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Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation

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Item 4 (c) of the provisional agenda

**Standardization of technical and safety requirements in inland navigation:
Prevention of pollution of inland waterways by vessels (resolution No. 21, revised)**

Types and categories of waste generated on board vessels

Note by the secretariat*

Mandate

1. This document is submitted in line with the programme of work of the Transport subprogramme for 2020 (ECE/TRANS/2020/21, chapter IV, table, section A, para. 11) adopted by the Inland Transport Committee at its eighty-second session (ECE/TRANS/294, para. 136).

2. At its fifty-sixth session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) agreed with the proposal by the secretariat that a commonly agreed system of symbols would be desirable for the types of waste generated during the operation of a vessel, harmonized with other international regimes for waste management on inland waterways. SC.3/WP.3 asked the secretariat to contact the secretariat of the Convention on Collection, Deposit and Reception of Waste Produced during Navigation on the Rhine and Inland Waterways (CDNI) and other key stakeholders and prepare a proposal for its fifty-seventh session (ECE/TRANS/SC.3/WP.3/112, paras. 56 and 57).

3. In the course of consultations of the secretariat with the CDNI Secretariat, the Danube Commission (DC) and via donau, it was mentioned that a harmonized approach was desirable at the pan-European level for types and categories of waste generated on board vessels, and a proposal for a harmonized categorization of waste has been jointly prepared, which is contained in the annex.

* The present document was submitted after the deadline as a result of consultations with key stakeholders.

Annex

Proposal for harmonizing types and categories of waste generated on board vessels

I. Introduction

1. The list of reception facilities for the transfer of waste generated on board vessels on European inland waterways (TRANS/SC.3/150 and Adds. 1–3, which are currently under revision) contains the information on the types of waste separated on board vessels and delivered to reception facilities. The information transmitted by governments does not always follow the types of waste in accordance with the European Code for Inland Waterways (CEVNI) or contains additional waste categories not mentioned in CEVNI. Given the ongoing work of governments on the waste sorting and separation, it would be desirable to harmonize waste types and categories applied by countries and other key stakeholders, at the pan-European level.

2. There is no uniform classification of the types of waste generated on board vessels which are subject to separate collection and disposal. In Europe, this work is now under way in the framework of CDNI and DC. The existing approaches to the categorization of waste generated on board vessels are highlighted below.

II. International terms and definitions applied in Europe

3. The following international regulations have been considered:

- CEVNI revision 5, chapter 10
- CDNI
- the Recommendations on the organization of the collection of waste from vessels navigating on the Danube, 2011 (DC Recommendations).

4. An overview on the terms and definitions related to types of waste generated on board vessels is given in table 1.¹

Table 1
Terms and definitions

Terms	CEVNI	CDNI ²	DC Recommendations ³
Waste generated onboard as a result of the operation of the vessel	Waste and waste water generated on board onboard from the operation and maintenance of the vessel; this includes oily and greasy waste and other waste generated from the operation of the vessel.	Waste and waste water generated on board as a result of the operation and maintenance of the vessel; this includes oily and greasy waste and other waste generated from the operation of the vessel.	Waste and waste water generated as a result of the operation and maintenance of the vessel (used grease, used filters, used rags, used oil, bilge water, receptacles, used solvents, domestic refuse, domestic waste water and other special waste) as well as residues (slops).

¹ The list of definitions from the DC Recommendations in table 1 is not exhaustive.

² Unofficial English version prepared by the CDNI Secretariat; www.cdni-iwt.org/wp-content/uploads/2020/03/CDNI_2020EN.pdf.

³ Informal English translation by the secretariat.

<i>Terms</i>	<i>CEVNI</i>	<i>CDNI²</i>	<i>DC Recommendations³</i>
Oily and greasy waste generated from the operation of the vessel	Used oil, bilge water and other oily and greasy waste such as used grease, used filters, used rags, and receptacles and packagings for such waste.	Used oil, bilge water and other oily or greasy waste, such as used grease, used filters, used rags, and the containers and packaging of such waste.	No general term is applied; the terms “used grease”, “used filters”, “used rags”, “used oil”, “bilge water”, “receptacles” are used.
Other waste generated from the operation of the vessel	Domestic waste water, household refuse, sludge, slops and other special waste within the meaning of paragraph 2 of article 10.01.	Domestic waste water, domestic refuse, cleansing slurry, slops and other special waste as defined in Part C of the Implementing Regulation.	No general term is applied; the terms “domestic waste water”, “domestic refuse”, “slops” and “other special waste” are used.
Cargo-related waste	Cargo-related waste: waste and waste water occurring on board the vessel and deriving from the cargo; residual cargo and handling residues as defined in (i) – (j), paragraph 1, article 10.01, are not included in this category.	Cargo-related waste: waste and waste water produced on board the vessel deriving from the cargo; this does not include residual cargo and handling residues as defined in Part B of the Implementing Regulation;	Cargo-related waste and waste water: waste and waste water generated on board the vessel as a result of cargo transportation.
Residual cargo and handling residues	Residual cargo: liquid cargo remaining in the cargo tanks or in the cargo piping after unloading without the use of a stripping system in accordance with the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways, as well as dry cargo remaining in the holds after unloading before manual or mechanical sweepers or suction facilities are used; Handling residues: cargo which falls on the vessel outside the hold during handling.	Residual cargo: liquid cargo remaining in the cargo tanks or in the piping after unloading when a stripping system has not been used, and dry cargo remaining in the holds after unloading before manual or mechanical sweepers or suction facilities are used. “Handling residues”: cargo that falls on the vessel outside the hold in the course of handling.	–
Household refuse	On board organic and inorganic household waste and food remains generated from the operation of the vessel, except for the components of the other types of waste defined in article 10.01.	Organic and inorganic waste from household and galley sources on board, but not containing any other defined types of waste generated from the operation of the vessel.	Organic and inorganic household waste (e.g. food waste, paper, glass and similar waste from galleys) that does not contain refuse generated from the operation of the vessel.
Sludge (cleansing slurry)	Residues occurring on board the vessel during the operation of an on board sewage plant.	Residue produced on board the vessel by the operation of an on-board sewage plant.	–
Slops	A mixture of cargo residues with washing water, rust or sludge, whether or not suitable for pumping.	Cargo residues mixed with leftover water from swabbing, rust and sludge, which may or may not be suitable for pumping.	A mixture of cargo residues with, for example, swilling out water, rust or mud, either suitable or not suitable for pumping.

⁴ See the CDNI Guide, paragraph 1.2 “Définitions concernant la cargaison”, footnote 1 (www.cdni-iwt.org/wp-content/uploads/2019/06/Guide-partie-B-FR_2019_Final, page 4 (in French)).

Terms	CEVNI	CDNI ²	DC Recommendations ³
Other special waste	Waste generated from the operation of the vessel other than oily and greasy waste and other than the waste covered by (a) to (c), paragraph 2, article 10.01.	Waste generated from the operation of the vessel other than oily and greasy waste and other than the waste referred to in subsections a) to d), Part C, Article 8.01.	Substances generated on board which are not related to cargo, having a mass less than 200 kg per deposit, which due to their physical or chemical properties cannot be disposed of together with household waste and which, if inappropriately disposed, pose a threat to people and the environment.

5. CEVNI and CDNI apply the general definitions for household refuse and other special waste generated from the operation of the vessel. However, Article 9.03 of CDNI⁵ specifies the following categories of household refuse: paper, glass, other recyclable materials, and other waste. The DC Recommendations specify six types of household refuse: paper, clear glass, coloured glass, plastics (packaging of synthetic materials), metal packaging and other waste, and introduce coloured pictograms for them (see table 2).

III. Provisions for the separate collection and processing of waste

6. The separate collection of waste on board a vessel is prescribed by:
- (a) CEVNI, Article 10.05, paragraph 1
 - 1. The boatmaster shall ensure the separate collection on board of the waste referred to in article 10.04, paragraph 1 above,⁶ not including any parts of the cargo or cargo-related waste, in receptacles intended for this purpose, and the collection of bilge water in the engine room bilges. The receptacles shall be stored on board in such a way as to facilitate the timely detection and repair of any leakage of the contents.
 - (b) CDNI, Article 9.03, Collection and treatment on board; deposit at reception stations
 - (1) The boatmaster must ensure that the waste referred to in paragraph 1 of Article 9.01⁷ is collected and deposited separately. If possible, domestic refuse should be deposited separately in the following categories: paper, glass, other recyclable materials, and other waste.
 - ...
 - (3) The operators of passenger vessels fitted with an on-board sewage treatment plant that complies with Appendix V must themselves ensure that the cleansing slurry is properly deposited and appropriately corroborated in accordance with national regulations in accordance with paragraph 3 of Article 9.03.
 - (4) The master of a passenger vessel subject to the prohibition on the discharge of domestic waste water under paragraph 3 of Article 9.01 shall be required to ensure that the domestic waste water is collected onboard the vessel in an appropriate manner and deposited at a reception station or facility in accordance with paragraph 3 of Article 8.02 where the passenger vessel does not possess an on-board sewage treatment plant in accordance with paragraph 4 of Article 9.01.

⁵ According to the information of the CDNI Secretariat, Article 9.03 is currently under revision to include plastics.

⁶ Oily or greasy waste generated from the operation of the vessel; slops, household refuse, sludge or other special waste; portions of the cargo or cargo-related waste.

⁷ Domestic refuse, slops, cleansing slurry and other special waste.

(c) DC Recommendations

- 2.3. Household waste should be collected and disposed of, if possible, after it has been sorted, by waste paper, glass (coloured, clear), plastic, metal and other waste, including food waste (see paragraph 1.2).

IV. Waste categories used by via donau

7. The ship waste management in Austria is regulated by the Federal Act on Sustainable Waste Management (Waste Management Act).⁸ In addition to the waste types according to the DC Recommendations, the following types of waste are applied in the Austrian legislation:⁹

- Residual waste
- Food leftovers
- Bulky waste
- Problematic materials (e.g. batteries, fluorescent tubes, aerosol cans) – a specific sub-category related to the disposal of small amounts of hazardous waste.

8. In accordance with the list of waste types applied in the European Union¹⁰ and the Waste Management Act, oily and greasy waste occurring from the operation of the vessel is classified as “hazardous waste”.

V. Categorization of garbage in Annex V to MARPOL

9. Management of waste generated during the normal operation of seagoing ships is an object of the International Convention for the Prevention of Pollution from Ships (MARPOL), Annexes I to VI. The definitions of waste types differ from those applied in CEVNI, CDNI and the DC Recommendations, however, they could be considered in a more detailed categorization of waste generated on board inland navigation vessels. This refers, in particular, to household refuse with a view of its minimization, recycling and reuse.

10. The garbage types that should be separated, are prescribed in paragraph 2.4.3 of the 2017 Guidelines for the Implementation of MARPOL Annex V (Resolution MEPC.295(71), adopted on 7 July 2017). They include:

- .1 non-recyclable plastics and plastics mixed with non-plastic garbage;
- .2 rags;
- .3 recyclable material:
 - .1 cooking oil;
 - .2 glass;
 - .3 aluminium cans;
 - .4 paper, cardboard, corrugated board;
 - .5 wood;
 - .6 metal; and
 - .7 plastics (including styrofoam or other similar plastic material);
- .4 E-waste generated on board (e.g. electronic cards, gadgets, instruments, equipment, computers, printer cartridges, etc.); and

⁸ www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=200002086.

⁹ www.doris.bmk.gv.at/en/services/disposal-of-ship-waste/disposal-infrastructure-in-austria/waste-reception-facilities-at-locks.

¹⁰ Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste.

.5 garbage that might present a hazard to the ship or crew (e.g. oily rags, light bulbs, acids, chemicals, batteries, etc.).

11. E-waste, as defined in paragraph 1.6.2 of the Guidelines, means electrical and electronic equipment used for the normal operation of the ship or in the accommodation spaces, including all components, subassemblies and consumables, which are part of the equipment at the time of discarding, with the presence of material potentially hazardous to human health and/or the environment.

12. The definition of E-waste is close to the definition of waste electrical and electronic equipment introduced in the legislation of the European Union. In Directive 2012/19/EU on waste electrical and electronic equipment of 4 July 2012, “Waste electrical and electronic equipment, or WEEE means electrical or electronic equipment which is waste within the meaning of Article 3(1) of Directive 2008/98/EC,¹¹ including all components, sub-assemblies and consumables which are part of the product at the time of discarding”.

VI. Comparative table of waste categories to be separately collected and deposited

13. Table 2 contains an overview of waste types and categories and includes the pictograms used by CN Danube Maritime Ports Administration SA Galati (Romania), DC, via donau¹² and informal symbols used on the CDNI map¹³ for communication purposes, which are supplemented with photos and lists of waste that can be deposited.

¹¹ According to Article 3(1) of Directive 2008/98/EC, waste means any substance or object which the holder discards or intends or is required to discard.

¹² www.doris.bmkk.gv.at/en/services/disposal-of-ship-waste/disposal-infrastructure-in-austria/disposal-potibilities-at-austrian-ports.

¹³ www.cdni-iwt.org/points-of-acceptance/?lang=en.

Table 2
Categories of waste generated on board vessels delivered to reception facilities

<i>CEVNI</i>	<i>CDNI</i> ¹⁴	<i>DC</i>	<i>via donau</i>	<i>MARPOL</i>	<i>CN Danube Maritime Ports Administration SA Galati</i>	<i>Baltic Sea ports</i> ¹⁵		
Residual cargo, handling residues	Residual cargo, handling residues	Waste and waste water occurring on board the vessel and deriving from the cargo		Cargo residues	Cargo residues (included in garbage)			
Slops		Slops	Slops	Cargo residues (included in garbage)				
Oily and greasy waste		Oily and greasy waste	Used oil; used grease; used filters; used rags; bilge water; used receptacles		Oily and greasy waste, subdivided into solid and liquid waste (hazardous waste) Hydrocarbon residues Rags (subcategory of garbage)		Hydrocarbon residues: bilge water, used oil, oil-containing sludge Hazardous waste: oil contaminated cleaning rags, used batteries, oil filters, contaminated metal packaging	Oily waste Oily rags
Household refuse	Domestic refuse	Domestic refuse	Domestic refuse	Domestic waste (included in garbage)	Household waste	Mixed domestic waste		
–		Non-recyclable household waste		Other waste, including food waste		Residual waste		
				Residual waste		Non-recyclable plastics and plastics mixed		

¹⁴ CDNI pictograms are those used today for communication purposes (website) and are not used in practice.

¹⁵ Data on the collection of garbage from cruise ships in the ports of Helsinki, Stockholm, Tallinn and Copenhagen-Malmö (I. Svaetichin, T. Inkinen, "Port Waste Management in the Baltic Sea Area: A Four Port Study on the Legal Requirements, Processes and Collaboration". Sustainability 2017, 9, 699).

<i>CEVNI</i>	<i>CDNI¹⁴</i>	<i>DC</i>	<i>via donau</i>	<i>MARPOL</i>	<i>CN Danube Maritime Ports Administration SA Galati</i>	<i>Baltic Sea ports¹⁵</i>
Food remains	Not defined, however, may be considered as a part of domestic refuse	Included in other waste		Food leftovers Food waste	with non-plastic garbage Included in residual waste	Food waste
-	Paper, cardboard		Waste paper		Waste paper	Paper, cardboard, corrugated board
-	-	-	-	-	Cooking oil	-
-	Metal		Metal packaging		Metal packaging	Aluminium cans Metal
-	Wood is included in special waste	-	-	-	Wood	-
-	Plastic		Plastic packaging		Plastic packaging	Plastics
-	Glass		Coloured glass		Coloured glass	Glass
-	Glass		Clear glass		Clear glass	Glass
Other special waste	Special waste (chemical, electric, electronic, wood...)	Other special waste		Special waste (chemical, electric, electronic etc.) (problematic materials)	Garbage that might present a hazard to the ship or crew	Used batteries and contaminated metal packagings are included in hazardous waste

<i>CEVNI</i>	<i>CDNI¹⁴</i>	<i>DC</i>	<i>via donau</i>	<i>MARPOL</i>	<i>CN Danube Maritime Ports Administration SA Galati</i>	<i>Baltic Sea ports¹⁵</i>
–	–	–		Bulky waste	–	
–	Included in special waste	–		Included in special waste	E-waste	Electronics
Domestic waste water		Domestic waste water (galley, washrooms and faecal water)	Domestic waste water		Domestic waste water	Sewage, domestic waste
Sludge		Sludge (from an on-board sewage-treatment plant)	–	–	Sewage sludge	Covered by sewage/ operational waste
						Scrubber waste

VII. Proposal for types and categories of waste generated on board vessels

14. Based on the analysis of table 2, the secretariat jointly with the CDNI secretariat, DC and via donau have agreed on the following harmonized types and categories of waste in order to facilitate its separate collection, efficient recycling and reuse, as a preliminary proposal for consideration by member States.

15. The following types and categories for the separate collection and deposit of waste are proposed:

1. Residual cargo, handling residues
2. Slops
3. Oily and greasy waste (solid and liquid)
4. Domestic waste water
5. Sludge (from an on-board sewage-treatment plant)
6. Household refuse:
 - (a) Recyclable household refuse:
 - clear glass
 - coloured glass
 - metal
 - waste paper
 - plastic
 - (b) Non-recyclable household refuse
 - (c) Food leftovers¹⁶
7. Other special waste:
 - (a) Waste potentially hazardous to human health and/or the environment
 - (b) E-waste
 - (c) Bulky waste and wood
 - (d) Other waste not covered above.

16. The following definitions are proposed, which modify or are additional to article 10.01 of CEVNI:

(a) “Household refuse”: on board organic and inorganic household waste, **including recyclable household waste, non-recyclable household waste and food remains leftovers** generated from the operation of the vessel, except for the components of the other types of waste defined in article 10.01 above.¹⁷

(b) “Recyclable household waste”: clear and coloured glass, metal, waste paper and plastic waste.

(c) “Plastic”: plastic in any form which is suitable for recycling, including plastic packagings, bags, synthetic ropes etc.

(d) “Metal”: aluminium cans, metal packagings, ferrous and non-ferrous metal scrap.

(e) “Waste paper”: newsprint, corrugated and non-corrugated cardboard, low grade paper (phone books, magazines, junk mail), high grade paper (office paper, stationery, coloured paper), books and carton packages.

¹⁶ In the DC Recommendations, food leftovers are included in other waste.

¹⁷ Article 10.01, paragraph 2(a) of CEVNI.

(f) “Non-recyclable household waste”: filament bulbs, rubber, pottery, textiles, insignificant amounts of food remains from galleys and restaurants etc.

(g) “Food leftovers”: significant amounts of biodegradable waste from galleys and restaurants, which are collected separately in accordance with hygienic requirements.

(h) “Other special waste”: waste generated from the operation of the vessel, other than oily and greasy waste and other than household refuse, sludge and slops,¹⁸ **including waste potentially hazardous to human health and/or the environment, E-waste, bulky waste, wood and other waste not covered above.**

(i) “Waste potentially hazardous to human health and/or the environment”: contaminated packagings, residual paints, acids, alkalis, aerosol dispensers, batteries, fire extinguishers, fluorescent tubes, used solvents, medical and clinical waste etc.

(j) “E-waste”: electrical or electronic equipment which is waste, including all components, sub-assemblies and consumables which are parts of the product at the time of discarding, such as screens, monitors, household appliances, information technology and telecommunication equipment, luminaires, medical devices etc.

(k) “Bulky waste”: large items of waste material such as furniture, large car parts etc.

¹⁸ Article 10.01, paragraph 2(d) of CEVNI. The reference to subparagraphs (a) to (c) is replaced by the respective types of waste.