsequently separated by sedimentation, air flotation or filtration.
Distillation/rectification	Dissolved non-biodegradable or inhibitory pollutants that can be distilled, e.g. some solvents	Distillation is a technique to separate compounds with different boiling points by partial evaporation and recondensation. Waste water distillation is the removal of low-boiling contaminants from waste water by transferring them into the vapour phase. Distillation is carried out in columns, equipped with plates or packing material, and a downstream condenser.
Equalisation	All pollutants	Balancing of flows and pollutant loads by using tanks or other management techniques.
Evaporation	Soluble pollutants	The use of distillation (see above) to concentrate aqueous solutions of high-boiling substances for further use, processing or disposal (e.g. waste water incineration) by transferring water to the vapour phase. It is typically carried out in multi-stage units with increasing vacuum, to reduce the energy demand. The water vapours are condensed, to be reused or discharged as waste water.

Technique	Typical pollutant(s) targeted	Description
Filtration	Suspended solids and particulate-bound metals	The separation of solids from waste water by passing them through a porous medium, e.g. sand filtration, microfiltration and ultrafiltration.
Flotation		The separation of solid or liquid particles from waste water by attaching them to fine gas bubbles, usually air. The buoyant particles accumulate at the water surface and are collected with skimmers.
Ion exchange	Ionic dissolved non-biodegradable or inhibitory pollutants, e.g. metals	The retention of undesired or hazardous ionic constituents of waste water and their replacement by more acceptable ions using an ion exchange resin. The pollutants are temporarily retained and afterwards released into a regeneration or backwashing liquid.
Membrane bioreactor	Biodegradable organic compounds	A combination of activated sludge treatment and membrane filtration. Two variants are used: a) an external recirculation loop between the activated sludge tank and the membrane module; and b) immersion of the membrane module in the aerated activated sludge tank, where the effluent is filtered through a hollow fibre membrane, the biomass remaining in the tank.
Membrane filtration	Suspended solids and particulate-bound metals	Microfiltration (MF) and ultrafiltration (UF) are membrane filtration processes that retain and concentrate, on one side of the membrane, pollutants such as suspended particles and colloidal particles contained in waste waters.
Neutralisation	Acids, alkalis	The adjustment of the pH of waste water to a neutral level (approximately 7) by the addition of chemicals. Sodium hydroxide (NaOH) or calcium hydroxide ($\text{Ca}(\text{OH})_2$) may be used to increase the pH, whereas sulphuric acid (H_2SO_4), hydrochloric acid (HCl) or carbon dioxide (CO_2) may be used to decrease the pH. The precipitation of some pollutants may occur during neutralisation.
Nitrification/denitrification	Total nitrogen, ammonia	A two-step process that is typically incorporated into biological waste water treatment plants. The first step is aerobic nitrification where microorganisms oxidise ammonium (NH_4^+) to the intermediate nitrite (NO_2^-), which is then further oxidised to nitrate (NO_3^-). In the subsequent anoxic denitrification step, microorganisms chemically reduce nitrate to nitrogen gas.

Technique	Typical pollutant(s) targeted	Description
Oil-water separation	Oil/grease	The separation of oil and water and subsequent oil removal by gravity separation of free oil, using separation equipment or emulsion breaking (using emulsion breaking chemicals such as metal salts, mineral acids, adsorbents and organic polymers).
Sedimentation	Suspended solids and particulate-bound metals	The separation of suspended particles by gravitational settling.
Precipitation	Precipitable dissolved non-biodegradable or inhibitory pollutants, e.g. metals, phosphorus	The conversion of dissolved pollutants into insoluble compounds by adding precipitants. The solid precipitates formed are subsequently separated by sedimentation, air flotation or filtration.
Stripping	Purgeable pollutants, e.g. hydrogen sulphide (H ₂ S), ammonia (NH ₃), some adsorbable organically bound halogens (AOX), hydrocarbons	The removal of purgeable pollutants from the aqueous phase by a gaseous phase (e.g. steam, nitrogen or air) that is passed through the liquid. They are subsequently recovered (e.g. by condensation) for further use or disposal. The removal efficiency may be enhanced by increasing the temperature or reducing the pressure.

6.4. Sorting techniques

Technique	Description
Air classification	Air classification (or air separation, or aeraulic separation) is a process of approximate sizing of dry mixtures of different particle sizes into groups or grades at cut points ranging from 10 mesh to sub-mesh sizes. Air classifiers (also called windsifters) complement screens in applications requiring cut points below commercial screen sizes, and supplement sieves and screens for coarser cuts where the special advantages of air classification warrant it.
All-metal separator	Metals (ferrous and non-ferrous) are sorted by means of a detection coil, in which the magnetic field is influenced by metal particles, linked to a processor that controls the air jet for ejecting the materials that have been detected.
Electromagnetic separation of non-ferrous metals	Non-ferrous metals are sorted by means of eddy current separators. An eddy current is induced by a series of rare earth magnetic or ceramic rotors at the head of a conveyor that spins at high speed independently of the conveyor. This process induces temporary magnetic forces in non-magnetic metals of the same polarity as the rotor, causing the metals to be repelled away and then separated from the other feedstock.

Technique	Description
Manual separation	Material is manually separated by means of visual examination by staff on a picking line or on the floor, either to selectively remove a target material from a general waste stream or to remove contamination from an output stream to increase purity. This technique generally targets recyclables (glass, plastic, etc.) and any contaminants, hazardous materials and oversized materials such as WEEE.
Magnetic separation	Ferrous metals are sorted by means of a magnet which attracts ferrous metal materials. This can be carried out, for example, by an overband magnetic separator or a magnetic drum.
Near-infrared spectroscopy (NIRS)	Materials are sorted by means of a near-infrared sensor which scans the whole width of the belt conveyor and transmits the characteristic spectra of the different materials to a data processor which controls an air jet for ejecting the materials that have been detected. Generally NIRS is not suitable for sorting black materials.
Sink-float tanks	Solid materials are separated into two flows by exploiting the different material densities.
Size separation	Materials are sorted according to their particle size. This can be carried out by drum screens, linear and circular oscillating screens, flip-flop screens, flat screens, tumbler screens and moving grates.
Vibration table	Materials are separated according to their density and size, moving (in slurry in the case of wet tables or wet density separators) across an inclined table, which oscillates backwards and forwards.
X-ray systems	Material composites are sorted according to various material densities, halogen components, or organic components, with the aid of X-rays. The characteristics of the different materials are transmitted to a data processor which controls an air jet for ejecting the materials that have been detected.

6.5. Management techniques

Accident management plan	The accident management plan is part of the EMS (see BAT 1) and identifies hazards posed by the plant and the associated risks and defines measures to address these risks. It considers the inventory of pollutants present or likely to be present which could have environmental consequences if they escape.
Residues management plan	A residues management plan is part of the EMS (see BAT 1) and is a set of measures aiming to (1) minimise the generation of residues arising from the treatment of waste; (2) optimise the reuse, regeneration, recycling and/or recovery of energy of the residues, and (3) ensure the proper disposal of residues.

DECISION (EU) 2018/1148 OF THE EUROPEAN CENTRAL BANK**of 10 August 2018****on the eligibility of marketable debt instruments issued or fully guaranteed by the Hellenic Republic and repealing Decision (EU) 2016/1041 (ECB/2018/21)**

THE GOVERNING COUNCIL OF THE EUROPEAN CENTRAL BANK,

Having regard to the Treaty on the Functioning of the European Union, and in particular the first indent of Article 127(2) thereof,

Having regard to the Statute of the European System of Central Banks and of the European Central Bank, and in particular the first indent of Article 3.1, Article 12.1, Article 18 and the second indent of Article 34.1 thereof,

Having regard to Guideline (EU) 2015/510 of the European Central Bank of 19 December 2014 on the implementation of the Eurosystem monetary policy framework (ECB/2014/60) ⁽¹⁾ (General Documentation Guideline), and in particular Article 1(4), Titles I, II, IV, V, VI and VIII of Part Four, and Part Six thereof,

Having regard to Guideline ECB/2014/31 of 9 July 2014 on additional temporary measures relating to Eurosystem refinancing operations and eligibility of collateral and amending Guideline ECB/2007/9 ⁽²⁾, and in particular Articles 1(3) and 6(1) and Article 8 thereof,

Whereas:

- (1) Pursuant to Article 18.1 of the Statute of the European System of Central Banks and of the European Central Bank, the European Central Bank (ECB) and the national central banks of Member States whose currency is the euro may conduct credit operations with credit institutions and other market participants, with lending being based on adequate collateral.
- (2) The standard criteria and minimum requirements for credit quality thresholds determining the eligibility of marketable assets as collateral for the purposes of Eurosystem monetary policy operations are laid down in Guideline (EU) 2015/510 (ECB/2014/60) and in particular in Article 59 and in Part Four, Title II thereof.
- (3) Pursuant to Article 1(4) of Guideline (EU) 2015/510 (ECB/2014/60), the Governing Council may, at any time, change the tools, instruments, requirements, criteria and procedures for the implementation of Eurosystem monetary policy operations. Pursuant to Article 59(6) of Guideline (EU) 2015/510 (ECB/2014/60), the Eurosystem reserves the right to determine whether an issue, issuer, debtor or guarantor fulfils the Eurosystem's credit quality requirements on the basis of any information that the Eurosystem may consider relevant for ensuring adequate risk protection of the Eurosystem.
- (4) By way of derogation from the Eurosystem's credit quality requirements for marketable assets, Article 8(2) of Guideline ECB/2014/31 provides that the Eurosystem's credit quality thresholds do not apply to marketable debt instruments issued or fully guaranteed by the central governments of euro area Member States under a European Union/International Monetary Fund programme, unless the Governing Council decides that the respective Member State does not comply with the conditionality of the financial support and/or the macroeconomic programme.
- (5) On 19 August 2015, following the expiry of the preceding European Financial Stability Facility (EFSF) programme of financial support for Greece, the Board of Governors of the European Stability Mechanism (ESM) approved the current three-year financial assistance programme for Greece.
- (6) The Governing Council assessed the effects of the abovementioned ESM programme for Greece, the continued implementation thereof and the commitment demonstrated by the Greek authorities to fully implement the programme. On the basis of that assessment, the Governing Council considered the Hellenic Republic to be in compliance with the conditionality of the programme. Consequently, on 22 June 2016, the Governing Council adopted Decision (EU) 2016/1041 of the European Central Bank (ECB/2016/18) ⁽³⁾ which restored the eligibility

⁽¹⁾ OJ L 91, 2.4.2015, p. 3.

⁽²⁾ OJ L 240, 13.8.2014, p. 28.

⁽³⁾ Decision (EU) 2016/1041 of the European Central Bank of 22 June 2016 on the eligibility of marketable debt instruments issued or fully guaranteed by the Hellenic Republic and repealing Decision (EU) 2015/300 (ECB/2016/18) (OJ L 169, 28.6.2016, p. 14).

of marketable debt instruments issued or fully guaranteed by the Hellenic Republic for Eurosystem monetary policy operations, subject to applying specific haircuts to such instruments, and provided that the Hellenic Republic should be considered a euro area Member State compliant with a European Union/International Monetary Fund programme.

- (7) Currently, Article 1(3) of Guideline ECB/2014/31 provides that, for the purposes of Article 6(1) and Article 8 of that Guideline, the Hellenic Republic should be considered a euro area Member State compliant with a European Union/International Monetary Fund programme. Moreover, Article 8(3) of that Guideline provides that marketable debt instruments issued or fully guaranteed by the Hellenic Republic are subject to the specific haircuts set out in Annex I to that Guideline.
- (8) Pursuant to Article 1 of the Financial Assistance Facility Agreement between the European Stability Mechanism, the Hellenic Republic, the Bank of Greece and the Hellenic Financial Stability Fund dated 19 August 2015 ⁽¹⁾, the termination date of the current ESM programme is 20 August 2018. Consequently, from 21 August 2018 the Hellenic Republic can no longer be considered a euro area Member State under a European Union/International Monetary Fund programme. As a result, from that date, the conditions for the temporary suspension of the Eurosystem's credit quality thresholds in respect of marketable debt instruments issued or fully guaranteed by the Hellenic Republic, as set out in Article 8(2) of Guideline ECB/2014/31, will no longer be fulfilled.
- (9) Therefore, the Governing Council has decided that from 21 August 2018 the Eurosystem's standard criteria and credit quality thresholds should apply in respect of marketable debt instruments issued or fully guaranteed by the Hellenic Republic and that such debt instruments will be subject to the standard haircuts set out in Guideline (EU) 2016/65 of the European Central Bank (ECB/2015/35) ⁽²⁾,

HAS ADOPTED THIS DECISION:

Article 1

Eligibility of marketable debt instruments issued or fully guaranteed by the Hellenic Republic

1. For the purposes of Articles 1(3) and 6(1) and Article 8 of Guideline ECB/2014/31, the Hellenic Republic shall no longer be considered a euro area Member State under a European Union/International Monetary Fund programme.
2. The Eurosystem's minimum requirements for credit quality thresholds, as laid down in Guideline (EU) 2015/510 (ECB/2014/60) and in particular in Article 59 and in Part Four, Title II thereof, shall apply to marketable debt instruments issued or fully guaranteed by the Hellenic Republic.
3. Marketable debt instruments issued or fully guaranteed by the Hellenic Republic shall no longer be subject to the specific haircuts set out in Annex I to Guideline ECB/2014/31.

Article 2

Repeal

Decision (EU) 2016/1041 (ECB/2016/18) is hereby repealed.

Article 3

Final provisions

1. This Decision shall enter into force on 21 August 2018.

⁽¹⁾ Available on the ESM's website at www.esm.europa.eu

⁽²⁾ Guideline (EU) 2016/65 of the European Central Bank of 18 November 2015 on the valuation haircuts applied in the implementation of the Eurosystem monetary policy framework (ECB/2015/35) (OJ L 14, 21.1.2016, p. 30).

2. In the event of any discrepancy between this Decision and any of Guideline (EU) 2015/510 (ECB/2014/60) and Guideline ECB/2014/31, as implemented at national level by the national central banks of Member States whose currency is the euro, this Decision shall prevail.

Done at Frankfurt am Main, 10 August 2018.

The President of the ECB

Mario DRAGHI

RECOMMENDATIONS

COMMISSION RECOMMENDATION (EU) 2018/1149

of 10 August 2018

on non-binding guidelines for the identification of conflict-affected and high-risk areas and other supply chain risks under Regulation (EU) 2017/821 of the European Parliament and of the Council

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 292 thereof,

Whereas:

- (1) Natural mineral resources hold great potential for development but can, in conflict-affected or high-risk areas, be a cause of dispute where their revenues fuel the outbreak or continuation of violent conflict, undermining endeavours towards development, good governance and the rule of law. In those areas, breaking the nexus between conflict and illegal exploitation of minerals is a critical element in guaranteeing peace, development and stability.
- (2) To address such concerns, Regulation (EU) 2017/821 of the European Parliament and of the Council ⁽¹⁾ lays down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas; which will apply from 1 January 2021 (hereinafter the 'Regulation').
- (3) Conflict-affected and high-risk areas for the purposes of that Regulation are defined as areas in a state of armed conflict or fragile post-conflict as well as areas witnessing weak or non-existent governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses.
- (4) Article 14(1) of that Regulation sets out that in order to create clarity and certainty for and consistency among the practices of economic operators, in particular SMEs, the Commission, in consultation with the European External Action Service and the OECD, is to prepare non-binding guidelines for economic operators, explaining how best to apply the criteria for the identification of conflict-affected and high-risk areas (hereinafter the 'Guidelines').
- (5) That Article also sets out that these Guidelines are to be based on the definition of conflict-affected and high-risk areas set out in the Regulation and are to take into account the OECD Due Diligence Guidance in this field, including other supply chain risks triggering red flags as defined in the relevant supplements to that Guidance.
- (6) These Guidelines, to be effective, should set out the general concept of due diligence in supply chains of minerals and metals associated with conflict-affected and high-risk areas and the steps companies should take to identify and address the risks in this regard relating to the sourcing of tin, tantalum, tungsten and gold.
- (7) It should be recalled that the Regulation's requirements for Union importers do not only relate to metals and minerals originating from conflict-affected and high-risk areas, but also to associated risks along the upstream chain with regard to, e.g. trading, handling and exporting.
- (8) These Guidelines should also explain the key principles of the identification of conflict-affected and high-risk areas for the specific purpose of implementing the Regulation, while the definition and explanation of such areas are without prejudice to the Union's position on what may constitute conflict-affected and high-risk areas outside the context of that Regulation.

⁽¹⁾ Regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas (OJ L 130, 19.5.2017, p. 1).

- (9) Reference to relevant open-source information that economic operators can use in identifying conflict-affected and high-risk areas should be a central part of these Guidelines, while recalling that relevant sources are updated with varying periodicity and should be complemented with other sources as appropriate.
- (10) Other supply chain risks triggering red flags addressed by these Guidelines should relate to location, suppliers and unusual circumstances of trading operations and should be based on the OECD's work in this field.
- (11) Article 14(2) of the Regulation sets out that the Commission is to call on external expertise that will provide an indicative, non-exhaustive, regularly updated list of conflict-affected and high-risk areas. That forthcoming list is to be based on the external experts' analysis of these Guidelines and other existing information from, inter alia, academics and supply chain due diligence schemes.
- (12) These Guidelines are non-binding and Union importers maintain their responsibility to comply with the due diligence obligations under the Regulation, while the services of the Commission ensure that these Guidelines remain relevant over time,

HAS ADOPTED THIS RECOMMENDATION:

1. Union importers with obligations under Regulation (EU) 2017/821 should follow the non-binding guidelines provided in the Annex to this Recommendation. Following these Guidelines will help them to identify conflict-affected and high-risk areas and red flags adequately so as to properly meet the requirements of that Regulation when they apply from 1 January 2021. The guidelines can be followed also by other entities applying due diligence to their mineral supply chain.
2. This Recommendation will be published in the *Official Journal of the European Union*.

Done at Brussels, 10 August 2018.

For the Commission
Cecilia MALMSTRÖM
Member of the Commission

ANNEX

1. OBJECTIVE OF THESE GUIDELINES

Regulation (EU) 2017/821 (hereinafter ‘the Regulation’) entered into force on 8 June 2017 and applies to Union importers ⁽¹⁾ (including but not limited to smelters and refiners) as from 1 January 2021. As set out in its first Article, the Regulation is designed to provide transparency and certainty as regards the sourcing practices of Union importers sourcing from conflict-affected and high-risk areas.

According to Article 14(1) of the Regulation, the European Commission is tasked with the preparation of non-binding guidelines in the form of a handbook for economic operators, explaining how best to apply the criteria for the identification of *conflict-affected and high-risk areas*. This Article also sets out that the guidelines are to take into account the OECD Due Diligence Guidance ⁽²⁾ in this field, including other supply chain risks triggering the so-called ‘*red flags*’, as defined in the relevant supplements to that Guidance.

In these guidelines,

- SECTION 2 sets out the general *concept of due diligence* in supply chains of minerals originating from conflict-affected and high-risk areas and the *steps* companies should take to identify and address the risks associated with sourcing of tin, tantalum, tungsten and gold.
- SECTION 3 explains the key elements of the *definition of conflict-affected and high-risk areas* for the purposes of the Regulation.
- SECTION 4 lists *open source information* to help companies identify conflict-affected and high-risk areas and other risks.
- SECTION 5 provides information on other indicators of potential risks (or ‘*red flags*’) in the mineral supply chain in relation to location, suppliers, and unusual circumstances of trading operations.

These guidelines are designed to help EU importers carry out their supply chain due diligence. They are without prejudice to Regulation (EU) 2017/821 and are not legally binding.

Furthermore, it should be noted that pursuant to Article 14(2) of the Regulation, the European Commission will (subsequently) call upon external expertise that will provide an indicative, non-exhaustive, regularly updated list of conflict-affected and high-risk areas. That list will be based on the external experts’ analysis of these guidelines and existing information from, inter alia, governments, international organisations, academics and supply chain due diligence schemes.

2. DUE DILIGENCE IN THE MINERAL SUPPLY CHAIN — GENERAL CONCEPT AND STEPS**2.1. The concept of risk-based due diligence**

In *conflict-affected and high-risk areas*, companies involved in *mining, processing and trade in minerals* have the potential to generate income, growth and prosperity, sustain livelihoods and foster local development. In such situations, companies may also be at risk of contributing to or being associated with significant adverse impacts associated with their activities or sourcing decisions, including armed conflict and serious human rights abuses. In this perspective, to ensure that companies do not intentionally or unintentionally contribute to or become (or continue to be) associated with these adverse impacts, they should conduct risk-based due diligence as part of an on-going, proactive and reactive process firmly integrated into their management system.

⁽¹⁾ As set out in Article 2(l) of Regulation (EU) 2017/821 ‘Union importer’ means any natural or legal person declaring minerals or metals for release for free circulation within the meaning of Article 201(1) of Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013 laying down the Union Customs Code (OJ L 269, 10.10.2013, p. 1) or any natural or legal person on whose behalf such declaration is made, as indicated in data elements 3/15 and 3/16 in accordance with Annex B to Commission Delegated Regulation (EU) 2015/2446 of 28 July 2015 supplementing Regulation (EU) No 952/2013 of the European Parliament and of the Council as regards detailed rules concerning certain provisions of the Union Customs Code (OJ L 343, 29.12.2015, p. 1).

⁽²⁾ The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (Second Edition, OECD 2013) is the framework to conduct supply chain due diligence pursuant to Regulation (EU) 2017/821.

Generally, *risk-based due diligence* refers to the steps companies should take to identify and address actual or potential risks in their mineral supply chain in order to prevent or mitigate any contribution to adverse impacts related to the extraction, production, trading, processing, handling and export of minerals associated with conflict-affected and high-risk areas. Risks are defined in relation to the potentially adverse impacts of a given company's operations, which result from the *company's own* activities or which may be directly linked to operations, products or services by its *business relationships* with third parties, including suppliers and other entities in the supply chain. Adverse impacts may include harm to people (i.e. external impacts), reputational damage or legal liability for the company (i.e. internal impacts), or both.

Companies may face risks in their mineral supply chains because the circumstances of mineral extraction, production, trading, handling or export by their very nature carry a higher risk of having significant adverse impacts, such as financing conflict or fuelling, facilitating or exacerbating conditions of conflict as *outlined in Annex II of the OECD Due Diligence Guidance and its supplements*.

Because of these risks, companies should *make good faith efforts* to identify and assess *location, supplier or circumstantial-related risks* and put in place due diligence measures adapted to the specific requirements of such risks. Due diligence can also help companies ensure they observe international law and comply with domestic laws, including those governing illicit trade in mineral resources as well as UN sanctions and EU Decisions based on the Treaty of the European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU), in particular restrictive measures pursuant to Article 215 TFEU.

The overall objective of the Regulation, which is based on the principles set forth in the OECD Guidance, is to enable the development of secure, transparent and verifiable supply chains of minerals and to ensure, facilitate and promote the responsible importation into the EU of minerals and metals from conflict-affected and high-risk areas without contributing to armed conflict and associated human rights abuses, thereby contributing to economic development and the livelihood of local communities.

2.2. Due diligence — five-step framework

Risk-based due diligence as recommended by the OECD Due Diligence Guidance is structured around the following *five steps*, all of which are also enshrined in the Regulation.

Companies along the supply chain should:

- *Establish a strong management system and adopt and clearly communicate to suppliers and the public their policy for the minerals and metals potentially originating from conflict-affected and high-risk areas. This includes the identification of the factual circumstances involved in the extraction, transport, handling, trading, processing, smelting, refining, and alloying, manufacturing, or selling of products that contain minerals from conflict-affected and high-risk areas.* (Article 4 of the Regulation)
- *Identify and assess any actual or potential risks in the supply chain* ⁽¹⁾. (Article 5(1)(a) of the Regulation)
- *Design and implement a strategy to respond to the identified risks in order to prevent or mitigate them by adopting and implementing a risk management plan. This may result in deciding to continue trade throughout the course of the risk mitigation efforts, temporarily suspend trade while pursuing ongoing risk mitigation, or disengage with a supplier either after failed attempts at mitigation or if the supplier is committing serious human rights abuses (e.g. worst forms of child labour, forced labour, and torture) or providing direct or indirect support to non-state armed groups.* (Article 5(1)(b) of the Regulation)
- *Carry out or obtain an independent third-party audit of the company's activities, processes and systems used to implement supply chain due diligence at identified points in the supply chain, in particular regarding the due diligence practices of smelters and refiners.* (Article 6 of the Regulation)
- *Publicly report on supply chain due diligence policies and practices in order to generate public confidence in the measures companies are taking.* (Article 7 of the Regulation).

⁽¹⁾ Risks as set out in Annex II of the OECD Due Diligence Guidance, including risks triggered by 'red flags' as defined in its supplements.

3. UNDERSTANDING THE DEFINITION OF CONFLICT-AFFECTED AND HIGH-RISK AREAS

The definition of conflict-affected and high-risk areas applied in the Regulation is in line with the OECD Due Diligence Guidance as to what characterises such areas and is without prejudice to the EU's position on what may constitute conflict-affected and high-risk areas *outside* the context of the Regulation. It is solely provided for the purpose of supply chain due diligence with regard to the metals and minerals in scope of the Regulation and it is designed to be practical, thorough and easily understood by companies.

Definition of conflict-affected and high-risk areas in the Regulation (Article 2(f)):

'Areas in a state of armed conflict or fragile post-conflict as well as areas witnessing weak or non-existing governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses.'

This definition follows some *key principles* set out in international law, including 'state of armed conflict', 'fragile post-conflict' and 'failed states'. These principles are further illustrated and explained below to facilitate their practical understanding as part of the responsible supply chain management by companies.

Moreover, these key principles should allow for easy matching with *open source information* on the situation on the ground in conflict-affected and high-risk areas, and assist companies with the broader identification of risks in their supply chain and the potential impact of their operations (cf. section 4).

It should be recalled that the supply chain due diligence foreseen in the Regulation — as well as in the OECD Due Diligence Guidance — is tied to identifying and assessing the risks of adverse impacts of certain business operations and relationships relating to metals and minerals originating in or being transported through conflict-affected and high-risk areas (which can be *sub-national*). *Country-related* information can provide contextual information to identify the general level of diligence needed.

Key element of the definition	Explanation
State of armed conflict	<i>Presence of armed conflict, widespread violence or other risks of harm to people</i> as described under international humanitarian law, which regulates the conduct of armed conflict by combatants. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars, etc. Specific guidance on the 'state of armed conflict' is provided in the <i>Geneva Conventions of 1949</i> and includes all cases of <i>declared war</i> or of <i>any other armed conflict</i> which may arise between two or more Parties, even if the state of war is not recognised by one of them; all cases of <i>partial or total occupation</i> of the territory of a Party, even if the said occupation meets with no armed resistance. Pursuant to <i>Protocol II</i> (1977) additional to the Geneva Conventions of 1949, they do <i>not</i> apply to situations of internal <i>disturbances and tensions</i>, such as riots, isolated and sporadic acts of violence and other acts of a similar nature.
Fragile post-conflict areas Areas witnessing weak or non-existent governance and security, such as failed states, <i>and</i> widespread and systematic violations of international law, including human rights abuses.	<i>Fragile post-conflict areas</i> are areas witnessing cessation of active hostilities and that are in a state of <i>fragility</i>, meaning that the region or state has a <i>weak capacity to carry out basic governance functions</i> and lacks the ability to develop mutually constructive relations within society due to the prior conflictual state. Such areas are more vulnerable to internal or external shocks such as economic crises or natural disasters. In such cases, as in cases covered by the subsequent paragraph of the definition (i.e. areas witnessing weak or non-existing governance and security), economic operators need to ascertain that there is <i>either</i> institutional weakness or lack of governance <i>and</i> widespread and systematic violations of international law and human rights abuses in order to make a determination that the area is a conflict-affected and high-risk area. Thus, the condition of the violations of international law is a <i>cumulative</i> one to the conditions of fragile post-conflict areas and areas witnessing weak or non-existing governance and security. On the latter, the absence of a formal mining licensing procedure would for instance constitute evidence of lack of governance.

Key element of the definition	Explanation
Failed states	A 'failed state' is an <i>illustration of a situation of extreme institutional weakness</i> . A <i>failed state</i> involves an implosion of structures of power and authority, a collapse of law and order and the absence of institutions capable of representing the state.

4. OPEN SOURCE INFORMATION TO IDENTIFY CONFLICT-AFFECTED AND HIGH-RISK AREAS

This section includes an indicative, non-exhaustive list of relevant open-source information to help companies identify conflict-affected and high-risk areas. By understanding the national and regional context as well as the potential risks involved in areas they operate in or source from, companies will be in a position to better tailor their due diligence efforts accordingly. Such more general country specific information can also be beneficial in assessing the plausibility of allegations of misconduct.

The listed open-source information is grouped according to the key elements set out in the definition of conflict-affected and high-risk areas (cf. section 3):

- CONFLICT — allowing for the assessment of whether an area is in a 'state of armed conflict' or is a 'fragile post-conflict' area.
- GOVERNANCE — allowing for the assessment of the extent to which areas witness weak or non-existent governance and security.
- HUMAN RIGHTS — allowing for the assessment of whether an area is affected by widespread and systematic violations of international law, including human rights abuses ⁽¹⁾.

In addition, the list provided in section 4.2 includes information sources on mineral resources, for context.

4.1. How to best use the information sources

The listed information sources are of a non-commercial nature, i.e. not requiring subscription fees or any financial contribution. Companies should consider whether that sources provide updated information while using them. The Regulation sets out that in addition to these guidelines, the European Commission is to call upon external expertise that will provide an indicative, non-exhaustive, regularly updated list of conflict-affected and high-risk areas. The European Commission's services will together with such external expertise ensure to update as appropriate the list of information sources to ensure its continued relevance.

Additional *sources of a more general nature* (some of which are not explicitly mentioned in the list below) that are useful to consult include geological surveys with information on mineral resources (British and U.S. Geological Surveys), the European Commission's Raw Material Information System, the websites of leading organisations on this issue such as the U.S. State Department Country Reports (Governance and Human Rights), reports published by the different UN agencies (including the Human Rights Council, UNHCR, OHCHR, UNICEF, UNDP, ILO, and IOM) and other relevant civil society organisations, for instance Amnesty International, Global Witness, Human Rights Watch and IMPACT (the former Partnership Africa Canada). The websites of other organisations and information sources such as the International Committee of the Red Cross, Natural Resource Governance Index, Global Peace Index, etc. may also be consulted by companies for more topical, news-based information.

It would also be useful to consult national or regional sources. Although sometimes more difficult to access, national/regional sources allow for a more in-depth review of the situation in a specific area compared with aggregate country information.

Companies consulting these sources can proceed as follows:

1. On the basis of the supply chain information retained in their management system (step 1 of the five-step framework, cf. section 2), companies should first seek to identify their geographical areas of mineral sourcing, trading, handling and transportation with a view to understanding the context in which the mining and trading activities take place and identify the related risks.

⁽¹⁾ For the definition of human rights, see the Convention for the Protection of Human Rights and Fundamental Freedoms; https://www.echr.coe.int/Documents/Convention_ENG.pdf

2. To this end, companies can consult the open sources (i.e. analytical sources, maps/tables and news items) listed below covering the three key elements of the definition of conflicted-affected and high-risk areas (i.e. conflict, governance and human rights) to understand the political and security context, and identify and assess the potential risks of adverse impacts of their supply chain against their supply chain policy which are to be consistent with Annex II of the OECD Guidance, and the 'red flags' set out in its supplements.
3. In case the sources listed below provide contradictory or inconclusive information, companies should exercise caution before dismissing an area from enhanced due diligence procedures. It should be stressed again that the responsibility of due diligence is tied to identifying and addressing actual or potential risks in order to prevent or mitigate adverse impacts of operations in particular sourcing, trade and business relationships as well as other circumstances associated with companies' activities and *not only to the country or area of origin of the mineral*.
4. The sources listed below are updated with varying periodicity and while being relevant may not always be fully accurate. They should therefore be used in combination and with the addition of complementary sources as appropriate. Once the abovementioned indicative, non-exhaustive, regularly updated list of conflict-affected and high-risk areas to be provided by external expertise is available, it will provide an addition source of information.

4.2. List of open information sources

Issue for assessment	Coverage	Open sources	Content of the sources
CONFLICT	Global	Analytical sources	
		Heidelberg Conflict Barometer http://www.hiik.de/?lang=en/	Analysis of the most recent global conflict events in the form of texts and graphics; separate regional and individual country chapters.
		Geneva Academy Rule of Law in Armed Conflicts http://www.rulac.org/	Database and analysis reporting on the implementation of international law in armed conflicts around the world (global coverage and brief overviews).
		Assessment Capacities Project — Global Emergency Overview https://www.acaps.org/countries/	World map and country specific analysis providing overview and analysis of countries in 'situation of concern', 'humanitarian crisis', and 'severe humanitarian crisis'.
		Maps or tables	
		Uppsala Conflict Data Programme — Georeferenced Event Dataset http://www.ucdp.uu.se/ged/	Interactive map of events of organised violence based on news sources; including fatalities, type of violence (state-based, non-state, one-sided), the user can zoom to a level of unique events.
		CrisisWatch http://www.crisisgroup.org	State of play in most significant global situations of conflict/potential conflict; interactive map and database allowing to assess the situation in selected country cases 2003-2018.
		Global Peace Index http://www.visionofhumanity.org	Interactive map that measures global peace according to qualitative and quantitative indicators (security officers and police, political instability, organised conflict, armed services personnel, etc.).

Issue for assessment	Coverage	Open sources	Content of the sources
		Major Episodes of Political Violence http://www.systemicpeace.org	Maps and tables listing e.g. episodes of armed conflict (including casualties) in the world from 1946-2017.
	Regional	Armed Conflict Location and Event Data http://www.acleddata.com/	Conflict trend reports and analysis including monthly updates on political violence in Africa, Middle East and Asia based on real-time data, and analysing current and historical dynamics in specific states.
		International Peace Information Service — Conflict Mapping http://ipisresearch.be/	Maps of Democratic Republic of Congo (conflict/conflict minerals), Central African Republic, Sudan-South Sudan (contested areas, incidents, natural resources, education, community violence, intrastate and interstate violence); analysis of maps is provided.
		International Tin Association https://www.internationaltin.org/ http://www.itsci.org/	Tin Supply Chain Initiative (iTSCi) provides assessment reports of the security situation of mines sites in Rwanda, Eastern provinces of the Democratic Republic of Congo, Burundi and Uganda.
		Mining Conflicts in Latin America http://ejatlas.org/featured/mining-latam	The environmental justice atlas documents and catalogues social conflict around environmental issues for contextual information.
GOVERNANCE	Global	Worldwide Governance Indicators http://info.worldbank.org/governance/wgi	Dataset of updated aggregate and individual governance indicators for specific countries, six dimensions of governance; country data reports summarise indicators per country.
		Fragile States Index http://ffp.statesindex.org	Index focusing on indicators of risk, based on news articles and reports.
		Corruption Perception Index http://www.transparency.org/research/cpi/overview	Index of the perceived corruption in countries.
		National Resource Governance Institute https://resourcegovernance.org/	Country specific information and comparative analysis on issues relating to governance of natural resources.
HUMAN RIGHTS	Global	United Nations Security Council Resolutions (UNSC) http://www.un.org/en/sc/documents/resolutions	UNSC Resolutions provide a useful description of the political and security situation in countries of concern on an annual basis.
		United Nations Human Rights Council http://www.ohchr.org/EN/HRBodies/HRC/Pages/AboutCouncil.aspx	Universal, periodic reviews.
		Office of the United Nations High Commissioner for Human Rights http://www.ohchr.org/EN/pages/home.aspx	Country specific information on human rights issues.

Issue for assessment	Coverage	Open sources	Content of the sources
		United Nations Development Programme — International Human Development Indicators — Country Profiles http://hdr.undp.org/en/countries	Annual country reports of country-specific human rights practices, global coverage.
		Amnesty International https://www.amnesty.org/en/countries/	
		Global Witness https://www.globalwitness.org/en-gb/	
		Human Rights Watch https://www.hrw.org/	
		Mines and Communities http://www.minesandcommunities.org/	News articles and analyses of global mining and its impacts; classified by theme, country, company, minerals.
MINERAL RESOURCES AND PRODUCTION	Global	British Geological Survey https://www.bgs.ac.uk/mineralsuk/statistics/worldStatistics.html	Country reports on international minerals statistics and information.
		U.S. Geological Survey http://minerals.usgs.gov/minerals/pubs/country/	Country reports on international minerals statistics and information.
		EU Raw Materials Information System http://rmis.jrc.ec.europa.eu/	Information on production, trade flows and policy relating to raw materials.

In addition to the abovementioned open information sources, it is expected that the OECD will provide additional information of relevance to identify conflict-affected and high-risk areas (<http://www.oecd.org/corporate/mne/mining.htm>). Risks related to humanitarian crises and disasters can also provide contextual information and point to areas where armed conflicts may emerge. In this regard, INFORM is a useful source (a collaborative project between the Inter-Agency Standing Committee and the European Commission; <http://www.inform-index.org>). Another useful tool in this regard is the Global Conflict Risk index (an open-source evidence base to support decision-making on long-term conflict risks developed by the Joint Research Centre of the European Commission; <http://conflictrisk.jrc.ec.europa.eu/>).

Moreover, the European Commission will make available support to SME's in their efforts to put in place and implement policies on responsible sourcing of minerals through the COSME programme, which is expected to partly relate to the identification of conflict-affected and high-risk areas under Regulation (EU) 2017/821.

5. RISK ASSESSMENT OF MINERAL SUPPLY CHAINS — 'RED FLAGS' FOR ENHANCED DUE DILIGENCE

5.1. Introduction to red flags and general considerations

The due diligence process set out by the Regulation and the OECD Due Diligence Guidance is *not limited to the identification and mitigation of risks in relation to the origin and transportation of minerals* in conflict-affected and high-risk areas. Indeed, companies are to consider and provide information on the risks pursuant to the OECD Due Diligence Guidance in relation to the trading, handling and exporting of minerals along the upstream supply chain, *and unusual circumstances*.

To this end, supplements of the OECD Due Diligence Guidance provide a list of the so called '*red flag*' situations that trigger the need for *enhanced due diligence*, including the collection of *additional information through the company's management system*, in particular in the following situations:

A. *Red flag locations of minerals origin and transit*

- Where minerals *originate* from or have been *transported* via conflict-affected and high-risk areas;
- Where minerals are *claimed* to originate from a country in which minerals from conflict-affected and high-risk areas are *known or reasonably suspected to transit*;
- Where minerals are claimed to originate from a country that has *limited known mineral resources or stocks, likely resources or expected production levels of the mineral in question* (i.e. the declared volumes of minerals from that country are out of keeping with the known mineral resources or expected production levels).

In each of these location-based 'red flags', in particular in situations of weak or non-existing governance, the risk is increased when anti-money laundering laws, anti-corruption laws, customs controls and other relevant governmental oversight laws are weakly enforced; when informal banking systems operate, and when cash is extensively used.

B. *Supplier red flags*

- Where a company's *suppliers or other known upstream companies operate* in one of the abovementioned 'red-flag' locations of mineral origin and transit, or have *shareholders or other interests* in suppliers of minerals from one of the abovementioned 'red-flag' locations of mineral origin or transit.
- Where a company's *suppliers or other known upstream companies* are known to have *sourced minerals from a 'red-flag' location* of mineral origin and transit in the last twelve months.
- For gold: where the gold is claimed to originate from recyclable/scrap or mixed sources and has been refined in a country where gold from conflict-affected and high-risk areas is known or reasonably suspected to transit.

C. *Red flag circumstances*

- Where *anomalies or unusual circumstances* are identified through the information collected by the company's management system which give rise to a reasonable suspicion that the minerals may contribute to conflict or serious abuses associated with their extraction, transport or trade.

5.2. Identifying specific red flags and ensuring appropriate due diligence

Following the identification of the 'red-flags' set out in section 5.1 as part of the company's risk assessment, companies should undertake an in-depth review of the context of all these 'red-flags' by collecting additional information through their company's management system and ensuring that the corresponding risks are duly taken into account.

As highlighted in the OECD Due Diligence Guidance, due diligence is a risk-based and progressive approach whereby companies must put in place adequate management systems and processes, map the factual circumstances along the supply chain and identify the risks that may lead them to undertake enhanced due diligence.

The following guidance should assist companies to obtain the relevant information on 'red flag' situations and tailor their due diligence appropriately. It should be noted that the information sources provided are updated with varying periodicity and while being relevant may not always be fully accurate. They should therefore be used in combination and with the addition of complementary sources as appropriate.

A. *Red flag locations of minerals origin and transit*

- *Red flag: Minerals originating from or transported via conflict-affected and high-risk areas*

Enhanced due diligence is triggered when minerals originate from or have been transported via conflict-affected and high-risk areas. The identification of such areas is discussed in section 4 of these guidelines.

- *Red flag: Minerals claimed to originate from a country in which minerals from conflict-affected and high-risk areas are known or reasonably suspected to transit.*

Companies should assess the extent to which the following issues are applicable:

- ‘Governance and other country issues’ need to be reviewed in order to identify the extent to which countries or areas are in control of their borders and have adequate internal enforcement mechanisms in place to ensure credible and documented traceability of the minerals trade to counteract the risks related to transit in case of weak governance.

Indicators	Information sources ⁽¹⁾
— The declared country of origin has porous borders or weak customs enforcement for goods.	— United Nations Security Council Resolutions (cf. section 4) — Information provided by Local Embassies, EU or other Delegations
— Anti-corruption laws are weakly enforced and reported instances of corruption in mining and trade exist. — Anti-money laundering or banking oversight laws are not or insufficiently in place or weakly enforced. — Economies are mostly cash-based, in particular for the minerals trade.	— Financial Action Task Force (FATF) http://www.fatf-gafi.org/countries/ — Corruption Perception Index by Transparency International http://www.transparency.org/research/cpi/overview — Worldwide Governance Indicator by the World Bank http://info.worldbank.org/governance/wgi — Global Financial Integrity reports http://www.gfintegrity.org/ — Cf. section 4 on ‘governance’ of these guidelines

- ‘Direct proximity, regional and historical issues’ provide information on the likelihood of misrepresentation of origin by smuggling from neighbouring countries, countries with historical ties, or countries providing tax incentives.

Indicators	Information sources
— The declared country of origin directly borders areas where illegal armed groups, public security forces or criminal organisations are involved in the mineral production and trade. — The declared country of origin has economic ties to conflict-affected and high-risk areas and their associated illicit mineral trade.	— United Nations Security Council Resolutions — Local Embassies, EU Delegations — Cf. section 4 on ‘conflict’ of these guidelines
— The country of origin’s tax policy leads to incentives to smuggle minerals to transit countries where material exports are not taxed, or taxed at much lower rates.	— OECD database for restrictions on exports of raw materials http://www.oecd.org/tad/benefitlib/export-restrictions-raw-materials.htm

- *Red flag: Minerals claimed to originate from a country that has limited known resources/stocks or expected production levels*

The below checklist sets out ‘Mineral and supply chain-specific issues’. As part of their due diligence exercise companies should in particular verify whether a claimed country of origin actually has known geological resources or expected production levels of the mineral concerned. Similarly, companies should reasonably assess whether the declared origin makes sense from an economic perspective — such as the presence of nearby and attractive markets.

⁽¹⁾ Information should be updated regularly, as appropriate.

Indicators	Information sources
— The declared country of origin has limited known mineral resources or stocks, likely resources or expected production levels of minerals, as well as specific characteristics of minerals. — The declared country of origin has a large informal or artisanal and small-scale mining sector where associated risks are normally higher.	— British Geological Survey: https://www.bgs.ac.uk/mineralsuk/statistics/worldStatistics.html — USGS U.S. Geological Survey: http://minerals.usgs.gov/minerals/pubs/country/ — National Geological Services in EU Member States — Geological Service of the alleged country of origin

B. Supplier red flags

- *Red flag: Where a company's suppliers or other known upstream companies operate in one of the abovementioned 'red-flag' locations of mineral origin and transit, or have shareholders or other interests in suppliers of minerals from one of the abovementioned 'red-flag' locations of mineral origin and transit and where company's suppliers or other known upstream companies are known to have sourced minerals from a 'red-flag' location of mineral origin and transit in the last twelve months.*

This supplier-specific information should mainly result from the data collected by companies through the implementation of their due diligence system. Once the identity of a company's supplier or other known upstream company is available, companies should seek to verify if the supplier is operating in a red-flag location by:

- Browsing internet for generic information on the said supplier/upstream company, including governments and international organisations reports (in particular UN Group of Experts reports) and reports from international and local media and civil society organisations more broadly.
- Checking corporate websites, and any available due diligence report (for instance, filing to the US Security Exchange Commission).
- Checking smelter/refiner lists of existing due diligence schemes; and once available the European Commission's forthcoming list of global responsible smelters and refiners;
- Browsing national register of commerce that can provide indications on the localisation of the headquarters and possibly operational subsidiaries.

Companies could also consult beneficial ownership registries where available, as well as country Extractive Industries Transparency Initiative (EITI) reports (which contain an increasing amount of information on beneficial ownership of companies involved in the extractive industry).

C. Red flag circumstances

- *Red flag: Where anomalies or unusual circumstances are identified through the information collected by the company's management system that give rise to a reasonable suspicion that the minerals may contribute to conflict or serious abuses associated with their extraction, transport or trade.*

This operation-specific information is almost entirely the result of the data collected by companies through due diligence implementation.

Anomalies/unusual circumstances may take a variety of forms. The OECD Due Diligence Guidance Supplement on gold provides the example that if jewellery worn in a country typically is 14k (58 %), an offer claimed to be recycled jewellery with 90 % gold content should be questioned.

Other examples include a situation where an upstream supplier (e.g. a local exporter) is inexplicably able to increase the volume of exported material over a short period of time, and reports of frequent mineral resources theft in a region where the European importer has reason to believe he is sourcing from

Other examples of ‘unusual circumstances’ specifically with regard to gold (and other precious metals can be found in paragraph 111 of the Financial Action Task Force’s Risk-based guidance for dealers in precious metals and stones ⁽¹⁾ as well as in the Financial Transaction and Reports Analysis Centre of Canada’s report on Risk-based approach workbook for Dealers in Precious Metals and Stones ⁽²⁾, e.g.:

- A previously unknown customer requesting that a refiner turns gold into bullion.
 - Gold purity, weight, origin and value are misclassified on customs declaration forms.
 - Unlicensed persons or businesses producing and commercialising gold.
 - Bullion that has physical characteristics inconsistent with industry standards.
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⁽¹⁾ <http://www.fatf-gafi.org/media/fatf/documents/reports/RBA%20for%20Dealers%20in%20Precious%20Metal%20and%20Stones.pdf>

⁽²⁾ <http://www.fintrac-canafe.gc.ca/guidance-directives/compliance-conformite/rba/rba-dpms-eng.asp>

