



Economic and Social Council

Distr.: General
8 September 2017
English
Original: English and Russian

Economic Commission for Europe

Inland Transport Committee

Working Party on Inland Water Transport

Sixty-first session

Geneva, 4-6 October 2017

Item 6 (b) of the provisional agenda

Standardization of technical and safety requirements in inland navigation:

Signs and Signals on Inland Waterways (SIGNI)

(Resolution No. 22, revision 2)

Answers to the questionnaire on regional and national special requirements for the Signs and Signals on Inland Waterways

Note by the secretariat*

I. Mandate

1. This document is submitted in line with cluster 5: Inland Waterway Transport, para. 5.1 of the programme of work 2016-2017 (ECE/TRANS/2016/28/Add.1) adopted by the Inland Transport Committee at its seventy-eighth session on 26 February 2016.
2. It is recalled that, at its fifty-first session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) approved the questionnaire on regional and national special requirements for the Signs and Signals on Inland Waterways, deviating from or complementary to Resolutions Nos. 22 and 59 (ECE/TRANS/SC.3/WP.3/2017/13), with the purpose of developing a new Chapter on regional and national special requirements to be included in the draft revision 3 of the Signs and Signals on Inland Waterways (SIGNI).
3. The Working Party on Inland Water Transport may wish to consider the overview of the responses received from the Governments of Austria, Belarus, Bulgaria, Czech Republic, Germany, Poland, Romania, Russian Federation, Slovakia, Central Commission for the Navigation on the Rhine (CCNR) and International Sava River Basin Commission (Sava Commission) and decide to use it as the basis for the new Chapter of SIGNI.

* This document was submitted late due to delayed input.

II. Application of Resolutions Nos. 22 and 59 by member States and River Commissions

4. The status of application of UNECE resolutions Nos. 22, revision 2, and 59, revision 1,¹ by member States is shown in Table 1 below.²

Table 1

Country	Austria	Belarus*	Belgium	Bulgaria	Croatia	Czech Republic	Finland	France	Germany	Hungary	Ireland	Italy	Latvia	Lithuania
<i>SIGNI</i>	A	N	P	A	A	A		C	A	A				A
<i>Resolution No. 59</i>	A	N	P	A		A		C						C

Country	Luxembourg	Netherlands	Norway	Poland	Republic of Moldova	Romania	Russian Federation**	Serbia	Slovakia	Switzerland	Turkey	Ukraine	United Kingdom	United States of America
<i>SIGNI</i>	A	A		A		A	N	C	A	A		A		
<i>Resolution No. 59</i>				N		A	N	A	A	A				

Legend:

A Resolution is applied
C Application is under consideration
N Resolution is not applied
P Resolution is applied in part
Blank No information is available

- * Belarus applies the following national regulations:
- Inland Waterway Navigation Rules of the Republic of Belarus adopted by Order No. 60 of the Ministry of Transport and Communications of 25 October 2005;
 - GOST 26600-98 “Navigation signs for inland waterways. General specifications”.
- ** The Russian Federation applies the following national regulations:
- GOST 26600-98 “Navigation signs for inland waterways. General specifications”;
 - GOST 23903-79 “Inland waterways and their navigation equipment. Terms and definitions”;
 - Instruction on the maintenance of navigation equipment of navigable inland waterways.

¹ Full information about the application of the second revision of Resolution No. 59 is not available in the secretariat.

² The detailed information on the status of application of UNECE resolutions relevant to inland navigation is given in ECE/TRANS/SC.3/2017/19.

5. River Commissions

(a) Central Commission for the Navigation on the Rhine:

Provisions for signs and signals on inland waterways can be found in annexes to the Police Regulations for the Navigation of the Rhine (RPNR), in particular, Annexes 7 and 8. However, CCNR member States may submit additional information about the implementation of these provisions and other details.

(b) Danube Commission:

The Instruction on the installation of signs and markings on the Danube was adopted by the eighty-fourth session of the Danube Commission on 9 June 2015 (ECE/TRANS/SC.3/2015/5). This document was used as the basis for the second revision of Resolution No. 59.

(c) Mosel Commission:

Provisions for signs and signals on inland waterways are included in the Police Regulations for the Navigation of the Mosel (RPNM).

(d) International Sava River Basin Commission:

The Rules for Waterway Marking on the Sava River Basin were adopted by the eighth Special Session of the Sava Commission on 13 November 2007 and amended by its thirty-first and thirty-sixth sessions on 20 February 2013 and 14 October 2014, respectively. The consolidated text of the Rules is available on the website of the Sava Commission.

III. Existing regional and national special requirements for the Signs and Signals on Inland Waterways

6. Table 2 below presents a brief overview of existing regional and national special requirements deviating from SIGNI.

Table 2

Special requirements deviating from SIGNI

SIGNI *Regional and National Special Requirements*

Chapter 1, Principles

Article 1.1.1 The following administrations use marks, supplementary to those indicated in Article 1.1.1, for marking on a particular waterway or waterway network:

1. Austria: to mark the safety zone above weirs where the entry is prohibited, red buoys with a cylindrical topmark are used with the colours of sign A.1;
 2. Czech Republic: yes, the shapes and colours of them are consistent with SIGNI;
 3. Germany: there are four Police Regulations used in different regions: Binnenschiffahrtsstraßenordnung (BinSchStrO); Rheinschiffahrtspolizeiverordnung (RheinSchPV); Moselschiffahrtspolizeiverordnung (MoselSchPV); Donauschiffahrtspolizeiverordnung (DonauSchPV). There are minor differences between them according to regional demands, and in relation to CEVNI³/SIGNI.
-

³ The European Code for Inland Waterways (Resolution No. 24, revision 5).

Article 1.1.7 For the determination of the luminous intensity of lights, administrations apply the following documents:

- (a) Recommendation on the Determination of the Luminous Intensity of Marine Aid-to-Navigation Lights, December 1977, IALA⁴ Bulletin No. 75-1978-3;
- (b) Appendix 2 to Guidelines for Waterway Signs and Marking (Resolution No. 59, rev. 2);
- (c) IALA Recommendations E-200 on Marine Signal Lights;
- (d) Other documents:
 - 1. Austria: (b);
 - 2. Belarus: (d) GOST 26600-98;
 - 3. Bulgaria: (d) Instruction on the installation of signs and markings on the Danube, Section 3;
 - 4. Czech Republic: (b);
 - 5. Germany: (c);
 - 6. Romania: (a) to (c);
 - 7. Russian Federation: (d) GOST 26600-98;
 - 8. Slovakia: (d) CEVNI;⁵
 - 9. Sava Commission: (d) Directive 2006/87/EC; the alternative proposal is (a).

Article 1.1.7 For the determination of the range of lights, administrations apply the following documents:

- (a) Formulae in general use, i.e. German Standard DIN 5037 or British Standard No. 942;
- (b) IALA Recommendation E-200, Part 2 — Calculation, Definition and Notation of Luminous Range;
- (c) Appendix 2 to Guidelines for Waterway Signs and Marking (Resolution No. 59, rev. 2);
- (d) Other documents:
 - 1. Austria: (c);
 - 2. Belarus: (d) GOST 26600-98;
 - 3. Bulgaria: (d) Instruction on the installation of signs and markings on the Danube, Section 3;
 - 4. Czech Republic: (c);
 - 5. Germany: (b);
 - 6. Romania: (a) to (c);
 - 7. Russian Federation: (d) GOST 26600-98;
 - 8. Slovakia: (d) CEVNI;
 - 9. Sava Commission: (d) The luminous range of lights is established by the competent authorities of the respective countries in terms of local navigational conditions.

Article 1.1.8 For the determination of colours of lights, administrations apply the following documents:





- (a) CIE Publication No. 2.2-1975 (TC-1.6);
- (b) ISO 11664/CIE S 014;
- (c) Standard CIE S 004/E-2001, Class A;
- (d) Appendix 2 to Guidelines for Waterway Signs and Marking (Resolution No. 59, rev. 2);
- (e) Other documents:
 - 1. Austria: (d);
 - 2. Belarus: (e) Inland Waterway Navigation Rules of the Republic of Belarus and GOST 26600-98;
 - 3. Bulgaria: (e) Instruction on the installation of signs and markings on the Danube, para. 1.8 of Section I and Annex 2;
 - 4. Czech Republic: (d);
 - 5. Germany: (e) Base: IALA Recommendation E-200, additional: special colour regions;
 - 6. Poland: (e) CEVNI;

⁴ The International Association of Marine Aids to Navigation and Lighthouse Authorities.

⁵ *Note of the secretariat:* Annex 5 of CEVNI, Intensity and range of signal lights on vessels, has been incorporated to Appendix 7 to Resolution No. 61.

<i>SIGNI</i>	<i>Regional and National Special Requirements</i>
Article 1.1.8 (continued)	<ol style="list-style-type: none"> 7. Romania: (a) to (d); 8. Russian Federation: (e) GOST 26600-98; 9. Slovakia: (e) CEVNI; 10. Sava Commission: (a).
Article 1.1.9	<p>The following administrations prescribe other shapes and colours for boards bearing special signs:</p> <ol style="list-style-type: none"> (a) Shapes of boards other than rectangular; (b) Other colours of background and symbols: <ol style="list-style-type: none"> 1. Germany: (a) sign A.1a (BinSchStrO, RheinSchPV, MoselSchPV) corresponding to A.1.1 in CEVNI (shape is round, not rectangular); (b) for informative signs; reflective films may not be used; 2. Russian Federation: (a) and (b); a round shape is used for prohibitory signs and a diamond shape is used for informative signs.
Article 1.1.10	<p>For the determination of the minimum dimensions of buoys and boards, administrations apply the following documents:</p> <ol style="list-style-type: none"> 1. Belarus: Inland Waterway Navigation Rules of the Republic of Belarus and GOST 26600-98; 2. Bulgaria: Instruction on the installation of signs and markings on the Danube, Annex 1; 3. Czech Republic: Article 1.1.10 of SIGNI; 4. Germany: Article 1.1.10 of SIGNI and paras. 3.6-3.8 of the Annex to Resolution No. 59, rev. 2; 5. Poland: Article 1.1.10 of SIGNI; 6. Romania: Article 1.1.10 of SIGNI and paras. 3.6-3.8 of the Annex to Resolution No. 59, rev. 2; 7. Russian Federation: GOST 26600-98; 8. Slovakia: CEVNI; 9. Sava Commission: paras. 3.6-3.8 of the Annex to Resolution No. 59 (Annexes 7 and 8 of CEVNI).
Article 1.1.12	<p>The following administrations apply a special signalling system for semaphores:</p> <ol style="list-style-type: none"> 1. Austria: Special signalling system for the Struden section of the Austrian Danube; 2. Belarus; 3. Russian Federation: information is given in GOST 26600-98.
Section 1.2	<p>The following administrations apply special provisions for rhythmic lights differing from those described in Annex 1 of SIGNI:</p> <ol style="list-style-type: none"> 1. Belarus: the following types of lights are applied according to the Inland Waterway Navigation Rules of the Republic of Belarus: fixed, flashing (single-flashing), double-flashing, scintillating, group-scintillating, pulsating, intermittent pulsating and occulting lights; 2. Germany: IALA E-110 Rhythmic Characters of Lights on AtoN, 2012, which is slightly different from SIGNI, e.g. 2.3 composite group-occulting light; 3. Russian Federation: information is given in GOST 26600-98.
Section 1.3	<p>The following administrations apply:</p> <ol style="list-style-type: none"> (a) Basic principles of marking by fixed lights other than indicated in Article 1.3.1; (b) Light signals alternative to any of those indicated in 1.3.3-1.3.21; (c) Light signals additional to those indicated in 1.3.3-1.3.21: <ol style="list-style-type: none"> 1. Belarus: (a) and (b) only; 2. Germany: (c) only for the light signal post for gorge section of the Rhine; 3. Russian Federation: information is given in GOST 26600-98.

Chapter 2, Buoyage and marking of the waterway

Articles 2.1.1-2.1.2	The following administrations prescribe other colours and/or shapes of marks for the waterway limits:	
1.	Belarus;	
2.	Germany: other colours or shapes of marks for the waterway limits are not applied, but recent developments, including new materials and technical means, may bring to a new standard type of buoys with a different shape (B5, B7):	
3.	Poland: the right-hand side of the fairway limits is marked with “tyka z wiechą” (spar with a bunch):	
	the left-hand side of the fairway limits is marked with “tyka” (‘bare’ spar):	
4.	Russian Federation; the shape is determined by GOST 26600-98; colours of the marks are green, white and black.	
Article 2.1.3	The following administrations:	
	(a) prescribe other colours and/or shapes of marks for the bifurcation of the fairway;	
	(b) apply special provisions for marking of the bifurcation of the fairway:	
1.	Belarus: (a) only;	
2.	Russian Federation: (a) and (b), in accordance with GOST 26600-98.	
Section 2.2	The following administrations apply special provisions for buoyage and marking of danger points and obstacles:	
	(a) Without requiring vessels under way to move in a particular direction;	
	(b) Prescribing the side for the passage of vessels;	
	(c) Requiring vessels under way to avoid causing wash:	
1.	Belarus: (a) only;	
2.	Czech Republic: (a) to (c); they correspond to marks, boards and lights indicated in Article 2.2;	
3.	Germany: (a) to (c); they correspond to marks, boards and lights indicated in Article 2.2; boards (red or red/white) are rectangular but not square (signal raft);	
4.	Russian Federation: (c) only, in accordance with GOST 26600-98.	
Articles 2.3.1-2.3.2	The following administrations prescribe other colours and/or shapes of bank marks:	
	(a) For indicating the position of the fairway near the right and left banks;	
	(b) For marking cross-overs:	
1.	Belarus: (a) and (b);	
2.	Czech Republic: these marks are not applied; otherwise, the colours and shapes should comply with the general stipulations;	
3.	Germany: (b) for the Elbe;	
4.	Russian Federation: (a) and (b), in accordance with GOST 26600-98.	
Article 2.4	The following administrations apply special marking of lakes and broad waterways:	
	(a) Cardinal marks;	
	(b) Isolated danger marks;	
	(c) Safe-water marks;	
	(d) Special marks;	
	(e) New dangers marks;	

SIGNI Regional and National Special Requirements

Article 2.4 (f) Weather signs and signals:

- (continued)
1. Austria: (f), on lakes only;
 2. Germany: (a) to (d); marking at the entrance of lakes on inland waterways: marking danger points and obstacles:
 3. Poland: (a) to (d) and (f);
 4. Romania: (c);
 5. Russian Federation: (a) and (b).

**Chapter 3, Marking of permanent structures**

Sections 3.1-3.3 The following administrations apply special provisions for: (a) fixed bridges; (b) movable bridges; (c) locks:

1. Belarus: (a) to (c);
2. Germany:
 - (a) “BinSchStrO Anlage7 D1b”: two yellow diamonds placed side by side:
 - (c) white light (e.g. Limbach lock);
3. Russian Federation: (a) to (c), in accordance with GOST 26600-98.

**Chapter 4, Blockage of the waterway**

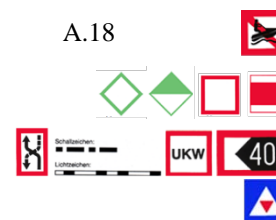
Sections 4.1-4.2 The following administrations apply special provisions: (a) for complete and protracted stoppage of navigation; (b) for temporary stoppage of navigation:

1. Germany: (a) only, sign A1 on a yellow buoy;
2. Russian Federation: (a) and (b), in accordance with GOST 26600-98.

**Chapter 5, Waterway signs and marking**

Article 5 The following administrations apply alternative images or light signals for prohibitory, mandatory, restrictive, recommendatory and/or informative signs indicated in Article 5.1:

1. Belarus: prohibitory, mandatory and informative signs;
2. Germany:
 - prohibitory signs: A.18
 - mandatory signs:
 - marking of cross-overs (trackline);
 - BinSchStrO, z.B. B.4, B.10, B.11a, Format C.5:
 - informative signs: e.g., E5.6 for the Danube:
3. Russian Federation: all above-mentioned types of signs, in accordance with GOST 26600-98.

**Chapter 6, Miscellaneous**

Article 6.2 The following administrations require kilometre markings along inland waterways:

1. Austria: on the Danube;
2. Belarus;
3. Bulgaria: on the Danube;
4. Czech Republic: on frequently used fairways of high importance (the Elbe, the Moldau and the Morava river, including the Baťa Canal);
5. Germany: distance marks are used in Inland Electronic Navigation Charts (IENC) for hectometre markings; each waterway is marked;
6. Poland: there are no legal requirements for kilometre markings in Poland, however, the markings are used on the Polish waterways;
7. Romania: the Danube with its main and secondary branches;

SIGNI *Regional and National Special Requirements*

- Article 6.2 (continued)
8. Russian Federation: according to GOST 26600-98;
 9. Slovakia: on monitored waterways;
 10. Sava Commission.

Chapter 7, Marking of prohibited or restricted zones

Article 7.1.1 The following administrations prescribe the use of special marks for prohibited or restricted zones other than indicated in Article 2.4.5:

1. Czech Republic: restricted zones marked with yellow barrel buoys, labelled “SPORT”, for activities indicated by bank marks, e.g. E 17;
2. Germany: a yellow buoy (example: on the Danube);
3. Russian Federation: special marks for prohibited or restricted zones are not used, and special instructions are provided on pilot charts.

7. Table 3 below presents an overview of existing regional and national special requirements deviating from the Guidelines for Waterways Signs and Marking (Resolution No. 59, revision 2).

Table 3

Special requirements deviating from the Guidelines for Waterway Signs and Marking (Annex to Resolution No. 59, revision 2)

Res. No. 59 *Regional and National Special Requirements***Chapter 2, Requirements to be met by signs and marks and their marking plan**

Article 2.2 The following administrations require the installation of temporary signs and marks, in addition to regular ones:

1. Belarus: temporary (spring flood) marks are installed on free-flowing rivers for marking submerged banks, isles and other dangerous points during the spring flood period. They do not indicate the fairway directly and used in combination with other signs and natural landmarks. Special marking plans are required for them;
2. Bulgaria: temporary floating bank marks are provided at a low water level; no special marking plans are required;
3. Germany: temporary signs and marks are not encoded in IENC, but they constitute a part of the Aids-to-Navigation (AtoN) concept (visualisation in Inland ECDIS via AIS⁶). The marking plan is visualized via a Web Map Service (WMS) from the national notice mark database;
4. Poland: there are no legal requirements for the installation of temporary signs and marks in addition to regular ones, however, they are installed on some stretches;
5. Russian Federation: temporary spring flood marks are installed during the spring flood period, according to GOST 26600-98;
6. Slovakia: the installation of temporary signs and marks is not required; however, during the winter period, buoys with light signals can be replaced by radar reflector buoys;
7. Sava Commission: the corresponding Article of our Rules for the waterway marking is fully in line with Article 2.2 of Resolution No. 59 and it presumes the replacement of regular marking with market posts and spars with corresponding topmarks and colours during high water and icing periods. Such replacements (if necessary) are performed by Agencies in the Sava River basin states, which are in charge of the waterway marking. The Sava Commission does not prescribe special marking plans. However, all changes performed by the Agencies are instantly introduced into the joint web application for the waterway marking and can be seen and downloaded from the web site www.savacommission.org/index.php?l=en.

⁶ Automatic Identification System.

Chapter 4, Installation of signs and marking in characteristic sections of the river

Sections 4.2-4.4 The following administrations apply special requirements for the installation of signs and marking for:

- (a) Meandering sectors;
- (b) Shoals;
- (c) Bridges and passages through bridges;
- (d) Other sections;
- (e) The indication of the fairway:
 1. Belarus: (e);
 2. Germany: signal rafts for the gorge section of the Rhine;
 3. Russian Federation: (a) to (e), according to GOST 26600-98.

**Chapter 5, Variable message signs to regulate traffic**

Article 5.1 The following administrations apply variable message signs on inland waterways:

1. Bulgaria: not yet, but a draft has been prepared;
2. Czech Republic: several lock chambers are fitted with variable signs with a height clearance related to the actual water level;
3. Germany: trivision boards, water level gauge indicators;
4. Sava Commission: this article will be introduced in our Rules after the formal procedure and adoption of the new version of the Rules.

Chapter 6, Installation of radar reflectors on marking signs and signals and navigable passes through bridges

Article 6.2 The following administrations require that marking signs and signals are fitted with radar reflectors:

1. Austria: only for floating marks;
2. Bulgaria: all floating signs are fitted with radar reflectors. On the most recent ones, upper figures are fitted with integrated solar panels. In this respect, Section 6 of the Instruction on the installation of signs and markings on the Danube is applied;
3. Germany;
4. Poland: where the fairway is made navigable using a radar;
5. Romania;
6. Russian Federation: for signs made of non-metallic materials (polyethylene), for those not fitted with upper metal supports;
7. Slovakia: all buoys on the Danube;
8. Sava Commission: our Administration generally requires that marking signs and signals are fitted with radar reflectors to ensure their visibility. The corresponding Article from our Rules is fully in line with Article 6.2.

Article 6.3 The following administrations require the marking of bridge pillars for the passage of vessels by radar reflectors:

1. Austria;
2. Bulgaria: Section 6 of the Instruction on the installation of signs and markings on the Danube is applied;
3. Germany: arch bridges with pillars in the fairway;
4. Poland;
5. Romania;
6. Slovakia;
7. Sava Commission.