

Doc. No: IR-50-D-18-1/1-2

Conscious of the importance of the Sava River for the economic, social and cultural development of the region,

Desirous of development of the inland navigation on the Sava River,

Considering that the Directive 2005/44/EC of the European Parliament and of the Council of 7 September 2005 on harmonised river information services (RIS) on inland waterways in the community and Resolution No.80 of the UNECE on International Standard for Notices to Skippers on Inland Waterways, represent a set of guiding regulations with important role in inland navigation,

Wishing to fully implement the Standard for Notices to Skippers for Inland Navigation on the Sava river,

Believing that public authorities can contribute significantly to the improvement of the safety and efficiency of vessel traffic and the protection of the environment through the Notices to Skippers for Inland Navigation on waterways of the Sava River Basin,

In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 9 Paragraph 1 of the Protocol on the Navigation Regime to the Framework Agreement of the Sava River Basin, the International Sava River Basin Commission (hereinafter: Sava Commission), has adopted the following

DECISION 11/18

on adoption of the

STANDARD FOR NOTICES TO SKIPPERS FOR INLAND NAVIGATION IN THE SAVA RIVER BASIN

- 1. Text of the Standard for Notices to Skippers for Inland Navigation in the Sava river Basin is attached to this Decision as its integral part.
- 2. Parties of the Framework Agreement shall adopt the measures necessary to implement this Decision and notify the Sava Commission thereof.

- 3. This Decision shall be binding for the Parties of the Framework Agreement unless any of the Sava Commission members withdraws his vote within 30 days after the decision has been adopted, or informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his or her State.
 - If any of the Sava Commission members withdraws his or her vote within 30 days after the decision has been adopted, or informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his or her State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.
- 4. If no member withdraws his or her vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his or her State, the Decision shall enter into force on January 5, 2019.
- 5. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties of the Framework Agreement.
- 6. The Sava Commission Secretariat shall notify the Parties of the Framework Agreement of the entry into force of the Decision.

Zagreb, December 5, 2018

Mr. Igor Pejić Chairman of the Sava Commission



STANDARD FOR NOTICES TO SKIPPERS FOR INLAND NAVIGATION IN THE SAVA RIVER BASIN (Edition 3.0)

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PREFACE

In the recent years many countries have implemented internet-services for notices to skippers. Most of the existing services are providing information in the national language. As many notices are safety related or very important for the planning of voyages, the availability of all the notices for European waterways in all the languages would contribute to increasing safety and competitiveness of Inland Navigation.

This standard has been developed by the "Notices to Skippers Expert Group".

SUBJECT MATTER

This Standard establishes a framework for the deployment and use of Notices for Skippers in inland navigation (NtS) in the Sava River Basin in order to support inland waterway transport with a view to enhancing safety, efficiency and environmental friendliness and to facilitating interfaces with other transport modes.

This Standard provides a framework for the establishment and further development of technical requirements, specifications and conditions to ensure notices for skippers on the inland waterways from the Scope bellow. Such establishment and further development of technical requirements, specifications and conditions shall be carried out by the International Sava River Basin Commission (Sava Commission). In this context, the Sava Commission shall take due account of measures developed by relevant international organisations, such as EU, Danube Commission, PIANC, CCNR and UNECE. Continuity shall be ensured with other modal traffic management services, in particular maritime vessel traffic management and information services.

SCOPE

The present Standard shall be applied on the waterways on the Sava River from the river kilometer 0.00 to the river kilometer 594.00, on the Bosna River from the river kilometer 0.00 to the river kilometer 5.00, on the Vrbas River from the river kilometer 0.00 to the river kilometer 0.00 to the river kilometer 0.00 to the river kilometer 15.00 and on the Kupa River from the river kilometer 0.00 to the river kilometer 5.00.

ABBREVIATIONS

ENC Electronic Navigational Chart FIS Fairway Information System

Inland ECDIS Inland Electronic Chart Display and Information System

GlW Gleichwertiger Wasserstand

GSM Global System for Mobile communications

ID Identification

RIS River Information Services

RNW Regulierungsniederwasserstand

URL Uniform Resource Locator; a type of Uniform Resource Identifier (URI)

that specifies where an identified resource is available and the mechanism

for retrieving it.

UTF-8 8-bit UCS/Unicode Transformation Format

VHF Very High Frequency

WAP Wireless Application Protocol
WGS 84 Wold Geodetic System 1984
XML Extended Markup Language

1 INTRODUCTION

In the following, the primary functions and performance requirements are described.

Fairway Information Services (FIS) contain geographical, hydrological and administrative data that are used by skippers and fleet managers to plan, execute and monitor a trip. FIS provide dynamic information (e.g. water levels, water level predictions etc.) as well as static information (e.g. regular operating times of locks and bridges) regarding the use and status of the inland waterway infrastructure, and thereby support tactical and strategic navigation decisions.

Traditional means to supply FIS are e.g. visual aids to navigation, notices to skippers on paper, broadcast and fixed telephone on locks. The mobile phone using GSM has added new possibilities of voice and data communication, but GSM is not available in all places and at all times. Tailor-made FIS for the waterways can be supplied by radiotelephone service on inland waterways, Internet service or electronic navigational chart service (e.g. Inland ECDIS with ENC).

The following Standard for Notices to Skippers provides rules for the data transmission of fairway information via Internet service.

The standardisation of Notices to Skippers will

- provide automatic translation of the most important content of notices in all the languages of the participating countries,
- provide a standardised structure of data-sets in all the participating countries to facilitate the integration of notices in voyage-planning systems,
- provide a standard for water level information,
- be compatible with the data-structure of Inland ECDIS to facilitate integration of Notices to Skippers into Inland ECDIS,
- facilitate data-exchange between different countries,
- use standard vocabulary in combination with code lists.

It will not be possible to standardise all the information, which is contained in Notices to Skippers. Part of the information will be provided as "free text" without automatic translation. The standardised part should cover all the information which is

- important for the safety of Inland Navigation (for example: sunken small craft on the right side of the fairway at the Sava, river-km 210),
- needed for voyage planning (for example: closure of locks, reduction of vertical clearance,
 ...)

Additional information (for example: cause of the closure of a lock) can be given as free text.

2 DATA STANDARD

Notices to Skippers shall be provided according to chapter 7, Structure of the messages and coding in XML-format, part XML message specification.

In order to enable a broad applicability, the XML message definition contains a wide range of elements. The message is structured into entities (tags), such as sections, groups, subgroups and data elements. The use of free text in the data elements should be restricted to a minimum. Wherever possible, data elements are encoded (standardised). The XML message definition defines the structure of the XML message and the codes. The standardised code values, their explanation and translation into 24 languages

are provided in reference tables $(Appendix B)^1$, which is maintained by the Notices to Skippers Expert Group.

The XML scheme for Notices to Skippers, which is based on the XML definition and the standardised code values, contains a complete definition for all the XML elements including possible formats and code values (**Appendix C**) 2 and is maintained by the Notices to Skippers Expert Group.

In order to obtain a machine-readable XML message one has to fill out the empty fields in the XML scheme (free text) and to select the code values from the value lists provided in the XML scheme.

The reference tables and XML scheme of Notices to Skippers are published at the EU RIS Portal, particularly NtS Expert Group internet link: http://www.ris.eu/library/expert_groups/nts/nts_version_3_0

3 WATER LEVEL INFORMATION

Water level information is very important for voyage planning as well as safety. At the moment there is no common standard of referencing water level information (Germany for example is using the GlW, "gleichwertiger Wasserstand", the Danube Commission is recommending the RNW, Regulierungsniederwasserstand, which is defined slightly different. The vertical clearance is mostly referred to a high water level, but sometimes to low water level. The values of gauges are referring to different sea-levels or to special reference points). Therefore it is not possible to integrate water level information in systems for automatic calculation of clearances.

The reference tables for Notices to Skippers (Appendix B) contain a list of gauges relevant for inland navigation with their reference values. The water level information in the message can be referred to the zero point of a gauge, as it has been done in the past, and the on-board software can calculate the absolute height by use of the reference data of the standard.

4 WAY OF DISTRIBUTION

Member States shall ensure that Notices to Skippers are provided according to this standard in XML format downloadable in the Internet. In order to enable a specific download, Internet services should provide a possibility to select:

- a specific waterway section (ID number of a fairway section according to Table 1) or
- a specific part of a waterway, defined by the river-km (ID of a fairway hectometer according to Table 1) of the start and the end point;
- a time of validity (starting date and end date according to Table 1) and
- and a date of publication of the notice (date of publication according to Table 1).

Notices according to this standard can additionally be provided for example by

- WAP (Wireless Application Protocol) services,
- E-mail services,
- web services³.

Data exchange between the authorities is recommended. All the authorities using this standard can integrate Notices to Skippers of other authorities and countries in their own services. The

¹ Notices to Skippers Expert group portal:

http://www.ris.eu/docs/File/421/nts_tables_3_0_1_at_bg_sk_cr089_nl_hu_fr_ro_cr110_114_115_cr080_076_125_126_127.xls_

Notices to Skippers Expert group portal: http://www.ris.eu/docs/File/421/nts_v3_0.xsd

³ A standardized method for exchanging notices to skippers by means of Web Service (WS) technology is under elaboration. WS will enable an easier and more secure method for exchanging notices to skippers.

participating parties (authorities) can agree the procedure of transmitting the XML messages by push or pull services directly.

5 WEATHER MESSAGES

In most tidal waters and on many of the other inland waterways, a number of hydro-meteo items are measured continuously and distributed online. The primary addressee of these measurements are the water(-way) authorities. The distribution of these data to users like skippers of inland waterway vessels varies greatly. In order to facilitate the distribution of hydro-meteo information from hydrometeo networks to skippers, dedicated weather messages shall be distributed as Notices to Skippers in accordance with the Table 1. XML message definition..

The member states are not obliged to provide weather data.. If such data is provided, this shall be done in line with this standard.

6 PROCEDURE FOR CHANGES IN THE REFERENCE TABLES AND THE XML SCHEME OF NOTICES TO SKIPPERS

Proposals for amendments to the reference tables or the XML scheme have to be sent together with an explanation, why the amendment is needed to the chairperson of the Notices to Skippers expert group.

The chairperson shall distribute the proposal to the members of the expert group as well as to the secretariat of the ISRBC. As regards the expert group, the amendment procedure as defined in the Terms of Reference for the Notices to Skippers expert group shall apply.

The secretariat of the ISRBC will proceed with the amendment in accordance with the procedures established by the ISRBC. In this context, one shall take due account of the work of the expert group.

If a proposal for amendment is adopted, the updated reference tables and XML scheme are published by the ISRBC.

7 STRUCTURE OF THE MESSAGES AND CODING IN XML-FORMAT

This chapter describes the structure and formatting of standardised electronic Notices to Skippers messages.

7.1 Structure of the Notices to Skippers

7.1.1 General

Notices to Skippers have the following information sections:

- Identification of the message;
- Fairway and traffic related message;
- Water level related messages as:
 - Water level messages,
 - Least sounded depth messages,
 - Vertical clearance messages,
 - Barrage status messages,
 - Discharge messages,

- Regime messages,
- Predicted water level messages,
- Least sounded predicted depth messages,
- Predicted discharge messages;
- Ice message;
- Weather message.

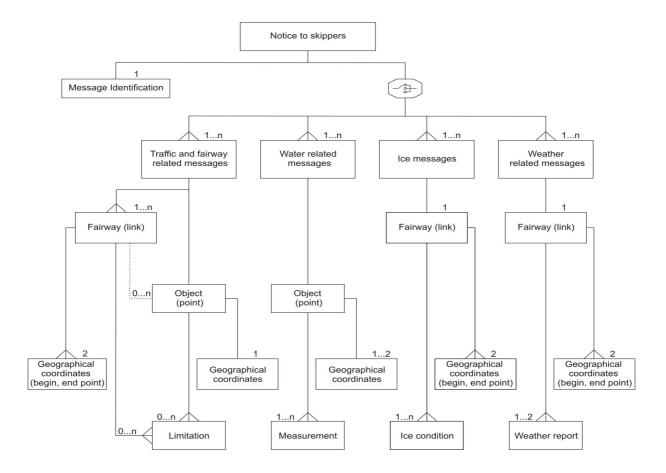


Figure 1: Notice to Skippers message structure

A standardised message in XML format contains therefore 5 different sections:

- Message identification,
- Fairway and traffic related messages,
- Water level related messages,
- Ice messages,
- Weather messages.

Normally in one message only 2 sections will be filled: The message identification section and at least one of the sections - fairway and traffic related message, water level related message, ice message or weather message (mix of sections, different type of message information is not allowed).

The fairway and traffic related section contains limitations for a fairway (link) or an object. The diagram also shows that a Notice to Skippers relates to a fairway or a geographical object (point). If the message is about an object the fairway section shall be filled with the related fairway information without the limitation section.

If a notice contains different limitations for different target groups or different communication information for different limitations, several fairway and traffic related sections with the same number can be used.

The Water level related message section contains measurements for an Object usually a tide gauge.

The Ice message section contains information about the ice conditions for a fairway (link). The Weather message contains information about the weather conditions for a fairway (link).

7.1.2 XML message definition overview

This section gives an overview of the definition of the message coded in XML. The XML scheme containing a complete definition for all the XML elements including the possible formats can be found in the Appendix C: http://www.ris.eu/docs/File/421/nts_v3_0.xsd

Table 1 XML message specification

Nr.	Tag (Group headers and closers are boldly printed)	Description	Mandatory Conditional	Rule applicable
	xml version="1.0" encoding="utf-8" ?			
	<ris message=""></ris>	Notice to Skippers		
1s	<id>dentification></id>	Identification section	М	1
1.1	<from>String</from>	Sender of the message		
1.2	<originator>Riza</originator>	Originator (initiator) of the information in this message	M M	
1.3	<pre><country code="">CH</country></pre>	Country where message is valid	M	
1.4	<language code="">HU</language>	Original language used in the textual info. (contents)	M	
1.5	doi.org/10.100/j.miguage_code <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100="" a="" doi.org="" href="https://doi.org/10.100/j.miguage_code <a href=" https:="" j.miguage_code<=""> <a 10.100<="" doi.org="" href="https://doi.org/10.100/j.miguage_code <td>District / Region within the specified country, where the message is applicable</td><td>C</td><td></td>	District / Region within the specified country, where the message is applicable	C	
			C	
1.6	<date_issue>20011231<date_issue></date_issue></date_issue>	Date of editing	•	
1.7	<tirme_issue>1145<tirme_issue></tirme_issue></tirme_issue>	Time of editing	С	
1e				
2s	<ftm></ftm>	Fairway and traffic related section	С	T 1
2.1	<pre></pre>	Year of first issuing of the notice	M	
2.2	<number>9999</number>	Number of the notice (per year)	M	
2.3	<serial number="">99</serial>	Serial number of the notice (replacements and withdrawals).	M	
2.3	<senai_number>aa</senai_number>	Original notice: 00	IVI	
2.4s	<target_group></target_group>	Target group information	С	
2.4.1	<target code="" group="">ALL</target>	Target group (vessel type) for this message	M	Default: all
2.4.2	<pre><direction code="">ALL</direction></pre>	Upstream or downstream traffic, or both	M	Default: all
2.4e	<pre>//direction_codes/</pre>	opstream of downstream traile, or both	IVI	Delault.all
2.46	<subject code="">OBSTRU</subject>	Subject code	М	
2.6s	<pre><validity period=""></validity></pre>	Overall period of validity	M	
2.6.1		Start date of validity period	M	
	<date_start>20011231</date_start>			
2.6.2	<date_end>99999999</date_end>	End date of validity period (indefinite: 99999999)	М	
2.6e		Ocatosta / motios to time of simulations and simulations are simulations are simulations and simulations are simulations and simulations are s	С	
2.7	<contents>String</contents>	Contents / notice text in original language	-	
2.8	<source/> String	Notice source (authority)	С	
2.9	<reason_code>REPAIR</reason_code>	Reason / justification of notice	C	
2.10s	<communication></communication>	Communication channel information	С	
2.10.1	<reporting_code>INF</reporting_code>	Reporting regime (information or duty to report)	М	5
2.10.2	<communication_code>TEL</communication_code>	Communication code (telephone, VHF etc.)	М	5
2.10.3	<number>String</number>	Telephone, VHF number, e-mail address, URL or teletext	С	5
2.10e				
2.11s	fainter continu	Fairway agetion, also available for objects (no. 2.12)	М	2
	<fairway_section></fairway_section>	Fairway section, also available for objects (no. 2.12)		4
2.11.1s	<geo_object></geo_object>	Geo information of fairway	M	
2.11.1.1	<id>String</id>	Unique id of the fairway section (1x or 2x)	M	
2.11.1.2	<name> String </name>	(Local) Name of the fairway section (f.e.: Rhine between bridge A and bridge B)	M	Defends FMM
2.11.1.3	<type_code>FWY</type_code>	Type of geographical object	М	Default: FWY
2.11.1.4s	<coordinate></coordinate>	Fairway section begin and end coordinates (2x)	C	
2.11.1.4.1	< at>42 34.1234 N at		М	5
2.11.1.4.2	<long>123 45.1234 E</long>		М	5
2.11.1.4e				
2.11.1e				
2.11.2s		Fairway section limitations	С	
2.11.2.1s	limitation_period>		С	
2.11.2.1.1	<pre><date_start>20011231</date_start></pre> <pre>Start date of limitation period (overall)</pre>		M	5
2.11.2.1.2	<date_end>20011231</date_end> End date of limitation period		С	
2.11.2.1.3	<time_start>1420</time_start>	Start time of limitation period	С	
2.11.2.1.4	<time_end>0500</time_end>	End time of limitation period	С	

Nr. Tag	g (Group headers and closers are boldly printed)	Description	Mandatory Conditional	Rule applicable
2.11.2.1.5	<interval_code>SAT</interval_code>	Interval for limitation if applicable	С	
2.11.2.1.e		··		
2.11.2.2	<pre></pre> code>OBSTRU/limitation_code>	Kind of limitation	M	5
2.11.2.3	<pre><position_code>AL</position_code></pre>	Position, which side	M	5, default: AL
2.11.2.4	<value>3.14159</value>	Value of limitation (i.e. max draught)	С	
2.11.2.5	<reference_code>NAP</reference_code>	Value reference	С	
2.11.2.6	<indication_code>MAX</indication_code>	Indication of the type of value (select a code from the reference table)	С	
2.11.2e				
2.11.e				
2.12s	<object></object>	Object section ()	С	3
2.12.1s	<pre><geo_object></geo_object></pre>	Geo Information of object	M	5
2.12.1.1.	<id><id>String</id></id>	Unique id of the geographical object	M	5
2.12.1.2	<name>String</name>	(Local) Name of the geographical object	M	5
2.12.1.3	<type_code>FWY</type_code>	Type of geographical object	M	5
2.12.1.4s	<coordinate></coordinate>	Object coordinates (1x)	С	8
2.12.1.4.1	< at>42 34.1234 N at		M	5
2.12.1.4.2	<lor><lorg>123 45.1234 E</lorg></lor>		М	5
2.12.1.4e				
2.12.1e				
2.12.2s	dimitation>	Object limitation section	С	
2.12.2.1s	<pre></pre>	Limitation periods / intervals	С	
2.12.2.1.1	<date_start>20011231</date_start>	(see <fairway section="">)</fairway>	M	5
2.12.2.1.2	<date_end>20011231</date_end>		С	
2.12.2.1.3	<time_start>1420</time_start>		С	
2.12.2.1.4	<time_end>0500</time_end>		С	
2.12.2.1.5	<interval_code>SAT</interval_code>		С	
2.12.2.1e				
2.12.2.2	<pre><limitation_code>OBSTRU</limitation_code></pre>		M	5
2.12.2.3	<pre><position_code>AL</position_code></pre>		M	5, default: AL
2.12.2.4	<value>3.14159</value>		С	
2.12.2.5	<reference_code>NAP</reference_code>		С	
2.12.2.6	<indication_code>MAX</indication_code>		С	
2.12.2e				
2.12e				
2e	_		1	

3s	<wrm></wrm>	Water level related section	С	1
3.1s	<validity_period></validity_period>	Overall period of validity of water level message	С	
3.1.1	<date_start>20011231</date_start>	Start date of validity period	M	5
3.1.2	<date_end>20011231</date_end>	End date of validity period	M	5
3.1e				
3.2s	<geo_object></geo_object>	Geo Information of measurement location, tide gauge	M	5
3.2.1	<id>String</id> (Waterway section)	Unique id of the geographical object	M	5
3.2.2	<name>String</name> (Pegelname)	(Local) Name of the geographical object	M	5
3.2.3	<type_code>FWY</type_code>	Type of geographical object	M	5, default: FWY
3.2.4s	<coordinate></coordinate>	Object coordinates (1x or 2x)	С	9
3.2.4.1	<lat>42 34.1234 N</lat>		M	5
3.2.4.2	<long>123 45.1234 E</long>		М	5
3.2.4e				
3.2.e				
3.3	<reference_code>NAP</reference_code>	Value reference (measurement reference)	С	6
3.4s	<measure></measure>	Measurements (normal or predicted values)	M	5
3.4.1	<pre><pre><pre></pre></pre></pre>	Predicted measurement (1) or real measurement (0)	M	5
3.4.2	<measure_code>DIS</measure_code>	Kind of water level related information	M	5
3.4.3	<value>314159</value>	Value	С	10

Nr.	Tag (Group headers and closers are boldly printed) Description		Mandatory Conditional	Rule applicable	
3.4.4	<difference>314159</difference>	Difference with previous measurement	С		
3.4.5	<barrage_code>OPD</barrage_code>	Barrage status	С	11	
3.4.6	<regime_code>HIG</regime_code>	Regime applicable	С	12	
3.4.7	<measuredate>20011231</measuredate>	Date of measurement	M	5	
3.4.8	<measuretime>1420</measuretime>	Time of measurement	М	5	
3.4e 3e					
4s	<icem></icem>	Ice related section	C	1	
4.1s	<validity_period></validity_period>	Overall period of validity of ice information	C	_	
4.1.1	<date_start>20011231</date_start>	Start of validity period	M	5	
4.1.2	<ate_end>20011231</ate_end>	End of validity period	М	5	
4.1e		F .		_	
4.2s	<fairway_section></fairway_section>	Fairway	M	5	
4.2.1	<geo_object></geo_object>	Geo Information of fairway location	M	5	
4.2.1.1	<id>String</id>	Unique id of the fairway section (1x or 2x)	M	5	
4.2.1.2	<name>String</name>	(Local) Name of the fairway section	M	5	
4.2.1.3	<type_code>FWY</type_code>	Type of geographical object	М	5, default: FWY	
4.2.1.4	<coordinate></coordinate>	Fairway section begin and end coordinates (2x)	С	7	
4.2.1.4.1	< at>42 34.1234 N at		M	5	
4.2.1.4.2	<long>123 45.1234 E</long>		M	5	
4.2.1.4e					
4.2.1e					
4.2.2s		Fairway section limitations		not applicable	
4.2.2e		Fairway section limitations		not applicable	
4.2e					
4.3s	<ice_condition></ice_condition>	Ice conditions	M	5	
4.3.1	<measuredate>20011231</measuredate>	Date of measurement	M	5	
4.3.2	<measuretime>1420</measuretime>	Time of measurement	M	5	
4.3.3	<ice_condition_code>A</ice_condition_code>	Condition code	С	4	
4.3.4	<ice_accessibility_code>A</ice_accessibility_code>	Accessibility code	С	4	
4.3.5	<ice classification="" code="">A</ice>	Classification code	С	4	
4.3.6	<ice code="" situation="">NOL</ice>	Situation code	С	4	
4.3e					
4e					
5s				l	
	-Warms	Weather related section		1	
	<werm></werm>	Weather related section Period of validity	C	1 5 12	
5.1s	<validity_period></validity_period>	Period of validity	М	1 5, 13	
5.1s 5.1.1	<validity_period> <date_start>20011231</date_start></validity_period>	Period of validity Start of validity period	M M	1 5, 13	
5.1s 5.1.1 5.1.2	<validity_period></validity_period>	Period of validity	М	1 5, 13	
5.1s 5.1.1 5.1.2 5.1e	<validity_period></validity_period>	Period of validity Start of validity period End of validity period (indefinite: 99999999)	M M M		
5.1s 5.1.1 5.1.2 5.1e 5.2s	<validity_period></validity_period>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway	М М М	5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 9999999) Fairway Geo Information of fairway location	М М М	5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x)	M M M M M	5 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section	М М М М М	5 5 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x)	M M M M M M	5 5 5 5 7	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3s	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section	M M M M M M C C	5 5 5 5 7 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section	M M M M M M	5 5 5 5 7	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section	M M M M M M C C	5 5 5 5 7 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section	M M M M M M C C	5 5 5 5 7 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3e 5.2.1.3e 5.2.1.5e	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x)	M M M M M M C M	5 5 5 5 7 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.3.2 5.2.1.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x)	M M M M M C M M	5 5 5 5 7 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.3 5.3.3 5	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x) Actual (0) or Forecast (1) report	M M M M M C M M	5 5 5 5 7 5 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.3.3	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x)	M M M M M C M C M M	5 5 5 5 7 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.2 5.2.1.3.3 5.3.3 5	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x) Actual (0) or Forecast (1) report Classification of weather report (0Nx) Weather items (0Nx)	M M M M M C M M M	5 5 5 5 7 5 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.1 5.2.1.3.e 5.2.1.3e 5.2.1.3e 5.2.1.3e 5.2.1.5 5.3.1 5.3.2 5.3.3.3 5.3.3.1	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x) Actual (0) or Forecast (1) report Classification of weather report (0Nx)	M M M M M C M M M	5 5 5 5 7 5 5 5 5	
5.1s 5.1.1 5.1.2 5.1e 5.2s 5.2.1s 5.2.1.1 5.2.1.2 5.2.1.3s 5.2.1.3.2 5.2.1.3e 5.2.1.3e 5.2.1.3e 5.2.1.3e 5.2.1.5 5.2.1.5 5.2.2.5 5.2.1.3e 5.2.2.1.3e 5.2.1.3	<pre><validity_period></validity_period></pre>	Period of validity Start of validity period End of validity period (indefinite: 99999999) Fairway Geo Information of fairway location Unique id of the fairway section (1x or 2x) (Local) Name of the fairway section Fairway section begin and end co-ordinates (2x) Weather Report (1x or 2x) Actual (0) or Forecast (1) report Classification of weather report (0Nx) Weather items (0Nx)	M M M M M C M M M	5 5 5 5 7 5 5 5 5 5	

Nr.	Tag (Group headers and closers are boldly printed)	Description	Mandatory Conditional	Rule applicable
5.3.3.4	<value gusts="">7</value>	Gusts value (Wind)	С	
5.3.3.5	<weather_category_code>2</weather_category_code>	Classification of wind report	С	
5.3.3.6	<direction_code_min>W</direction_code_min>	Direction of wind or wave	С	
5.3.3.7	<direction_code_max>N</direction_code_max>	Direction of wind or wave	С	
5.3.3e	weather_item			
5.3e				
5e				

Rules applicable to Table 1:

- 1 In one message at least 2 sections have to be filled in:
 - the identification section (1) and
 - one of the sections:
 - Fairway and traffic related messages (2),
 - Water level related message (3),
 - Ice message (4),
 - Weather message (5).
- 2 Group 2.11 (fairway section) is also available for object related messages (no. 2.12).
- 3 Group 2.12 (objects) is not available for fairway related messages (no. 2.11).
- 4 In group 4.3, at least one of the conditional elements 4.3.3 to 4.3.6 have to be filled in.
- 5 If a conditional group contains mandatory subgroups or elements these are only mandatory if the group on the higher level is applied.
- 6 Only mandatory for water levels and vertical clearances.
- A fairway section is defined by the begin and end coordinates (2 sets of coordinates).
- 8 An object is defined by the coordinates of its center point (1 set of coordinates).
- 9 A wrm geo_object has 2 sets of coordinates in case the type_code is FWY, otherwise only 1 set of coordinates is to be used.
- 10 Mandatory if measure_code is either "DIS", "VER", "LSD" or "WAL".
- 11 Mandatory if measure code is "BAR".
- 12 Mandatory if measure code = "REG".
- 13 Predictions for different periods require individual weather messages.
- May contain combinations of weather_class_code tags.

7.1.3 Explanation of tags

The meaning of the different tags used in the XML definition is described on the page "Tags" of the reference tables for Notices to Skippers (Appendix B).

7.1.4 Explanation of codes

The meaning of the different codes used in the XML definition is described in the reference tables for Notices to Skippers (Appendix B).

The formats and possible values of all XML elements are described in the XML scheme for Notices to Skippers (Appendix C).

- Notices to Skippers can be divided into two categories, namely URGENT and NOT URGENT. Urgent notices always contain a limitation for shipping traffic. There must therefore be one or more records in the limitations section. If there is no limitation section, the message is not urgent.
- Latitude and longitude coordinates are referred to WGS 84 and presented in degrees and minutes with at least three, but preferable four decimals (dd mm.mmmm N, ddd mm.mmmm E)
- Decimals in numeric fields are indicated with a decimal point ("."). No thousand separators are used.
- Only cm, m!/s, h, km/h, kW, Bft (wind), mm/h (rain) and degree Celsius are allowed to be used as units.
- For waterways there is no objects section. For objects (bridges, etc.) the waterway section shall be included.
- The location code according to the Standard for Electronic Ship Reporting in Inland Navigation has to be used as unique ID.

7.1.4.1 Subject codes assigned to the Notices to Skippers

In the following, the meaning of and situations defined by the different (examples of) subject codes are explained.

Blockage

In case, no form of navigation is possible:

- through all the lock chambers of a lock,
- through all the passages of a bridge,
- passing a specified point on the fairway,
- on a specified section of the fairway.

Partial obstruction

In case, limited navigation is possible:

- through one or more lock chambers of a lock, leaving at least one open,
- through one or more passages of a bridge, leaving at least one open,
- passing a specified point on the fairway, leaving a part of the fairway open.

<u>Delay</u>

In case, an obstruction occurs, limited in time, at a bridge, lock or on a section, between a specified start and end date.

For example: Delay of at most 2 hours on November 13 between 08:00 and 17:00.

Encoded:

date_start: 20021113
date_end: 20021113
time_start: 0800
time_end: 1700
limitation_code: Delay
position_code: All
value: 2

No service

In case a movable bridge is not operated during a specified period. This period should lie within the normal operating hours.

No service of a lock is an 'Obstruction' or 'Delay'.

No service of a movable bridge means that passing under the bridge still is possible. Otherwise it is an 'Obstruction'.

Change Service

In case a modification in the normal operating hours occurs at a lock or a bridge.

Normally this means a limitation of the operating hours, due to work, rather than an increase.

A limitation in the operating hours of a lock usually implies an obstruction. For example if a lock normally is operated between 06:00 and 20:00, and the operating hours are now limited to between 10:00 and 14:00, then this will result in an obstruction between 06:00 and 10:00 and another obstruction between 14:00 and 20:00.

A limitation in the operating hours of a bridge usually implies 'No Service'.

Vessel length

In case somewhere a smaller maximum length for passing vessels is allowed / possible.

Usually this occurs at a lock (half lock chamber).

Clearance width

In case somewhere a smaller maximum width for passing vessels is available.

This occurs during work on a lock / bridge.

This subject is also used if the available width of the fairway is less, even if this has no influence on the maximum available width of the waterway.

Vessel air draught

In case somewhere a smaller maximum height for passing vessels is allowed.

<u>Clearance height</u> This occurs also if the vertical clearance is locally decreased by for

example painting equipment

Vessel draught In case somewhere a smaller maximum draught for passing vessels is

allowed.

Available depth In case the least sounded depth is modified. This has no impact on the

maximum draught.

<u>No mooring</u> In case somewhere on the fairway mooring is not allowed.

Change marks In case a change occurs in the fairway marks used for navigational

purposes, such as buoys, beacons, sector lights, notice marks, etc. Encoding of "Change marks" can be used for NEW MARKS as it

indicates the change from the state "no marks" to "some marks".

Work Other activities on or near the fairway which do not fall within the

mentioned subjects.

<u>Dredging</u> Dredging activities for which none of the other mentioned subjects are

valid.

Exercises Exercises for which none of the other mentioned subjects are valid.

Events (rowing competitions, fireworks etc.) where none of the other

mentioned subjects are valid.

Announcement All other notices where none of the other (structured) subjects are valid.

Notice withdrawn The message has to be published as a serial number of the original

message.

If for one single message more subjects are possible, then the limitation with the greatest impact on shipping traffic is selected.

7.1.4.2 Explanation of ice codes

The meaning of the ice codes used in the XML definition is described in the reference tables of Notices to Skippers (Appendix B).

The thickness indicated in column 2 of the ice_condition_code gives information on average thickness only. The description has to be used to select the code for a specific situation.

7.1.4.3 Encoding of limitation periods

The limitation period has to be encoded by

- date_start
- date_end
- time_start
- time_end
- interval_code.

As the limitation period is very important for voyage planning, limitation periods have to be encoded in accordance with the following examples:

Limitation period	date_start	date_end	time_start	time_end	Interval_code
2005-01-01, 07:00 to 2005-01-31, 20:00	20050101	20050131	0700	2000	Continous (C)
2005-01-01 to 2005-01-31, each day from 07:00 to 20:00	20050101	20050131	0700	2000	Daily (M)
2005-01-01 to 2005-01-31, every working day (Monday to Friday) from 07:00 to 20:00	20050101	20050131	0700	2000	Monday to Friday (M)
05-01-01 to 2005-01-21, each week from	20050103	20050107	0700	2000	Continous (C)
Monday 07:00 to Friday 20:00	20050110	20050114	0700	2000	Continous (C)
	20050117	20050121	0700	2000	Continous (C)
2005-01-01 to 2005-01-31, each day from	20050101	20050131	0700	2000	Daily (M)
07:00 to 20:00 with the exception of 2005-01-06	20050106	20050106			With the exception of (M)

APPENDIX A: SPECIFICATIONS OF EXAMPLES FOR THE IMPLEMENTATION OF THE NOTICES TO SKIPPERS STANDARD

Example for the presentation of a Notice to Skippers

In the following example the text mask is given in plain text, the content of the message with grey underlay. Sections, which are not obligatory, are in square brackets.

Notice to Skippers

A new Notice to Skippers of via-donau is available for [the Donau waterway in] Austria in the original language German, which has been compiled by BMVIT, Schifffahrtspolizei [on 10 June 2003 at 11:10]:

The fairway and traffic related message no 89/00 in the year 2003, [published by the Strom- und Hafenaufsicht Hainburg] concerning dredging [caused by siltation] is valid between 7 October 2003 and 25 October 2003 [for all vessels in all directions].

[Additional information is provided via internet, www.via-donau.org] or

[There exists an additional duty to report via VHF channel 16.]

[On workdays from 7 October 2003 until 25 October 2003 between 06:00 o'clock and 19:00 o'clock] following limitation is valid for the waterway Donau, Furt Orth, km 1902,000 to 1902,600: available depth [210 cm referred to low water level Danube Commission] along the left side of the fairway.

[[On workdays from 7 October 2003 until 25 October 2003 between 06:00 o'clock and 19:00 o'clock] following limitation is valid for the lock Greifenstein, km 1950,000: available length [200 cm referred to equivalent low water level] along the left side of the fairway.]

Additional text in national language: [xxxx]

Water level related message

This message is valid for the gauge Kienstock [between 10 June 2003 and 11 June 2003].

All values are referred to the zero point of gauge.

The measured value for the water level on 10 June 2003 at 10:00 o'clock was 197 cm.

[The difference to the last measured value is +15 cm]. [At the moment the barrage is closed] and [navigation faces normal regime.]

[According to the forecast the water level on 11 June 2003 at 12:00 o'clock will be 205 cm].

Ice related message

This message is valid for the waterway Danube [between 3 December 2003 and 5 December 2003].

On 3 December 2003 at 0:00 o'clock navigation faced [light floating ice] [Navigation is normal.] [The section is navigable] [and skippers face no limitation.]

APPENDIX B REFERENCE TABLES

Reference tables for the Standard for Notices to Skippers are maintained and presented on the **EU River Information Services Portal**, particularly on the **NtS Expert Group web page**, at:

http://www.ris.eu/docs/File/421/nts_tables_3_0_1_at_bg_sk_cr089_nl_hu_fr_ro_cr110_114_115_cr080_07_6_125_126_127.xls

APPENDIX C XML-SCHEME

NtS XML-Scheme for the Standard for Notices to Skippers is maintained and presented on the **EU River Information Services Portal**, particularly on the **NtS Expert Group web page**, at:

http://www.ris.eu/docs/File/421/nts_v3_0.xsd