

Submission from the EU and its Member States

We would like to thank the Expert working group (EWG) on the review of Annexes for its work, notably for the recommendations and findings contained in the Annex to the report of the third meeting of the EWG (document UNEP/CHW/RA_EWG.3/8).

We have the following preliminary comments with regard to:

- The recommended options for possible amendments to Annex IV, in the text contained in Appendix I to the recommendations of the EWG.
- The recommended option for possible amendments to A1180 and B1110, based on the text in option 1 of Appendix III to the recommendations of the EWG.

We agree with the findings of the EWG on the consequential implications of the review of Annex IV, as contained in section III of the Annex of the recommendations of the EWG, and do not have further comments at this stage.

Recommended options for possible amendments to Annex IV

We would like to provide the following **general comments**, which we structure according to the key concepts identified in the note by the co-chairs of the EWG (document UNEP/CHW/OEWG.12/INF/26):

1. Include specific operations as subcategories, or include examples of specific operations in brackets

We continue to support including examples for specific operations where appropriate and are open to discuss further examples or changes of examples contained in the current options. With regard to including specific operations as subcategories, we continue to think that this option is too detailed and complicated to apply. A preliminary review of the suggested subcategories revealed that we have a large number of questions on their content and on the differentiation between them. In addition, there may be numerous possible subcategories in addition to the ones contained in the options. We think that Parties may add subcategories or footnotes in national legislation for national purposes but not for transboundary movements.

2. Differentiate interim from non-interim operations

According to the second paragraph of the agreed General introduction, annex IV also lists disposal operations that occur prior to submission to any of the operations in the respective section (“interim operations”). It seems to be a logical consequence that operations without “prior to submission to any of the operations in section ...” are not interim operations, i.e. non-interim operations. It is therefore also not necessary to add “as an interim operation” or “as a non-interim operation” in any of the operations.

The EU and MS note for further consideration that “(“interim operations”)” may be deleted from the general introduction at a later time if agreement is reached on a wording of annex IV which does not contain the term “interim” in any of the operations.

The EU and its MS also note that it may be difficult in practice to differentiate between interim and non-interim operations. In case e.g. the total output of an operation is still waste, this seems to indicate that the operation is an operation “prior to submission to any of the operations in section ...”. In case the total output of an operation is non-waste, it seems clear that this operation is a non-interim operation. However, there are

also cases where a non-interim operation produces waste, e.g. a slag from incineration falling under D10 or R1, or a waste from paper production with waste paper as input, falling under R3. In addition, there may be cases where part of the output of an operation that is understood as an interim operation is non-waste, e.g. small part of the output from the pre-treatment of metals, falling under R12. We think that such practical difficulties could be addressed in guidance, where it could e.g. be included that the principal purpose of a treatment should determine whether it is an interim operation or a non-interim operation (see also paragraph 16 of the report of the third meeting of the EWG).

We also note that there may be cases where operations are carried out stepwise: For example, with respect to recycling of metals, e.g. a temporary storage could take place in one facility (operation R13), a mechanical treatment could take in another facility (operation R12) and a smelting process could take place in a third facility (operation R4). However, all such steps could also take place in one integrated facility, where the appropriate operation may only be R4. We think that such cases could possibly be included in the instructions for the notification and movement documents, considering these instructions will have to be revised following the revision of annex IV.

3. Include or not “preparing for reuse”

We propose a new operation on preparing for reuse, for the reasons provided in Annex I to document UNEP/CHW/RA_EWG.3/INF/3. We note that the agreed introduction for Annex IV B clarifies that all of the operations, including preparing for reuse, apply to wastes, by saying (emphasis added) “A recovery operation is an operation the principal result of which is **waste** serving a useful purpose ...”.

In light of the useful considerations in the note on key concepts by the co-chairs of the EWG that “regeneration” may be considered as covered by preparing for reuse, we think that “regeneration” should be added as further example in the new operation R14 and be deleted as examples under R3 option 1 and R5 option 1.

We do not think that it is useful to include preparing for reuse in one or more current recovery operations, as mentioned in the note on key concepts by the co-chairs of the EWG, because we would like to differentiate preparing for reuse from recycling, in line with the waste hierarchy.

4. Include or not catch-all operations

We continue to believe that it useful to include catch-all operations, in order to cover all disposal operations, for the reasons provided in Annex I to document UNEP/CHW/RA_EWG.3/INF/3. Examples of operations that occur in practise but are not yet listed are “Release into sewage” (may not be covered by D6), “Underground waste stowage” which is serving a useful purpose by replacing other materials and therefore falls under the introduction of section B, and thermal treatment as interim operation in case it is not covered by R12bis option 1.

The addition of the "catch-all" codes (see D20, D21 R12quintis and R17) would also be necessary insofar as these codes will allow a classification of treatment processes not known to date. The convention cannot be amended quickly and regularly enough to take account of technological developments.

Catch-all operations should of course only be used if no other specific operation applies, and this could be clarified in guidance (in addition to the wording “other ... than covered by ...” which seems clear). We are not in favour to follow the alternative approach included in the note on key concepts by the co-chairs of the EWG to leave out catch-all operations and clarify in guidance that an operation that falls under introductions to Annex IV A or IV B, but it is not covered by an operation listed, should

fall under the operation that is the most closely linked. Such an approach would provide legal gaps and uncertainties which operations are “most closely linked”.

5. Include or not “direct re-use” in the title of Annex IV

We appreciate the agreement reached at the third meeting of the EWG to agree titles for sections A and B that are free of the term “direct reuse”. It seems that the members that wanted to retain this term in earlier meetings of the EWG want to address cases of cross-border movements where a material is not waste (e.g. used tyres) or not yet waste (e.g. “near end-of-life” electric or electronic equipment). As pointed out in the note on key concepts by the co-chairs of the EWG, which refers to contents of the technical guidelines on the on e-waste, a way to address the concerns raised could to establish national import restrictions in relation to such material.

6. Further comments

In addition to the key concepts identified in the note by the co-chairs of the EWG, we would like to provide further general comments as follows:

The operations listed should in principle be generic and not refer to certain waste types. In the notification, the disposal operation as well as the waste identification (according to the waste lists) and the designation and composition of the waste need to be provided. This comment is relevant to the operations D19, R2 and R6 to R9.

As pointed out under points 2 and 4 above specifically, we think it would be useful to develop guidance to further clarify the content of the disposal operations in Annex IV. This would help to ensure a common understanding among competent authorities and operators in all countries of the specific disposal operations which the codes aim to describe. This would support a proper implementation of the Convention and ensure traceability linked to the disposal operations. This guidance should be included in a separate document, not in the Convention itself.

We have included our preliminary comments below in revision mode (deletions in strike through, additions underlined) together with rationales. We have also summarized our preliminary comments in an Annex to this document which is based on the options set out in the recommendations of the EWG with the only purpose to illustrate the order of disposal and recovery operations which may in our view be different for Section A with the ordering per media, land, water, air, than for Section B per the waste hierarchy (preparing for reuse, recycling, other recovery)); interim operations are listed after non-interim operations, and the suggested catch-all operations are placed at the end of the non-interim and interim operations, respectively. We think this would facilitate further discussions although we would like to emphasize that we are examining the specific descriptions of all operations at this stage. **These views are therefore preliminary and the specific descriptions of the respective operations are without any prejudice to any future proposals that could be submitted by the EU and its Member States.**

I. General introduction for Annex IV

Annex IV

Disposal operations

There are two categories of disposal operations, namely final disposal operations and recovery operations. Section A encompasses final disposal operations and section B recovery operations.

Both sections A and B also list disposal operations that occur prior to submission to any of the operations in the respective section (“interim operations”).¹

This Annex covers all operations, regardless of their legal status at the national and/or international level and regardless of whether they are considered to be environmentally sound.

II. Captions and introductory texts for sections A and B of Annex IV

A. FINAL DISPOSAL OPERATIONS

A final disposal operation is an operation which is not a recovery [or recycling] operation even where the operation reclaims substances or energy as a secondary consequence.

B. RECOVERY ~~[AND RECYCLING]~~ OPERATIONS

A recovery operation is an operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

EU and MS comments, rationale: We continue to believe that the terminology agreed in the Glossary of terms should be used, i.e. that recycling is part of recovery, whereby recovery captures all operations in Annex IV B. In addition, the text addresses recovery; therefore, it does not seem appropriate to refer to recycling in the heading.

III. Options for possible amendment proposals to Annex IV A

D1: Deposit into or onto land, (e.g., landfill, etc.)

1. ~~Deposit into or onto land, (e.g. non-engineered landfill, dumpsites) other than by any operations D2 to D5, D12 or D12bis~~
2. Deposit into or onto land, ~~[(e.g. dumpsites, [placement into wells, salt domes or naturally occurring repositories])]~~ other than covered by D2, ~~{D3}~~, D4, D5, D12 or D12bis (e.g. placement into wells, salt domes of naturally occurring repositories)

EU and MS comments, rationale: We think Option 2 has merits. We suggest an editorial change and deletion of the example “dumpsites”, a) because we think that D3 may be deleted since it may practically not be very relevant and could be covered under D1 and b) because we generally do not think that examples should be chosen that are always non-environmentally sound as choosing such examples could mislead the reader that only non-environmentally sound operations could be covered under D1.

We note that there may also be environmentally sound deposit into or onto land, e.g. the placement of suitable waste into suitable areas. The example “non-engineered landfill” seems redundant since the deposit in engineered landfills will be covered by D5 and therefore a non-engineered landfill will be covered by D1 without mentioning it. Examples could also be omitted.

D2: Land treatment, (e.g., biodegradation of liquid or sludgy discards in soils, etc.)

~~0. Status quo~~

1. ~~{Treatment of land or through interaction with land [biological or chemical treatment], [landfarming]} [as a non-interim operation]}~~ other than covered by R10 in section B (e.g. [biological or chemical treatment], [landfarming])

¹ See operations D8, D9, D13, D14, D15, D19, D21, D22 and D23 in section A, and operations R12, R13 and R16 in section B.

EU and MS comments, rationale: Option 1 has advantages as it is clearer than the status quo. We suggest adding text in order to clearly distinguish with the related operation R10. We think that the term “landfarming” could be misinterpreted and does not add something in addition to biological or chemical treatment. As to “as a non-interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

D3: Deep injection, (e.g., injection of pumpable discards into wells, salt domes of naturally occurring repositories, etc.)

~~0. Status quo~~

1. *Delete and merge with D1*

EU and MS comments, rationale: We think that D3 may be deleted because it may practically not be very relevant and could be covered under D1.

D4: Surface impoundment, (e.g., placement of liquid or sludge discards into pits, ponds or lagoons, etc.)

~~0. Status quo~~

1. Surface impoundment (e.g. placement of liquids or sludge into pits, tailings ponds, tailings dams or tailings lagoons)

EU and MS comments, rationale: Option is clearer than the status quo.

D5: Specially engineered landfill, (e.g., placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)

1. Deposit in an engineered landfill isolated from the environment

~~2. [Deposit in an] Engineered landfill ([i.e.] [e.g.] placement isolated from the environment with[, if needed,] venting systems, leachate collection and draining systems)~~

EU and MS comments, rationale: We think that option 1 is simpler and clearer.

The technical features in the examples for option 2 do not seem necessary as these are explained in detail in the technical guidelines on D5 that is currently under revision.

D6: Release into a water body except seas/oceans

0. Status quo

D7: Release into seas/oceans including sea-bed insertion

0. Status quo

D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations in Section A

~~1. Biological treatment not specified elsewhere in this Annex, prior to submission to any of the operations in Section A~~

2. Biological treatment prior to submission to any of the operations in Section A

~~3. Biological treatment as an interim operation prior to any of operations in section A~~

~~D8.01: aeration lagoons~~

~~D8.02: bioventilation (bioventing)~~

~~D8.03: activated sludge~~

~~D8.04: biopiles with added nutrients (composting)~~

~~D8.05: UASB reactors~~

~~D8.06: full mix digesters~~

~~D8.07: another aerobic treatment~~

~~D8.08: another anaerobic treatment~~

EU and MS comments, rationale: We think Option 2 has merits because it is clear and simple. In option 1, “not specified elsewhere in this Annex” is unclear; there does not seem to be another biological treatment as interim operation in section A.

With regard to option 3, see the general comments above on including subcategories. As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

D9: Physico chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations in Section A, (e.g., evaporation, drying, calcination, neutralization, precipitation, etc.)

1. Manual treatment (e.g. separation), pPhysical/mechanical treatment (e.g. separation, size reduction, evaporation, drying, {autoclaving}), physical/chemical treatment (e.g. solvent extraction), chemical treatment (e.g. neutralization, precipitation) or immobilization (e.g. stabilization, solidification, ~~encapsulation~~) prior to submission to any of the operations in Section A

2. ~~Physico-chemical treatment as an interim operation prior to any of operations in section A~~

~~D9.01: evaporation, drying, dehydration~~

~~D9.02: precipitation, flotation, flocculation, coagulation, decantation~~

~~D9.03: phase separation, adsorption, desorption, absorption~~

~~D9.04: neutralization~~

~~D9.05: treatment by adsorption / desorption of activated carbon~~

~~D9.06: dechlorination~~

~~D9.07: decomposition by oxidation and / or reduction~~

~~D9.08: centrifugation, filtering and other selective separation media~~

~~D9.09: steam air treatment, condensation~~

~~D9.10: autoclave or other similar technology that uses pressure and temperature as process variables, for decontamination of contaminated solids~~

~~D9.11: Washing or decontamination~~

~~D9.12: Microencapsulated~~

~~D9.13: Macroencapsulation~~

~~D9.14: Chemical stabilization~~

~~D9.15: Physical stabilization~~

~~D9.16: Another waste conditioning operation for further treatment or final disposal~~

EU and MS comments, rationale: We think that option 1 has advantages because of its clarity. We think that “separation, size reduction” could be added as examples since the technical guidelines on D8 and D9 cover e.g. “size reduction” (which seems to cover e.g. compacting, shredding and crushing), “special physical sorting”, “sieving and screening”, “air classification” under “physical/mechanical treatment”. In line with the discussion on D22, we think it is clearer to add “manual treatment (e.g. separation)” separately from “physical/mechanical treatment”, although “manual separation” is covered under “physical/mechanical treatment” in the technical guidelines on D8 and D9. In light of these changes, D22 can be dropped. We also think that “autoclaving” can be listed as example, in line with the technical guidelines on D8 and D9. In addition, “encapsulation” should not be added as example since the technical guidelines on mercury wastes and the general technical guidelines on POPs clarify that solidification encapsulate waste.

With regard to option 2, see the general comments above on including subcategories. As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

D10: Incineration on land

1. Thermal treatment {other than covered by R1 in Section B} ~~{other than covered by D11 and D18}~~ (e.g. incineration)

2. ~~Thermal treatments other than covered by D11 and D18~~

~~D10.01: incineration, thermic oxidation or pyrolysis~~

~~D10.02: co-incineration~~

~~D10.03: gasification~~

~~D10.04: thermal desorption~~

~~D10.05: vitrification~~

~~D10.06: other D10~~

EU and MS comments, rationale: We think that option 1 is clearer. We think also that it is useful to include a reference to R1 for clarity. We note that we do not support keeping D11 and adding D18.

With regard to option 2, see the general comments above on including subcategories.

D11: Incineration at sea

0. ~~——~~ Status quo

1. Delete and merge with D10 option 1

EU and MS comments, rationale: We think it has merit to merge with D10 option 1 for simplification and broadening. In addition, listing an operation that seems to cover non-environmentally sound management separately does not seem appropriate. We note that the London Convention stands on its own. We also note that the Basel Convention does not cover the transport to incineration at sea outside the area under the national jurisdiction of a State as the term transboundary movement does not cover such transport. Finally, we note that, given the provisions of the London Convention and the Basel Convention, it is unlikely that a notification is made for the transboundary movement where D11 is used.

D12: Permanent storage (e.g., emplacement of containers in a mine, etc.)

Split in 2:

D12: Permanent underground storage (e.g. emplacement of containers in a mine)

D12bis: Permanent aboveground storage (e.g. emplacement of containers in a warehouse)

D13: Blending or mixing prior to submission to any of the operations in Section A

0. Status quo

D14: Repackaging prior to submission to any of the operations in Section A

0. Status quo

D15: Storage pending any of the operations in Section A

Temporary storage ~~{as an interim operation}~~ prior to submission to any of the operations in section A

EU and MS comments, rationale: As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

NEW OPERATIONS

D16: Release to the atmosphere (e.g. venting of compressed or liquefied gases)

~~{D17: Treatment of waste by nanomaterials}~~

EU and MS comments, rationale: We do not support this operation. The arguments in annex II to document UNEP/CHW/RA_EWG.3/INF/3 are not convincing. It seems that the processes described are not practically relevant and can be covered under D2 or D9, or if appropriate under R operations. Some of the processes described are not relevant for waste (e.g. production of drinking water from seawater). The links in this annex II are not all up to date, e.g. the “European Observatory for Nanotechnology” refers to a project run from 2008 until 2012 by an institute.

~~{D18: Open burning}~~

EU and MS comments, rationale: We do not support a separate operation for open burning as it is covered by operation D10 option 1. Listing an unsound operation separately does not seem appropriate; this is also not done for other unsound operations. We do not think it would be useful to develop specific codes for this type of undesired operations.

~~{D19: Sterilization or disinfection of [biopathological] [infectious] waste as an interim operation prior to submission to any of the operations in section A}~~

~~D19.01: autoclave~~

~~D19.02: microwave—radio waves.~~

~~D19.03: physical sterilization~~

~~D19.04: chemical sterilization~~

~~D19.05: other method or technology not specified}~~

EU and MS comments, rationale: We do not support this operation as it refers to a certain waste type; see also the related general comments above. We note that the operations specified in the subcategories can be covered under D9 (autoclaving and microwave irradiation are mentioned in the technical guidelines on D8 and D9).

In addition, see the general comments above on including subcategories. As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

{D20: Other treatment than covered by D1 option 2, D2 option1, D3 option1, D5 option1, D6, D7, D10 option1, D12, D12bis and D16 above}

EU and MS comments, rationale: We support this operation; see the general comments above on the including or not of catch-all operations.

{D21: Other treatment than covered by D8 option 2, D9 option1, D13, D14, D15 and D22 above prior to submission to any of the operations in Section A}

EU and MS comments, rationale: We support this operation (D15 added as it is also an interim operation); see the general comments above on the including or not of catch-all operations.

~~{D22: Mechanical or manual [operations] [treatment] other than covered by D13 (e.g. dismantling, sorting, crushing, compacting, shredding, separating) prior to submission to any of the operations in section A}~~

EU and MS comments, rationale: Merged with D9; see comments on D9 option 1 above.

~~{D23 Treatment of land or through interaction with land (e.g. [biological or chemical treatment], [landfarming]) as an interim operation prior to submission to any of the operations in Section A.}~~

EU and MS comments, rationale: A treatment of land or through interaction with land prior to submission to any of the operations in Section A can in our view be covered under D8 or D9 (see also the related contents in the Technical guidelines on D8 and D9); therefore, a separate specific operation seems redundant. See also the general comments above on the differentiation between interim and non-interim operations.

~~{D24. Biological treatment as a non-interim operation not covered by D2~~

~~D24.01: aeration lagoons~~

~~D24.02: bioventilation (bioventing)~~

~~D24.03: UASB reactors}~~

EU and MS comments, rationale: We do not support the inclusion of this operation. It seems that the subcategories listed are interim operations, before water is released into the environment. Aerated lagoons and upflow anaerobic sludge blanket (UASB) reactors are wastewater treatment operations; after such interim operations, clean water seems to be released to the environment. Bioventing seems to be one of the interim operations for groundwater remediation, and we doubt that groundwater can be a waste. In addition, see the general comments above on including subcategories. As to “as a non-interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

~~{D25. Physico-chemical treatment as a non-interim operation (e.g. neutralization)}~~

EU and MS comments, rationale: We do not support the inclusion of this operation. We seek clarification which non-interim operations are meant here; such treatment, e.g. neutralization, seems to be an interim operation, before a certain material that has been treated, e.g. neutralized, is released to the environment. If such material would be of use, it could be a non-waste and the treatment, e.g. neutralization, could be a recovery operation. As to “as a non-interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

IV. Options for possible amendment proposals Annex IV B

R1: Use as a fuel (other than in direct incineration) or other means to generate energy

~~0. Status quo~~

~~1. Use as a fuel or other means to generate energy [or to reduce energy requirements]~~

2. Thermal treatment with the principal result ~~purpose~~ to generate energy {except where covered by R15} ~~[or to reduce energy requirements]~~ (e.g. incineration)

EU and MS comments, rationale: We think option 2 has merits because “Use as a fuel or other means” and “other than in direct incineration” seem unclear. In option 2, “reduce energy requirements” is unclear and a distinction to R15 (co-processing) seems necessary. “purpose” should be replaced by “result” for consistency with the introduction of section B.

R2: Solvent reclamation/regeneration²

0. ~~Status quo~~

1. Delete and merge with R3 option1 and R5 option1 and R14

2. ~~Solvent reclamation/regeneration.~~

~~R2.01: distillation / rectification~~

~~R2.02: filtered~~

~~R2.03: other R2~~

EU and MS comments, rationale: We thinks option 1 has merits in order to simplify and to avoid operations related to specific waste types; see also the related general comments above. With regard to regeneration, see the general comments above on including or not “preparing for reuse”.

With regard to option 2, see the general comments above on including subcategories. As to footnote 2, see the general comments above on the differentiation between interim and non-interim operations (this sentence also applies to footnotes 3 to 9 below).

R3: Recycling/reclamation of organic substances which are not used as solvents³

0. ~~Status quo~~

1. Recycling of organic substances (e.g. ~~regeneration~~, mechanical treatment)

2. ~~Recovery of organic substances which are not used as solvents~~

EU and MS comments, rationale: We think option has merits 1 because “reclamation” seems unclear and because “recovery” is not appropriate as it covers all R operations. With regard to the example regeneration, see the general comments above on including or not “preparing for reuse”.

R4: Recycling/reclamation of metals and metal compounds⁴

0. ~~Status quo~~

1. Recycling of metals and metal compounds (e.g. smelting, hydrometallurgy, mechanical treatment)

2. ~~Recovery of metals and metal compounds~~

~~R4.01: precipitation~~

~~R4.02: pyrometallurgy~~

~~R4.03: hydrometallurgy~~

~~R4.05: unspecified metallurgical processes~~

~~R4.05: distillation~~

~~R4.06: decontamination~~

~~R4.07: metal casting~~

EU and MS comments, rationale: We think option has merits 1 because “reclamation” seems unclear and because “recovery” is not appropriate as it covers all R operations.

With regard to option 2, see the general comments above on including subcategories.

R5: Recycling/reclamation of other inorganic materials⁵

0. ~~Status quo~~

1. Recycling of ~~[other]~~inorganic materials ~~[other than covered by R4]~~ (e.g. ~~regeneration~~, mechanical treatment)

2. ~~Recovery of [other] inorganic materials [other than covered by R4]~~

EU and MS comments, rationale: We think option 1 has merits because “reclamation” seems unclear and because “recovery” is not appropriate as it covers all R operations. A distinction to

² Should the expert working group reach the conclusion that operations not identified as “prior to submission to any of the operations in section A or B” may also be interim operations, it would consider the option of formulating operations R2 to R9 following the example in paragraph 2 of section II of the recommendations.

³ Idem.

⁴ Idem.

⁵ Idem.

R4 seems necessary, as metals are also inorganic materials. With regard to the example regeneration, see the general comments above on including or not “preparing for reuse”.

R6: Regeneration of acids or bases⁶

~~0. Status quo~~

1. ~~Delete R6 and merge with R14 R3 option1 and R5 option1~~

EU and MS comments, rationale: We support option 1 in order to simplify and to avoid operations related to specific waste types; see also the related general comments above. With regard to regeneration, see the general comments above on including or not “preparing for reuse”.

R7: Recovery of components used for pollution abatement⁷

~~0. Status quo~~

1. ~~Delete R7 and merge with R3 option1, R4 option1 and R5 option1~~

~~2. Recovery of components used for pollution control~~

~~R7.01: Recovery or regeneration of activated carbon~~

~~R7.02: another treatment applied to used components~~

EU and MS comments, rationale: We think option 1 has merits in order to simplify and to avoid operations related to specific waste types; see also the related general comments above.

With regard to option 2, see also the general comments above on including subcategories.

R8: Recovery of components from catalysts⁸

~~0. Status quo~~

~~1. Recycling/reclamation of catalysts~~

2. ~~Delete R8 and merge with R3 option1, R4 option1 and R5 option1~~

~~3. Recovery of components from catalysts~~

~~R8.01: hydrometallurgy~~

~~R8.02: pyrometallurgy~~

~~R8.03: other R8~~

EU and MS comments, rationale: We think option 2 has merits in order to simplify and to avoid operations related to specific waste types; see also the related general comments above.

With regard to option 3, see also the general comments above on including subcategories.

R9: Used oil re-refining or other reuses of previously used oil⁹

~~0. Status quo~~

~~1. Re-refining of used oil~~

2. ~~Delete and merge with R3 option1 and R14~~

~~3. Recovery of used oil and hydrocarbons~~

~~R9.01: filtering or rectification~~

~~R9.02: distillation of natural or synthetic hydrocarbon based waste~~

~~R9.03: use without the need of any further operation from this Annex~~

EU and MS comments, rationale: We think option 2 has merits in order to simplify and to avoid operations related to specific waste types; see also the related general comments above.

With regard to re-refining which seems similar to regeneration, see the general comments above on including or not “preparing for reuse”.

With regard to option 3, see also the general comments above on including subcategories.

R10: Land treatment resulting in benefit to agriculture or ecological improvement

⁶ Idem.

⁷ Idem.

⁸ Idem.

⁹ Idem.

1. ~~Land treatment other than in D2 resulting in benefit to agriculture or ecological improvement~~
2. Treatment of land or through interaction with land ~~[resulting in~~ with the principle purpose to benefit to agriculture or ecological improvement] (e.g. biological or chemical treatment)
3. ~~Land treatment resulting in benefit to agriculture or ecological improvement:~~

~~R10.01: valorization of phosphorus or nitrogen content~~

~~R10.02: preparation or manufacture of amendments or fertilizers~~

~~R10.03: improvement of disaggregated soils without an agronomic purpose~~

EU and MS comments, rationale: We think option 2 has merits with a drafting change for consistency with R1 option 2 and the introduction of section B; see also the comments on D2.

With regard to option 3, see also the general comments above on including subcategories.

R11: Uses of residual materials obtained from any of the operations numbered R1-R10

0. ~~Status quo~~

1. *Delete*

EU and MS comments, rationale: It is unclear why this operation has been listed. The term “use” is not acceptable as it is linked to non-waste (see Glossary of terms).

R12: Exchange of wastes for submission to any of the operations numbered R1-R11

0. ~~Status quo~~

1. *Split and replace by five operations mirroring D operations:*

R12 (mirroring D8)

~~1. Biological treatment not specified elsewhere in this Annex, prior to submission to any of the operations in Section B~~

2. Biological treatment prior to submission to any of the operations in Section B

~~3. Biological treatment as an interim operation prior to any of operations in section B~~

~~R12.01: aeration lagoons~~

~~R12.02: bioventilation (bioventing)~~

~~R12.03: activated sludge~~

~~R12.04: biopiles with added nutrients (composting)~~

~~R12.05: UASB reactors~~

~~R12.06: full mix digesters~~

~~R12.07: another aerobic treatment~~

~~R12.08: another anaerobic treatment~~

R12bis (mirroring D9)

1. Manual treatment (e.g. separation), pPhysical/mechanical treatment (e.g. separation, size reduction, evaporation, drying, {autoclaving}), physical/chemical treatment (e.g. solvent extraction), or chemical treatment (e.g. neutralization, precipitation) prior to submission to any of the operations in Section B

~~2. Physico-chemical treatment as an interim operation prior to any of operations in section B~~

~~R12bis.01: evaporation, drying, dehydration~~

~~R12bis.02: precipitation, flotation, flocculation, coagulation, decantation~~

~~R12bis.03: phase separation, adsorption, desorption, absorption~~

~~R12bis.04: neutralization~~

~~R12bis.05: dechlorination~~

~~R12bis.06: decomposition by oxidation and / or reduction~~

~~R12bis.07: centrifugation, filtering and other selective separation media~~

~~R12bis.08: steam air treatment, condensation~~

~~R12bis.09: autoclave or other similar technology that uses pressure and temperature as process variables, for decontamination of contaminated solids~~

~~R12bis.10: Washing~~

~~R12bis.11: Chemical stabilization~~

~~R12bis.12: Physical stabilization~~

~~R12bis.13: other R12~~

R12ter (mirroring D13)

Blending or mixing prior to submission to any of the operations in Section B

~~R12quater (mirroring D22)~~

~~Mechanical or manual [operations] [treatment] other than covered by R12ter (e.g. dismantling, sorting, crushing, compacting, shredding, separating) prior to submission to any of the operations in section B~~

~~R12quintis (mirroring D21)~~

~~{Other treatment than covered by R12, R12bis, R12ter, R12quater, R13 and R16 above prior to submission to any of the operations in section B}~~

~~2. — Keep status quo and add option 1 as new operations~~

EU and MS comments, rationale: We think option 1 has merits under R12 as the status is not acceptable because the term “exchange” is unclear. With regard to option 1 under R12:

On R12 options 1 to 3: We support option 2; see the rationale for D8 above.

On R12bis options 1 and 2: We support option 1; see the rationale for D9 above.

On R12quater: Merged with R12bis; see comments on D9 above.

In R12quintis, R13 has been added as it is also an interim operation.

R13: Accumulation of material intended for any operation in Section B

Temporary storage ~~{as an interim operation}~~ prior to submission to any of the operations in section B

EU and MS comments, rationale: As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

NEW OPERATIONS

{R14: Preparing for re-use (e.g. checking, cleaning, repair, refurbishment, regeneration)}

EU and MS comments, rationale: See the general comments above on including “Preparing for re-use”.

R15: Co-processing

EU and MS comments, rationale: We are looking into the addition of R15 as a new recovery operation.

R16: Repackaging ~~{as an interim operation}~~ prior to submission to any of the operations in Section B

EU and MS comments, rationale: As to “as an interim operation”, see the general comments above on the differentiation between interim and non-interim operations.

{R17: Other treatment than covered by R1 option2, R3 option1, R4 option1, R5 option1, R14 and R15 above}

EU and MS comments, rationale: We support this operation; see the general comments above on the including or not of catch-all operations.

Recommended option for possible amendments to A1180 and B1110

We have based our comments on option 1 below because the recommended option in Appendix II to the recommendations by the EWG seems too complicated; however, we think that certain parts of it should be taken into account. With regard to option 2 in Appendix III to the recommendations of the EWG is problematic as it includes the words “a) contain waste(s) included on list A” which does not seem appropriate.

The rationale for the changes shown in revision mode (deletions in strike through, additions underlined) are as follows:

- It should read “... equipment including scrap thereof” instead of “Waste electrical and electronic equipment or scrap” in order to clarify that “scrap” of such equipment also falls under “waste” (cf. entry B1010). In our understanding, “scrap” notably covers the output of mechanical treatment of equipment, such as shredding.
- “assemblies” does not seem to add something. We note that “equipment” is used nowadays, see e.g. the technical guidelines on e-waste (its glossary of terms contains a definition for “Waste electrical and electronic equipment”). In relation to “assemblies”, we also make reference to the Harmonized System codes (see document UNEP/CHW.14/INF/14) which contains a new Note 6 that reads “Throughout the Nomenclature, “Electrical and electronic waste and scrap” means electrical and electronic assemblies, printed circuit boards, and electrical or electronic articles that ...”; this note also shows that there is no need to add “assemblies”.
- A1180 should also include waste electrical and electronic equipment or scrap that contains or components containing Annex I constituents to an extent that the waste exhibits an Annex III characteristic, such as mercury switches and capacitors containing PCBs. This seems in line with the current text of A1180 and also consistent with entry B1250, where hazardous components are excluded.
- With regard to examples, we have drawn from the examples in A1180. We note that PCB is not an constituent listed in Annex I of the Convention; with respect to PCB, the footnote has been amended to clarify that the 50 mg/kg apply to equipment, scrap and components, for consistency with entry A3180. Batteries and glass from CRTs have not been mentioned as they are covered by “components on list A” (see A1160, A1170, A2010). Finally, we note that circuit boards and display devices may or may not be hazardous components and should therefore not be mentioned next to mercury switches and capacitors containing PCBs as these are always components containing Annex I constituents to an extent that the waste exhibits an Annex III characteristic.

Option 1

A1180: Waste electrical and electronic equipment, ~~assemblies~~ or including scrap thereof

- a) containing components included on list A or components containing Annex I constituents to an extent that the waste exhibits an Annex III characteristic (e.g. mercury switches, capacitors containing PCBs) or
- b) containing or contaminated with Annex I constituents (e.g. cadmium, lead, mercury) to an extent that the waste exhibits an Annex III characteristic;

or waste electrical and electronic components containing or contaminated with Annex I constituents to an extent that the waste exhibits an Annex III characteristic (note the related entry on list B B1110)¹⁰

¹⁰ PCBs are at a concentration level of 50 mg/kg or more in equipment, scrap or a component.

B1110: Waste electrical and electronic equipment, ~~assemblies~~ or including scrap thereof

- a) not containing components included on list A or components containing Annex I constituents to an extent that the waste exhibits an Annex III characteristic (e.g. mercury switches, capacitors containing PCBs) and
- b) not containing or contaminated with Annex I constituents (e.g. cadmium, lead, mercury) to an extent that the waste exhibits an Annex III characteristic;

or waste electrical and electronic components not containing and not contaminated with Annex I constituents to an extent that the waste exhibits an Annex III characteristic (note the related entry on list A ~~A1180~~ B B1110)¹⁰

¹⁰ PCBs are at a concentration level of 50 mg/kg or more in equipment, scrap or a component.

We have summarized our preliminary comments on the options set out in the recommendations of the EWG with the only purpose to illustrate the order of disposal and recovery operations which may in our view be different for Section A with the ordering per media, land, water, air, than for Section B per the waste hierarchy (preparing for reuse, recycling, other recovery); interim operations are listed after non-interim operations, and the suggested catch-all operations are placed at the end of the non-interim and interim operations, respectively.

We think this would facilitate further discussions although we would like to emphasize that we are examining the specific descriptions of all operations at this stage. **These views are therefore preliminary and the specific descriptions of the respective operations are without any prejudice to any future proposals that could be submitted by the EU and its Member States.**

Annex IV Disposal operations

There are two categories of disposal operations, namely final disposal operations and recovery operations. Section A encompasses final disposal operations and section B recovery operations.

Both sections A and B also list disposal operations that occur prior to submission to any of the operations in the respective section (“interim operations”).¹

This Annex covers all operations, regardless of their legal status at the national and/or international level and regardless of whether they are considered to be environmentally sound.

A. Final disposal operations

A final disposal operation is an operation which is not a recovery operation even where the operation reclaims substances or energy as a secondary consequence.

A1 Deposit in an aboveground landfill isolated from the environment

(Note: D5 option 1)

A2 Surface impoundment (e.g. placement of liquids or sludge into pits, tailings ponds, tailings dams or tailings lagoons)

(Note: D4 option 1)

A3 Permanent underground storage (e.g. emplacement of containers in a mine)

(Note: from D12)

A4 Permanent aboveground storage (e.g. emplacement of containers in a warehouse)

(Note: from D12bis)

A5 Deposit into or onto land other than covered by A1 to A4 (e.g. placement into wells, salt domes or naturally occurring repositories)

(Note: D1 option 1)

A6 Treatment of land or through interaction with land other than covered by B5 in Section B (e.g. biological or chemical treatment)

(Note: D2 option 1)

A7 Release into a water body except seas/oceans

¹ See operations A12 to A17 in section A and operations B9 to B14 in section B.

(Note: D6 option 0)

A8 Release into seas/oceans including sea-bed insertion

(Note: D7 option 0)

A9 Release to the atmosphere (e.g. venting of compressed or liquefied gases)

(Note: D16)

A10 Thermal treatment other than covered by B6 in Section B (e.g. incineration)

(Note: D10 option 1)

A11 Other treatment than covered by A1 to A10 above

(Note: D20)

A12 Biological treatment prior to submission to any of the operations in section A

(Note: D8 option 1)

A13 Manual treatment (e.g. separation), physical/mechanical treatment (e.g. separation, size reduction, evaporation, drying, autoclaving), physical/chemical treatment (e.g. solvent extraction), chemical treatment (e.g. neutralization, precipitation) or immobilization (e.g. stabilization, solidification) prior to submission to any of the operations in Section A

(Note: D9 option 1 merged with D22)

A14 Blending or mixing prior to submission to any of the operations in Section A

(Note: D13 option 0)

A15 Repackaging prior to submission to any of the operations in Section A

(Note: D14 option 0)

A16 Temporary storage prior to submission to any of the operations in Section A

(Note: from D15)

A17 Other treatment than covered by A12 to A16 above prior to submission to any of the operations in Section A

(Note: D21)

B. Recovery operations

A recovery operation is an operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

B1 Preparing for reuse (e.g. checking, cleaning, repair, refurbishment, regeneration)

(Note: R14)

B2 Recycling of organic substances (e.g. mechanical treatment)

(Note: R3 option 1)

B3 Recycling of metals and metal compounds (e.g. smelting, hydrometallurgy, mechanical treatment)

(Note: R4 option 1)

B4 Recycling of other inorganic materials other than covered by B3 (e.g. mechanical treatment)

(Note: R5 option 1)

B5 Treatment of land or through interaction with land with the principle purpose to benefit agriculture or ecological improvement (e.g. biological or chemical treatment)

(Note: R10 option 2)

B6 Thermal treatment with the principal result to generate energy except where covered by B7 (e.g. incineration)

(Note: R1 option 2)

B7 Co-processing

(Note: R15)

B8 Other treatment than covered by B1 to B7 above

(Note: R17)

B9 Biological treatment prior to submission to any of the operations in Section B

(Note: from option 1 under R12: R12 option 2)

B10 Manual treatment (e.g. separation), physical/mechanical treatment (e.g. separation, size reduction, evaporation, drying, autoclaving), physical/chemical treatment (e.g. solvent extraction) or chemical treatment (e.g. neutralization, precipitation) prior to submission to any of the operations in Section B

(Note from option 1 under R12: R12bis option 1 merged with R12quater)

B11 Blending or mixing prior to submission to any of the operations in Section B

(Note: from option 1 under R12: R12ter)

B12 Repackaging prior to submission to any of the operations in Section B

(Note: R16)

B13 Temporary storage pending any of the operations in section B

(Note: from R13)

B14 Other treatment than covered by B9 to B13 above prior to submission to any of the operations in section B

(Note: R17)