NAVIGATION RULES ON THE SAVA RIVER BASIN

RULES ON MINIMUM MANNING REQUIREMENTS FOR THE VESSELS ON THE SAVA RIVER BASIN

RULES ON MINIMUM REQUIREMENTS FOR THE ISSUANCE OF BOATMASTER’S LICENSES ON THE SAVA RIVER BASIN

RULES FOR WATERWAY MARKING ON THE SAVA RIVER BASIN

DETAILED PARAMETERS FOR WATERWAY CLASSIFICATION ON THE SAVA RIVER

CLASSIFICATION OF THE SAVA RIVER WATERWAY

International Sava River Basin Commission
Zagreb, 2009
Foreword

In last two decades, navigation and transport on the Sava river were, for known reasons, primarily affected by a lack of investments into the waterway maintenance and the waterway infrastructure development, which, nowadays, resulted in a significant decrease of the cargo transport with respect to the year 1990.

A solid basis for gradual overcoming of the problem was set by ratification of the Framework Agreement on the Sava River Basin in December 2004, and by establishment of the International Sava River Basin Commission (Sava Commission) in June 2005.

According to the Framework Agreement, the strategic objective of the Sava Commission is coordination of cooperation among the Sava countries in the water sector, with aim to provide conditions for sustainable development of the basin. The Framework Agreement, which integrates all aspects of water resources management in the basin, stipulates the following three particular objectives of cooperation:

- Establishment of the international navigation regime on the Sava river and its navigable tributaries;
- Establishment of sustainable water management in the basin, and
- Management of hazards, such as floods, droughts, ice and water pollution.

The establishment of the international navigation regime on the Sava river, by respecting, at the same time, the other two objectives, includes the realization of a series of activities related to the rehabilitation and development of waterway infrastructure, improvement of navigation safety and upgrade of the technical standards of navigation, thus providing the conditions for the navigation development in a modern and environmentally sustainable manner.

To this end, the Sava Commission has, so far, developed a set of documents related to navigation and passed decisions on their adoption. Herewith, these documents entered into force and became obligatory for the Sava countries, given the legal capacity of the Sava Commission in the field of navigation, stipulated by the Framework Agreement.

Keeping in mind the potential of the Sava river as the element of the Danube and European network of inland waterways, a considerable attention during the preparation of the documents has been paid to their harmonization with the corresponding regulations of other organizations, such as the Danube and Rhine navigation commissions.

This publication, which presents the first part of the documents adopted so far, was prepared in order to make the documents available in appropriate form primarily to interested parties in the Sava river basin (relevant ministries, port authorities, port master offices, skippers and other users of the waterway), as well as to other organizations and institutions, interested in developments in the Sava river basin, and, generally, in the activities of the Sava Commission.

As the published material is made of the „living documents“, which are subject to modifications and upgrades, the publication has been prepared in a form that enables a simple substitution of individual documents, once they are modified or updated.

We hope that the practical usefulness of the publication will be confirmed in near future, which would further motivate the Sava Commission to invest additional efforts in preparation of similar publications.

Zagreb, March 2009

Branko Bačić, Chairman of the Sava Commission
Dejan Komatina, Secretary of the Sava Commission
NAVIGATION RULES
ON THE SAVA RIVER BASIN
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,

Having regard to the European code for inland waterways (CEVNI) and General rules for the navigation on the Danube (OPPD),

In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 2 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), on its VIII Special Session held on November 12-13, 2007, has adopted the following

DECISION – 30/07

on adoption of

NAVIGATION RULES ON THE SAVA RIVER BASIN

1. Text of the Navigation Rules on the Sava River Basin is attached to this Decision as its integral part.
2. This Decision shall apply as of June 01, 2008.
3. Parties shall adopt the measures necessary to implement this Decision and notify the Sava Commission.
4. This Decision shall be binding for the Parties 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 State. If 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 State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.
5. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 13, 2007.
6. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
7. The Sava Commission Secretariat shall notify the Parties of the entry into force of the Decision.

Ref. No: 1S-8-D-07-6/1-3

Zagreb, November 13, 2007

Mr. Kemal Karkin
Chairman of the Sava Commission
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Chapter 1

GENERAL PROVISIONS

Article 1.00 - Scope
The present Rules shall be applied on the inland waterways on the Sava River from the river kilometer 0.00 to the river kilometer 586.00, on the Kolubara River from the river kilometer 0.00 to the river kilometer 5.00, on the Drina River from the river kilometer 0.00 to the river kilometer 15.00, 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 3.00, on the Una River from 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.

The present Rules shall be also applied on inland waterway on river Sava in Republic of Slovenia from border point between Republic of Slovenia and Republic of Croatia up to Brežice.

Article 1.01 - Meaning of certain terms
(a) The term “vessel” means any inland waterway craft intend for navigation, including small craft and ferry-boats, as well as floating equipment;
(b) The term “motorized vessel” means any craft using its own mechanical means of propulsion, except craft whose engines are used only to cover short distances (in harbours or at loading and unloading points) or to make them easier to handle while being towed or pushed;
(c) The term “sailing vessel” means any vessel proceeding under sail only; a vessel proceeding under sail and making use at the same time of its own mechanical means of propulsion shall be considered as a motorized vessel;
(d) The term “small craft” means any vessel with a length less than 20 m, except vessels built or equipped to tow, push or propel in side-by-side formation vessels other than small craft, craft authorized to carry more than 12 passengers and ferry-boats regardless to their length;
(e) The term “floating equipment” means vessel, with or without its own mechanical means of propulsion, equipped with machinery used for work on inland waters (dredgers, elevators, floating cranes, etc.);
(f) The term “floating establishment” means any floating installation that is permanently moored, anchored or laid on the river bed, e.g. landing-places, accommodation-establishment, restaurants, repair-shops, warehouses, pontoon bridges, floating hangars, watermills;
(g) The term “assembly of floating material” means a raft or any construction, assembly or object capable of navigation, other than a vessel or floating establishment;
(h) The term “ferry-boat” means any vessel providing a transport of the persons or goods across a waterway, which is classed as a ferry-boat by the competent authorities;
(i) The term “pushed barge” means any vessel designed or specially equipped to be pushed; “barge” means any vessel designed or specially equipped to be towed;
(j) The term “shipborne barge” means a pushed barge designed to be carried on board seagoing vessels and to navigate on inland waterways;
(k) The term “convoy” means a towed convoy, a pushed convoy or a side-by-side formation;
(l) The term “towed convoy” means any group consisting of one or more vessels, floating establishments
or assemblies of floating material towed by one or more motorized vessels, the later forming part of the convoy and being known as tugs;

(m) The term “pushed convoy” means a rigid group of vessels, one at least of which is placed in front of the motorized vessel propelling the convoy and is known as a pusher;

(n) The term “side-by-side formation” means a group consisting of vessels coupled side by side, none of which is placed in front of the motorized vessel propelling the formation;

(o) A vessel, an assembly of floating material or a floating establishment is “stationary” when it is, directly or indirectly, anchored or made fast to the shore;

(p) A vessel, an assembly of floating material or a floating establishment is “under way” when it is neither directly nor indirectly at anchor, made fast to the shore or grounded. For such vessels, floating equipment or floating establishments under way, the term “stop” applies with respect to the land;

(q) The term “vessel engaged in fishing” means any vessel fishing with nets, lines, trawls or other fishing apparatus that restrict manoeuvrability, but does not apply to a vessel fishing with trolling lines or other fishing apparatus that does not restrict manoeuvrability;

(r) The terms “white light”, “red light”, “green light”, “yellow light” and “blue light” mean lights of colours conforming to the provisions of annex 4 to these regulations;

(s) The terms “strong light”, “bright light” and “ordinary light” mean lights of intensities conforming to the provisions of annex 5 to these regulations;

(t) The terms ‘scintillating light’ and ‘quick scintillating light’ mean rhythmic lights flashing 50-60 times per minute and 100-120 times per minute;

(u) The term “short blast” means a blast lasting approximately one second, and the term “long blast” means a blast lasting approximately four seconds, the interval between two consecutive blasts being about one second;

(v) The term “series of very short blasts” means a series of at least six blasts lasting approximately ¼ second each, separated by intervals of approximately ¼ second; “series of blows” means two peals of bell;

(w) The term “three-tone signal” means a signal repeated three times, of three blasts of different pitch with no interval between them lasting about two seconds in all. The frequency of the blasts shall be within the range 165 to 297 Hertz and the difference between the highest and the lowest blasts shall be at least two full notes. Each series of three blasts shall begin with the lowest and end with the highest note;

(x) The term “night” means the period between sunset and sunrise;

(y) The term “day” means the period between sunrise and sunset;

(2) The term “state of fatigue” means a state occurring as the result of insufficient rest or of sickness, and expressed in deviations from the norm in behaviour and reaction speed;

(aa) The term “state of intoxication” means that a person shall be considered to be in an intoxicated state if blood or blood and urine analysis or some other method of measurement confirms that the blood alcohol level is greater than 0,5 g/Kg or if the presence of alcohol in the organism is confirmed by use of appropriate means or devices (alcometer, etc.) for measuring degree of intoxication, which corresponds with amounts greater than 0,5 g/Kg or a person who upon expert examination, regardless of the blood alcohol level, show signs of alcoholic derangement. Similarly, a person under the influence of narcotics, medicines or some other similar substance shall also be considered to be in an intoxicated state, which shall be established with the assistance of results from laboratory tests or clinical symptoms.
(bb) The term “water bike” means any small craft using its own mechanical means of propulsion, which
is able to carry one or more persons and built or designed to be used for skiing over the water or performing
figures, for example, waterbobs, waterscooters, jetbikes, jetski and other similar craft.

(cc) The term “high-speed vessel” means a motorized vessel, with the exception of small craft, capable
of travelling at a speed greater than 40 km/h in relation to still water, when this is stated in its inspection
certificate;

(dd) The term “reduced visibility” means conditions in which visibility is reduced owing to fog, haze, snow,
rain or other reasons.

(ee) The term “safe speed” means a speed at which a vessel or a convoy can navigate safely, undertake
manoeuvres and stop within the distance required by the prevailing circumstances and conditions;

(ff) The term “left and right bank” means left and right side of the river looking from the river source
towards the river mouth;

(gg) The term “fairway” means zone on inland waterways of a particular depth, width and other dimensions
which is developed, marked and open for safe navigation.

Article 1.02 - Boatmaster
1. Every vessel or assembly of floating material, except vessels in a pushed convoy other than the pusher,
shall be placed under the authority of a person having the necessary qualifications. This person is hereinafter
referred to as the boatmaster.
2. Every convoy shall likewise be placed under the authority of a boatmaster having the necessary
qualifications. This shall be appointed as follows:
   (a) In the case of a convoy with only one motorized vessel, the boatmaster of the convoy shall be the
   boatmaster of the motorized vessel;
   (b) In the case of a towed convoy led by two or more motorized vessels in line, the boatmaster of the
   convoy shall be the boatmaster of the leading vessel, unless that vessel is a temporary auxiliary tug, in which
   case the boatmaster of the convoy shall be the boatmaster of the second vessel;
   (c) In the case of a towed convoy led by two or more motorized vessels not in line, one of which provides
   the main traction, the boatmaster of the convoy shall be the boatmaster of the vessel providing the main
   traction;
   (d) In a pushed convoy propelled by two pushers side by side, the boatmaster of a pusher of a higher
   propelling power shall be the boatmaster of the convoy;
   (e) In other cases, the boatmaster of the convoy shall be appointed when required.
3. When a vessel is under way the boatmaster shall be on board; in addition, the boatmaster of floating
   equipment shall always be on board when the equipment is in operation.
4. The boatmaster is responsible for compliance with these Rules on his vessel, convoy or assembly of
   floating material. In a towed convoy, the boatmasters of the towed vessels shall obey the orders of the
   boatmaster of the convoy; however, even without such orders, they shall take all steps required by the
   circumstances for the proper handling of their vessels. The same provisions apply to boatmasters of vessels
   in a side-by-side formation who are not the boatmaster of the formation.
5. Every floating establishment shall be placed under the authority of a competent person. This person shall
   be responsible for the observance of the provisions of these Rules and any special instructions given them
   by officials of the competent authorities on the floating establishment.
6. The faculties of the boatmaster shall not be impaired as a result of a state of fatigue or intoxication. An authorized official of the competent authorities may subject the boatmaster to testing with the aid of suitable means and devices (alcometers, etc.) or bring him in for an expert examination to check whether he is in a state of intoxication. The boatmaster is obliged to submit to testing or an expert examination.

7. In the case of a moored vessel or assembly of floating material having no boatmaster, the person responsible for ensuring compliance with the provisions of the regulations in force shall be the operator or owner of such vessel or assembly and the person responsible for keeping watch and surveillance under article 7.08. of these Rules.

Article 1.03 - Duties of crew and other persons on board

1. Crew members shall carry out the orders given them by the boatmaster in the performance of his duties. They shall assist in complying with the requirements of these Rules and of other regulations in force.

2. All other persons on board are required to comply with the orders given them by the boatmaster in the interest of safe navigation or of good order on board.

3. Members of the crew who temporarily in shift operates the vessel (determine the vessel’s course and speed) themselves shall also be responsible in that respect for ensuring compliance with the requirements of these Rules and of other regulations in force.

4. The faculties of crew members on duty and other persons on board who participate temporarily in the navigation of the vessel shall not be impaired as a result of a state of fatigue or intoxication. Requirements of the article 1.02, paragraph 6. are applicable.

Article 1.04 - General obligation to exercise vigilance

1. When underway every vessel shall at all times proceed at a safe speed.

2. Even where no special rules are laid down in these Rules, boatmasters shall take all the precautions required by the general obligation to exercise vigilance and good navigational practice in order to avoid, in particular:

   (a) Danger to human life;
   (b) Damage to vessels or assemblies of floating material, banks, works or installations of any kind on or adjacent to the fairway;
   (c) Causing obstructions to navigation;
   (d) Demolishing and damaging of the cargo
   (e) Causing damage to the environment and waters of the Sava River.
   (f) Causing harm to crew members and other persons on board of the vessel

3. The above provisions shall also apply to persons in charge of floating establishments.

Article 1.05 - Conduct in special circumstances

To avoid imminent danger, boatmasters shall take all the steps required by the situation, even if this entails departing from this Rules.

Article 1.06 - Use of the waterway

The length, width, height, draught and speed of vessels, convoys and assemblies of floating material shall be suited to the characteristics of the fairway and its installations.
Article 1.07 - Maximum load and maximum number of passengers
1. Vessels shall not be loaded beyond their maximum draught markings.
2. The load shall not endanger the vessel’s stability or the strength of the hull. The load shall not restrict the direct or indirect view at a distance of more than 350 m in front of the vessel or convoy under way. If direct visibility abaft or aside is restricted during the voyage, this lack of visibility may be compensated for by the use of radar apparatus.
3. Passenger vessels shall not have on board more passengers than the number authorized by the competent authorities. High-speed passenger vessels shall not have on board more persons than the number of available seats.
4. In addition, the stability of vessels carrying containers shall be checked and the vessel is obliged to have on board Stability certificate before departure for the following cases:
   (a) for vessels with a beam of less than 9.5 m, loaded with more than one tier of containers;
   (b) for vessels with a beam of 9.5 m or more but less than 11 m, loaded with more than two tiers of containers;
   (c) for vessels with a beam of 11 m or more, loaded with more than three tiers of containers or more than three widths;
   (d) for vessels with a beam of 15 m or more, loaded with more than three tiers of containers.

Article 1.08 - Construction, rigging and crews of vessels
1. Vessels and assemblies of floating material shall be so constructed and rigged as to ensure the safety of those on board and safe navigation and to be able to satisfy the requirements of these Rules and of other regulations in force.
2. All vessels, except vessels in a pushed convoy other than the pusher, shall have a crew sufficient in number and sufficiently skilled to ensure the safety of those on board and safe navigation. However, non-motorized vessels in a side-by-side formation and some of the towed vessels in a rigid group are not required to have a crew when the crew of the other vessels in the side-by-side formation or rigid group is sufficiently large and skilled to ensure the safety of those on board and safe navigation.
3. All vessels performing carriage of the dangerous goods shall have on board a one crew member qualified for the carriage of the dangerous goods in accordance with the regulations for the carriage of the dangerous goods in force.

Article 1.09 - Steering
1. When under way, a vessel, except vessels from Article 1.08, paragraph 2., shall be steered by at least one qualified person of not less than 16 years of age.
2. In order to ensure proper control of the vessel, the helmsman shall be able to receive and give all information and orders from the wheelhouse. In particular, he shall be able to hear sound signals and have a sufficiently clear view in all directions. If a sufficiently clear view is not possible, he has to have a possibility to use an optical means giving a clear and undistorted image over an adequate field.
3. When particular circumstances so require, a look-out or listening-post shall be set up to keep the helmsman informed.
4. When under way, all high-speed vessels shall be steered by a person not younger than 21 years of age holding a diploma certifying that he has the necessary qualifications referred to in article 1.02, paragraph 1 and
the certificate referred to in article 4.05, paragraph 1 (b). A second person who also holds these documents shall be in the wheelhouse except during berthing and casting off and in locks and their forebays.

Article 1.10 - Vessel’s papers

1. Every vessel shall carry:
   (a) A certificate of registry;
   (b) A measurement certificate\(^1\)
   (c) Crew list;
   (d) A ship’s log;
   (e) A ship’s certificate

and other documents relating to navigation required under international conventions or agreements.

2. By derogation from paragraph 1 above, small craft are not required to carry the documents referred to in subparagraphs (b) and (d); moreover, in the case of small pleasure craft, the document referred to in subparagraph (c) is not required, and that referred to in subparagraph (a) may be replaced by a national navigation permit.

3. Assemblies of floating material shall carry a national navigation permit.

4. The documents required to be carried on board and shall be produced whenever requested by officials of the competent authorities.

5. However, the certificate of registry, measurement certificate and ship’s certificate need not be carried on board a pushed barge to which is affixed a metal plate conforming to the following model:

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Official No.: ............................................................................................................................
Certificate of registry No.: .....................................................................................................
Competent authority: ............................................................................................................
Expiry date: ............................................................................................................................
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These particulars shall be engraved or stamped in easily legible characters not less than 6mm high. The metal plate shall be not less than 60mm high and 120mm long; it shall be permanently affixed in a prominent place towards the stern of the barge on the starboard side.

The conformity of the particulars given on the plate to those in the barge’s certificate of registry, measurement certificate and ship’s certificate shall be certified by the competent authority, whose stamp shall be applied to the plate. The certificate of registry, measurement certificate and ship’s certificate shall be kept by the owner or operator of the barge.

\(^1\) Certificate shall be issued in accordance with the Convention on the Measurement of Inland Navigation Vessels, of February 15, 1966
Article 1.11 - Navigation regulations
An update copy of these Rules shall be carried on board every vessel and assembly of floating material, except vessels in a pushed convoy other than the pusher.2

Article 1.12 - Dangerous objects on board; loss of objects; obstacles
1. It is prohibited to allow objects that would constitute a danger to vessels, assemblies of floating material, floating establishments or installations on or adjacent to the fairway to project beyond the sides of vessels or of assemblies of floating material.
2. When anchors are weighed, they shall not hang below the bottom or keel of a vessel or the bottom of an assembly of floating material and no part of it may be permanently immersed in water.
3. When a vessel, an assembly of floating material or a floating establishment loses an object and this may cause an obstruction or danger to navigation, the boatmaster or the person responsible for the floating establishment shall at once inform the nearest competent authority, specifying as accurately as possible the place where the object was lost. If possible, he shall also place a marker at the spot.
4. When a vessel encounters an unknown obstacle on a waterway, the boatmaster shall at once inform the nearest competent authority, specifying as accurately as possible the place where the obstacle was encountered. When this obstacle may cause danger to navigation he shall also place a marker at the spot.

Article 1.13 - Protection of waterway signs and marking
1. It is prohibited to use waterway signs or marking (boards, buoys, floats, beacons, etc.) for mooring or warping vessels or assemblies of floating material, to damage them or to render them unfit for use.
2. When a vessel or an assembly of floating material has displaced or damaged any device or installation which is part of the system of waterway signs and marking, the boatmaster shall at once inform the nearest competent authority.
3. Every boatmaster has a general duty immediately to inform the nearest competent authority of any incident or accident affecting waterway signs or marking (failure of a light, displacement of a buoy, destruction of a sign, etc.).

Article 1.14 - Damage to permanent structures
When a vessel or assembly of floating material has damaged a permanent structure (lock, bridge, etc.), the boatmaster shall at once inform the nearest competent authority.

Article 1.15 - Prohibition of discharge into waterways
1. It is forbidden to throw, pour or allow to fall or flow into a waterway any objects or substances likely to cause an obstruction or danger to navigation or to other users of the waterway.
2. It is in particular forbidden to throw, pour or discharge into a waterway any form of petroleum waste or mixtures of such waste with water.
3. In the event of accidental spillage of a substance covered by paragraph 1 or paragraph 2 or of any risk of such spillage, the boatmaster shall immediately inform the nearest competent authority specifying as accurately as possible the nature and site of the spillage.

2 The competent authorities may exempt certain classes of small craft and of assemblies of floating material from this regulation.
Article 1.16 - Salvage and assistance
1. In the event of an accident endangering those on board, the boatmaster shall use every means at his disposal to save them.
2. Every boatmaster who is close to a vessel or assembly of floating material which has suffered an accident endangering persons or threatening to obstruct the fairway is required to give immediate assistance insofar as is consistent with the safety of his own vessel.

Article 1.17 - Grounded or sunken vessels
1. The boatmaster of a grounded or sunken vessel or of a grounded or broken assembly of floating material shall arrange for the nearest competent authority to be informed as soon as possible. In the case of a grounded or sunken vessel or broken assembly of floating material, the boatmaster or a member of the crew shall remain on board or near the site of the accident until the competent authority has authorized him to leave.
2. When a vessel is grounded or sunk, or an assembly of floating material is grounded, in or near the fairway, its boatmaster shall, unless it is obviously unnecessary, as soon as possible and without prejudice to the obligation to display the marking referred to in article 3.23 and 3.35 of these Rules, give warning to approaching vessels and assemblies of floating material at suitable points far enough from the site of the accident to enable them to take the necessary action in good time.
3. Should an accident occur while a vessel is passing through a lock, the boatmaster shall immediately inform the service in charge of the lock in question.
4. When the vessels from paragraph 1, 2, and 3. of this Article are part of the pushed or towed convoy or side by side formation the boatmaster of the convoy or side by side formation shall be responsible in that respect for ensuring compliance with the requirements of this Article.

Article 1.18 - Obligation to clear the fairway
1. When a grounded or sunken vessel, a grounded assembly of floating material or an object lost by a vessel or assembly of floating material causes or threatens to cause total or partial obstruction of the fairway, the boatmaster of the vessel or assembly of floating material shall endeavour to get the fairway cleared as soon as possible.
2. A boatmaster whose vessel is in danger of sinking or becomes impossible to control is under the same obligation.
3. When the vessels from paragraph 1. and 2. of this Article are part of the pushed or towed convoy or side by side formation the boatmaster of the convoy or side by side formation shall be responsible in that respect for ensuring compliance with the requirements of this Article.

Article 1.19 - Special instructions
1. Boatmasters and persons in charge of floating establishments shall comply with any special instructions given them by officials of the competent authorities in charge in order to ensure safe and orderly navigation.
2. Authorised officials of the competent authorities may, except in special cases when the provisions of other legislation is applied, by means of a special Rules prohibit the navigation of a vessel and especially in the following cases:
1. when the vessel does not have a certificate of registry or national navigation permit or these documents have expired
2. when the vessel does not comply with the conditions referred to in Article 1.07 of these Rules
3. when the crew or vessel do not comply with the conditions referred to in Article 1.08 of these Rules
4. when the capabilities of the boatmaster or on-duty crew members have been diminished due to a state of fatigue or intoxication.

Article 1.20 - Inspection
Boatmasters and persons in charge of floating establishments shall give officials of the competent authorities the necessary facilities for verifying compliance with these Rules and any other provisions applicable, and in particular facilitate immediate boarding by them.

Article 1.21 - Special transport operations
1. Movements on inland waterways are deemed to be special transport operations if they are movements of:
   (a) Vessels or convoys which do not comply with the requirements of articles 1.06 and 1.08 of these Rules;
   (b) Floating establishments or assemblies of floating material, unless it is evident that their movement cannot cause any hindrance or danger to navigation or any damage to permanent structures.
2. Such a transport operation shall be allowed only under a special authorization issued by the competent authorities in charge for the sector or sectors over which it is to take place.
3. It shall be subject to such conditions as those authorities may determine in each case.
4. A boatmaster shall be appointed for each transport operation, account being taken of the provisions of article 1.02.
5. Before issuing approval for the transports referred to in paragraph 1 of this Article, the competent authorities may request a review and verification of ability for navigation by the competent organisation.

Article 1.22 - Special temporary requirements
Boatmasters shall comply with any temporary requirements issued by a competent authority in special circumstances and published as notices to ensure safe and orderly navigation.

Article 1.23 - Authorization of public events
1. Organizers of the sporting events, regattas and other public activities on waterways from Article 1.00 of these Rules shall inform competent authorities in charge about such activities minimum 20 days in advance.
2. Sporting events, regattas or other public events from the paragraph 1. of this Article which may endanger safe and orderly navigation shall be subject to authorization by the competent authorities.

Article 1.24 - Winter harbours and winter protection of the vessels
1. In the case that meteorological conditions do not permit continuation of the navigation, boatmasters can use ports and shelters for protection and winter quarters of the vessels, under condition to oblige special
regulations of the competent authorities in accordance with local circumstances or loading and unloading operations.

2. The water area in the winter harbour shall have the depth and width necessary for navigation, landing and manoeuvring of vessels.

3. The entry and middle of the water area of the winter harbour shall be free and cleared of ice.

4. Motorised vessels in winter refuge must have their engines prepared for movement in case such shall be necessary for protection from ice movements and if necessary also offer aid to other vessels in the winter refuge or fairway.

5. Vessels transporting dangerous substances shall be accommodated in winter harbours or winter refuge separately from other vessels and near the exit of the winter harbour or creek of refuge.

6. In periods in which there is ice in the winter harbour or winter refuge the vessels’ crews shall constantly break the ice surrounding the vessel and constantly maintain vents in the ice.
Chapter 2

MARKS AND DRAUGHT SCALES ON VESSELS; TONNAGE MEASUREMENT

Article 2.01 - Identification marks on vessels other than small craft

1. Every vessel, except small craft, shall bear the following identification marks on its hull or on fixed boards or plates:
   (a) Its name or emblem
   The name shall be inscribed on both sides of the vessel; in the case of motorized vessels, it shall also be inscribed in a position visible from astern. If, in a side-by-side formation or pushed convoy, one or more of the inscriptions of the propelling vessel’s name are hidden, the name shall be reproduced on boards so placed as to be clearly visible from the directions from which those inscriptions are hidden. If the vessel has no name or emblem, it shall bear either the name (or its usual abbreviation) of the organization to which it belongs followed, where applicable, by a number, or the registration number followed, in order to show the country of the vessel’s home port or place of registry, by the letter or letters assigned to that country in annex 1 to these Rules.
   (b) Its home port or place of registry
   The name of the home port or place of registry shall be inscribed either on both sides of the vessel or on its stern and shall be followed by the letter or letters indicating the country of that home port or place of registry.

2. Every cargo vessel from the paragraph 1. of this Article shall have its dead-weight tonnage inscribed on both sides, on the hull or on fixed boards;

3. Every passenger vessel from the paragraph 1. of this Article shall display the maximum permissible number of passengers in a conspicuous position on board.

4. The identification marks from the paragraphs 1., 2. and 3. of this Article shall be inscribed for numbers in easily legible and indelible arabic numbers and for characters in easily legible and indelible Latin characters, their inscription in oil paint being considered indelible. The height of the characters shall be not less than 20 cm for the name and not less than 15 cm for other marks. The width of the characters and the thickness of strokes shall be in proportion to the height. The characters shall be of a light colour against a dark background or vice versa.

5. Crewed vessels under way by day shall fly their national flag at the stern. High speed vessels may instead of the national flag display a board which matches the national flag in shape and colours.

Article 2.02 - Identification marks on small craft

1. Small craft shall bear the official registration marks; if those marks are not prescribed, they shall bear:
   (a) Their name or emblem;
   (b) The name and domicile of the owner.

2. The registration or identification marks mentioned under paragraph 1 (a) shall be inscribed on the outside of the craft in Latin characters not less than 10 cm high, easily legible and indelible, their inscription in oil
paint being considered indelible. If the craft has no name or emblem, it shall bear the name (or its usual abbreviation) of the organization to which it belongs, followed, where applicable, by a number.

3. The name and domicile of the owner shall be displayed in a conspicuous position inside or outside the craft.

4. However, ship's boats need only bear, inside or outside, the name of the vessel to which they belong and any other particulars needed to identify the owner.

Article 2.03 - Tonnage measurement
Every inland waterway cargo vessel, except small craft, shall have its tonnage capacity measured.

Article 2.04 - Draught marks and draught scales
1. All vessels, except small craft, shall bear marks showing the maximum draught level. In the case of inland waterway vessels, the methods by which the maximum draught is determined and the conditions to be observed in affixing the draught marks shall be such as laid down in the Directive 2006/87/EC of the European Parliament and of the Council of 12 December 2006 laying down technical requirements for inland waterway vessels and repealing Council Directive 82/714/EEC.

2. Every vessel which may draw as much as 1 m of water shall be provided with draught scales. In the case of inland waterway vessels, annex 2 to these regulations lays down the conditions to be observed in affixing the draught scales.

Article 2.05 - Identification marks on anchors
The anchors of vessels, except small craft, shall bear identification marks in indelible characters. If an anchor is used on another vessel belonging to the same owner, the original marking may be kept.
Chapter 3

VISUAL SIGNALS (MARKING) ON VESSELS

I. GENERAL

Article 3.01 - Application and definitions
1. Articles 3.08 to 3.17, 3.37, 3.38 and 3.39 shall apply to vessels and assemblies of floating material under way by night and articles 3.18 to 3.24 and 3.39 to stationary vessels, floating establishments and assemblies of floating material by night. Articles 3.19, 3.21, 3.23 and 3.24 shall apply also to vessels, assemblies of floating material or floating establishments, when they are grounded.
2. Articles 3.25 to 3.31, 3.37, 3.38 and 3.39 shall apply to vessels and assemblies of floating material under way by day and articles 3.32 to 3.36 and 3.39 to stationary vessels and assemblies of floating material by day. Articles 3.33, 3.35 and 3.36 shall apply also to vessels, floating establishments or, assemblies of floating material when they are grounded.
3. When visibility conditions so require, the visual signals prescribed for use at night shall also be displayed by day.
4. For the application of this chapter, pushed convoys whose maximum dimensions do not exceed 110 m by 12 m and a side-by-side formation whose greatest dimensions do not exceed 110 m in length and 23 m in width are regarded as single motorized vessels.
5. Sketches of the signals prescribed in this chapter are contained in annex 3 to these regulations.
6. In this chapter:
   (a) The term “masthead light” means a strong white light projecting an uninterrupted beam throughout a horizontal arc of 225º and placed so as to project that beam from the bow to 22º30’ abaft the beam on each side;
   (b) The term “side lights” means a bright green light to starboard and a bright red light to port, each of these lights projecting an uninterrupted beam throughout a horizontal arc of 112º30’ and placed so as to project that beam from the bow to 22º30’ abaft the beam on its side;
   (c) The term “stern light” means an ordinary or bright white light projecting an uninterrupted beam throughout a horizontal arc of 135º and placed so as to project this beam throughout an arc of 67º30’ along each side from the stern;
   (d) The term “light visible from all directions” means a light projecting an uninterrupted beam throughout a horizontal arc of 360º;
   (e) The term “height” means the height above the level of the draught marks or, for vessels without draught marks, above the line of the maximum draught.

Article 3.02 - Lights
Unless otherwise provided, the lights prescribed in these regulations shall show a continuous and uniform beam.
Article 3.03 - Boards, flags and pennants
1. Unless otherwise provided, the boards and flags prescribed in these regulations shall be rectangular and
their colour must not be faded or dirty.
2. The dimensions of flags and boards must be large enough to be seen clearly. It shall be deemed that this
condition has been fulfilled if:
   (a) For the boards and flags if neither the length nor the width is less than 1 m or, in the case of small
craft, less than 0.60 m;
   (b) For the pennants if the length is not less than 1 m and the breadth at the staff not less than 0.50 m.

Article 3.04 - Cylinders, balls, cones and bicones
1. The cylinders, balls, cones and bicones prescribed in these Rules may be replaced by devices having the
same appearance when seen from a distance.
2. The colour of cylinders, balls, cones and bicones, as well as bodies replacing them may not be faded
or dirty.
3. The dimensions of cylinders, balls, cones and bicones must be large enough to enable good visibility. It
shall be considered that these conditions have been fulfilled if:
   (a) For cylinders, if the height is not less than 0.80 m and the diameter not less than 0.50 m;
   (b) For balls, if the diameter is not less than 0.60 m;
   (c) For cones, if the height is not less than 0.60 m and the diameter at the base not less than 0.60 m;
   (d) For bicones, if the height is not less than 0.80 m and the diameter at the base not less than 0.50 m.

Article 3.05 - Prohibited lights and signals
1. The use of any lights or signals other than those mentioned in these Rules or the use of those mentioned
otherwise than as prescribed or permitted by these regulations is prohibited.
2. However, for communication between vessels or between a vessel and the shore, the use of other lights or
signals is permitted provided they are not liable to be confused with those mentioned in these Rules.

Article 3.06 - Emergency lights
When signal lights prescribed by these regulations cease to function, they shall be replaced by emergency
lights without delay. However, where the prescribed light is strong, the emergency light may be bright and,
where the prescribed light is bright, the emergency light may be ordinary. Lights of the prescribed power
shall be brought into operation again as soon as possible.

Article 3.07 - Prohibited use of lamps, searchlights, boards, flags, etc.
1. The use of lamps or searchlights or of boards, flags or other objects in such a way that they may be
confused with the lights or signals mentioned in these Rules or impair their visibility or complicate their
identification is prohibited.
2. The use of lamps or searchlights in such a way that they cause dazzle constituting a danger or inconvenience
to navigation or to traffic on the banks of the waterway is prohibited.
II. NIGHT MARKING

II.A. NIGHT MARKING WHEN UNDER WAY

Article 3.08 - Night marking for motorized vessels proceeding alone

1. Single motorised vessels under way must have:
   
   (a) a masthead light, positioned on the bow side on the longitudinal axis of the vessel, at a height of at least 6 m, while for vessels shorter than 40 m it may be less than 4 m,

   (b) side lights, located at the same height and level which is perpendicular to the axis of the vessel. They must be positioned at least 1 m lower than the masthead light and not forward and where possible on the external side of the widest part of the ship. Similarly, they must be positioned toward the interior side of the vessel so that the green light may not be seen from the port side, nor the red light from the starboard side.

   (c) the stern light placed aft and on the longitudinal axis of the vessel, at a height which is adequate for it to be seen clearly by the overtaking vessel or which is located behind the vessel in question.

2. A single motorised vessel may, other than the lights listed in paragraph 1 of this Article, have another masthead light on the stern part on the longitudinal axis of the vessel at least 3 m higher than the forward masthead light located so that the horizontal distance between the mentioned two lights is at least three times their vertical distances. It shall be obligatory for a single motorised vessels more than 110 m long.

3. The single motorised vessel temporarily preceded by night by an auxiliary motorised vessel shall continue to show the lights referred to in paragraphs 1 and 2 of this Article

4. In addition to the marking prescribed by other provisions of these Rules, high-speed vessels under way shall carry by day and by night two strong yellow quick scintillating lights. These scintillating lights shall be placed one above the other about 1 m apart, in a suitable position and high enough to be visible from all directions.

5. When passing through the opening of a fixed bridge or closed bridge or weir, or when passing through locks, vessels may carry the masthead light provided for in paragraphs 1 and 2 of this Article at a reduced height so that passage may be affected without difficulty.

6. The provisions of this Article shall not apply to small crafts and ferry-boats.

Article 3.09 - Night marking for towed convoys under way

1. All motorised vessels leading a towed convoy and a motorised vessel used as an auxiliary in front of another motorised vessel, a pushed convoy or a side-by-side formation shall carry:

   (a) two masthead lights positioned on the bow side and on a longitudinal axis of the vessel one above the other with a distance between them of about 1 m, the upper light positioned at the height stipulated in item a, paragraph 1, Article 3.08 of these Rules, while the lower, insofar as it shall be possible, at least 1 m higher than the side lights,

   (b) side lights fulfilling the conditions referred to in item b, paragraph 1, Article 3.08 of these Rules,

   (c) a stern light which is yellow instead of white and positioned on a longitudinal plane on the vessel high enough for it to be clearly visible on the towed convoy, motorised vessel, pushed convoy or side-by-side formation in front of which the vessel is used an auxiliary.

2. When a towed convoy is being led by several motorised vessels, or where a motorised vessel, pushed convoy or side-by-side formation is preceded by several auxiliary motorised vessels proceeding side by side,
whether coupled or not, each of those vessels shall carry on their bow section and on the longitudinal axis of a vessel, instead of the masthead lights stipulated in item a, paragraph 1 of this Article, three masthead lights positioned about 1 m distance from each other. The upper and lower light should be located at the same height as that stipulated in item a, paragraph 1 of this Article.

If a vessel or floating establishment is moved by a number of motorised vessels, then this rule shall apply to every motorised vessel.

3. Vessels in a towed convoy following the motorized vessel or vessels referred to in paragraphs 1 and 2 above shall carry a bright white light visible from all directions, placed at a height of at least 5 m. If a section of the convoy is more than 110 m long, that section shall carry two such lights, one forward and one aft. If a section of the convoy comprises a row of more than two vessels coupled side by side, only the two outside vessels of the row shall carry such lights.

The marking of all towed vessels in a convoy shall, so far as possible, be carried at the same height above the water level.

4. The vessel or vessels forming the rear section of a towed convoy must have a stern light which corresponds with the provisions of item c, paragraph 1, Article 3.08 of these Rules. However if the rear section of the convoy consists of three or more vessels coupled side by side, only the two external vessels in the row must have this light. If the rear section of the convoy consists of small crafts, the provisions of this Article shall not apply to them.

5. When passing through the opening of a fixed or closed bridge or weir, or when passing through locks, vessels may have lights foreseen in item a, paragraph 1 and paragraph 2 of this Article positioned at height so that such passage may be affected without difficulty.

6. The provisions of this Article shall not apply to small crafts only towing other small crafts and small crafts being towed.

Article 3.10 - Night marking for pushed convoys under way

1. Pushed convoys shall carry:

   (a) Three masthead lights at the bow of the leading vessel or on a vessel which is on a longitudinal axis of the convoy and at the head of a convoy. These lights shall be arranged in an equilateral triangle with a horizontal base, in a plane perpendicular to the longitudinal axis of the convoy. The top light shall be at a height of not less than 5 m. The two lower lights shall be about 1.25 m apart and about 1.10 m below the top light.

   (a-bis) A masthead light at the bow of any other vessel whose full width is visible from ahead. This light shall so far as possible be 3 m below the top light referred to under (a). The masts carrying these lights shall be in the longitudinal axis of the vessel in which they are carried;

   (b) The side lights prescribed in article 3.08, paragraph 1 (b) of these Rules; these lights shall be placed on the widest part of the convoy, as near the pusher as possible, not more than 1 m from the sides of the convoy and at a height of not less than 2 m;

   (c) Three stern lights as prescribed in article 3.08, paragraph 1 (c) of these Rules on the pusher, placed in a line perpendicular to its longitudinal axis, about 1.25m apart and high enough not to be hidden by another vessel in the convoy;

   (c-bis) A stern light on every vessel whose full width is visible from astern; however, when more than two vessels other than the pusher are visible from astern, this light shall be carried only by the two vessels on the outside of the convoy.
2. The provisions of paragraph 1 above shall also apply to pushed convoys preceded by one or more auxiliary motorized vessels; however, the stern lights referred to in paragraph 1 (c) above shall be yellow instead of white.

3. When a pushed convoy is passing through the opening of a fixed or closed bridge or weir, or when passing through locks, the masthead lights prescribed in paragraph 1 (a) above may be carried at a reduced height so that passage may be effected without difficulty.

4. Pushed convoys with two pushers in side-by-side formation shall carry the stern lights prescribed in paragraph 1 (c) on the pusher on which is the boatmaster of the convoy; the other pusher shall carry the stern light prescribed in paragraph 1 (c-bis) above.

Article 3.11 - Night marking for side-by-side formations under way

1. Side-by-side formations shall carry:

   (a) The masthead light prescribed in article 3.08, paragraph 1 (a) of these Rules, on each motorised vessel; however, each non-motorized vessel may, instead of the masthead light, carry the white light prescribed in article 3.09, paragraph 3 of these Rules, visible from all directions, in a suitable position but not higher than the masthead light of the motorized vessel or vessels;

   (b) The side lights prescribed in article 3.08, paragraph 1 (b) of these Rules; these lights shall be placed on the outside of the formation, so far as possible at the same height and at least 1 m below the lowest masthead light;

   (c) The stern light prescribed in article 3.08, paragraph 1 (c) of these Rules, on each vessel.

2. The provisions of paragraph 1 above shall also apply to side-by-side formations preceded by one or more auxiliary motorized vessels.

3. When a side-by-side formation is passing through the opening of a fixed or closed bridge or of a weir, or when passing through locks, the lights prescribed in paragraph 1 (a) above may be carried at a reduced height so that passage may be effected without difficulty.

4. The provisions of this article shall not apply to small craft propelling only small craft in a side-by-side formation, or to small craft so propelled.

Article 3.12 - Night marking for sailing vessels under way

1. Sailing vessels shall carry:

   (a) The side lights prescribed in article 3.08, paragraph 1 (b) of these Rules; however these lights may be ordinary, instead of bright;

   (b) The stern light prescribed in article 3.08, paragraph 1 (c) of these Rules.

2. In addition to the lights prescribed in paragraph 1 of this article, a sailing vessel shall carry two ordinary or bright lights one above the other, visible from all directions, the upper light being red and the lower green; these lights shall be in a suitable position at the top or on the upper part of the mast and not less than 1 m apart.

3. The provisions of paragraphs 1 and 2 of this article shall not apply to small craft. The provisions of paragraph 2 shall not apply to the vessels referred to in article 3.45.
Article 3.13 - Night marking for small craft under way
1. Small motorized craft proceeding alone shall carry:
   (a) A masthead light; this light shall be in the axis of the craft, at least 1 m higher than the side lights. This light does not have to be strong it may be just bright and may also be placed at the same height as the side lights but must be 1 m in front of them,
   (b) Two side lights; these lights may be ordinary instead of bright and shall be placed either as prescribed in article 3.08, paragraph 1 (b) of these Rules; or side by side or in the same lamp, in the axis of the craft, at or near the bow;
   (c) The stern light prescribed in article 3.08, paragraph 1 (c) of these Rules. However, this light may not be carried; but in such case, the masthead light referred to in (a) above shall be a bright white light visible from all directions.
2. Motorized small craft less than 7 m long proceeding alone may carry, instead of the lights prescribed in paragraph 1 above, an ordinary white light in a suitable position and high enough to be visible from all directions.
3. When a small craft is towing or propelling in side-by-side formation only other small craft, it shall carry by night the lights prescribed in paragraph 1 above.
4. Small craft in tow or propelled in side-by-side formation shall carry by night an ordinary white light visible from all directions. This provision shall not apply to ships’ boats.
5. Small sailing craft under way shall carry:
   (a) Side lights and stern light, the side lights being placed side by side or in the same lamp in the axis of the craft, at or near the bow, and the stern light being placed in the after part of the craft; however, these lights may be ordinary lights;
   (b) Instead of the lights from 5. a) above side lights and a stern light in the same lamp placed in a suitable position at the top or on the upper part of the mast; this light may be an ordinary light; or
   (c) In the case of craft less than 7 m long, an ordinary white light visible from all directions. On the approach of other vessels, such craft shall in addition display a second ordinary white light.
6. Small craft proceeding alone which are neither motorized nor under sail shall carry an ordinary white light visible from all directions. However, ships’ boats under these conditions need not display this light except on the approach of other vessels.
7. The provisions referred to in paragraph 3, Article 3.11 of these Rules shall apply to masthead lights referred to in this Article.

Article 3.14 - Additional night marking for vessels carrying out certain transport operations involving dangerous substances
1. Vessels carrying out transport operations involving flammable substances that are referred to in ADN shall carry, in addition to the marking prescribed elsewhere in these Rules, one blue light referred to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. These markings shall be in a suitable position and high enough to be visible from all directions.
2. Vessels carrying out transport operations involving substances constituting health hazards that are referred to in ADN shall carry, in addition to the marking prescribed elsewhere in these regulations, two blue lights referred to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. These markings shall be placed one about 1 m above the other, in a suitable position and high enough to be visible from all directions.
3. Vessels carrying out transport operations involving explosives that are referred to in ADN shall carry, in addition to the marking prescribed elsewhere in these regulations, three blue lights referred to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. These markings shall be about 1 m one above the other, in a suitable position and high enough to be visible from all directions.

4. Insofar as there are one or more vessels referred to in paragraphs 1, 2 or 3 of this Article in the towed convoy, the lights stipulated in the aforementioned paragraphs must also be on the motorised vessel which is at the head of the convoy and towing and a tug acting as an auxiliary to the convoy.

5. When a pushed convoy or side-by-side formation includes one or more of the vessels referred to in paragraphs 1, 2 or 3 above, the marking prescribed in paragraphs 1, 2 or 3 above shall be carried by the vessel propelling the pushed convoy or side-by-side formation.

6. Any vessel, pushed convoy or side-by-side formation carrying out a transport operation involving several dangerous substances that are referred to in paragraphs 1, 2 and 3 above shall carry the marking corresponding to the substance that requires the greatest number of blue lights.

7. Any vessel not required to carry the markings referred to in paragraphs 1, 2 or 3 above but which has been issued with an approval certificate in accordance with paragraph 8.1.8 of ADN and which conforms to the safety provisions for vessels referred to in paragraph 1 above, may, on approaching a lock, display the markings referred to in paragraph 1 above, when it wishes to pass through the lock with a vessel required to display the markings referred to in paragraph 1 above.

8. The intensity of the blue lights prescribed in this article shall be at least equal to that of ordinary blue lights.

Article 3.15 - Night marking for ferry-boats under way

1. Ferry-boats not moving independently shall carry:
   (a) A bright white light visible from all directions, at a height of not less than 5 m; this height may, however, be reduced if the ferry-boat is not more than 20 m long;
   (b) A bright green light visible from all directions, about 1 m above the light referred to in (a) above;

2. Ferry-boats moving independently shall carry:
   (a) A bright white light visible from all directions, as prescribed in paragraph 1 (a) above;
   (b) A bright green light visible from all directions, as prescribed in paragraph 1 (b) above;
   (c) The side lights and stern light prescribed in article 3.08, paragraphs 1 (b) and (c) of these Rules;

   If a ferry-boat is being towed, pushed or drawn side-by-side, only the vessel with its own power must have the lights stipulated in items a), b) and c) of this paragraph.

3. Ferry-boats moving independently and enjoying priority, other than the lights stipulated in paragraph 2 of this Article, must also have another bright green light visible from all directions, at a height of about 1 m above the green light stipulated in item b), paragraph 2. of this Article.

Article 3.16 - Additional night marking for vessels unable to manoeuvre

1. A vessel which is unable to manoeuvre shall, if necessary, display, in addition to the marking prescribed elsewhere in these Rules a swinging red light or two red lights, one about 1 m above the other, placed in a suitable position and high enough to be visible from all directions; in the case of small craft, this light may be white instead of red.

2. If necessary, such vessels shall in addition give the regulation sound signal.
Article 3.17 - Night marking for assemblies of floating material and floating establishments under way

Without prejudice to any special conditions which may be imposed under article 1.21 of these Rules, assemblies of floating material and floating establishments shall carry a sufficient number of bright white lights visible from all directions to show their outline.

II.B. NIGHT MARKING WHEN STATIONARY

Article 3.18 - Night marking for stationary vessels

1. All vessels, except ferry-boats listed in Article 3.20 of these Rules shall, when stationary, have one ordinary white light visible from all directions, at a height of at least 3 m.

2. The use of lights referred to in paragraph 1 of this Article shall not be mandatory when the vessel is part of a group of vessels or convoy in which the vessels located on the outside part of the group, or convoy, have lights as stipulated in paragraph 1 of this Article.

3. A pushed convoy stationary offshore (without direct or indirect access to the shore) must have two ordinary white lights visible from all directions, in a suitable position and at a height of at least 3 m. One light must be on the pusher, while the other on the leading vessel of the convoy.

4. Small craft other than ship’s boats may carry, instead of the lights prescribed by night in paragraph 1 above, an ordinary white light in a suitable position and high enough to be visible from all directions.

5. The marking prescribed in this article shall not be mandatory:
   (a) When the vessel is stationary in a waterway on which navigation is temporarily impossible or prohibited;
   (b) When the vessel is stationary alongside the bank and is sufficiently well lit from the bank;
   (c) When the vessel is stationary outside the fairway in a clearly safe situation.

6. This article shall not apply to the vessels referred to in articles 3.20, 3.23, 3.44 paragraph 2, and 3.45.

Article 3.19 - Additional night marking for stationary vessels carrying out certain transport operations involving dangerous substances

The requirements of article 3.14 shall also apply to the vessels referred to in that article when those vessels are stationary.

Article 3.20 - Night marking for ferry-boats made fast at their landing-stage

1. Ferry-boats not moving independently shall, when made fast at their landing-stage, carry by night the lights prescribed in article 3.15, paragraph 1 of these Rules.

2. Ferry-boats moving independently in service shall, when made fast at their landing-stage, carry by night the lights prescribed in article 3.15, paragraph 1 of these Rules. When made fast for a short time, they may also keep the lights prescribed in article 3.08, paragraph 1 (b) and (c) of these Rules. The green light referred to in article 3.15, paragraph 1 (b) of these Rules shall be extinguished as soon as the ferry-boat is no longer in service.
Article 3.21 - Night marking for assemblies of floating material and floating establishments when stationary

Without prejudice to any special conditions which may be imposed under article 1.21, assemblies of floating material and floating establishments shall carry a sufficient number of ordinary white lights visible from all directions to show their outlines on the channel side.

The provisions of article 3.18, paragraph 5 of these Rules, are applicable.

Article 3.22 - Night marking for nets or poles of stationary vessels

When vessels have nets or poles extending into the fairway or near to it, such nets or poles shall be marked by ordinary white lights visible from all directions in sufficient number to show their position;

Article 3.23 - Night marking for floating equipment at work and for grounded or sunken vessels

1. Floating equipment at work and stationary vessels carrying out work or sounding or measuring operations shall carry on the side or sides on which the fairway is clear, two ordinary green lights or two bright green lights positioned at a height of about 1 m one above each other and when necessary, on the side where the fairway is not clear, one ordinary red light or one bright red light positioned at the same height as the highest light of two green lights stipulated in this paragraph and of the same intensity as the mentioned green light. These lights shall be positioned at a height so that it is visible from all directions.

2. When it is necessary to protect the vessels referred to in paragraph 1 of this Article against wash, the vessel must have on the side or sides on which the fairway is clear, one ordinary red light and one ordinary white light or one bright red light and one bright white light, positioned at about 1 m one above each other (the red light is the highest) and when necessary on the side where the fairway is not clear, a red light positioned on the same height as the red light stipulated in this paragraph and of the same intensity as the aforementioned light. These lights must be positioned at a height so that it is visible from all directions.

3. Grounded or sunken vessels shall carry the marking prescribed in paragraph 2. above. If the position of a sunken vessel prevents the marking from being placed on the vessel, it shall be placed on boats or buoys or displayed in any other appropriate manner.

Article 3.24 - Marking for anchors that may be a danger to navigation

1. When, in the cases referred to in articles 3.18 and 3.21 of these Rules, by night, the anchors of vessels, assemblies of floating material or floating establishments are so placed that they, their cables or chains may be a danger to navigation, the “stationary vessel” light nearest to such anchors shall be replaced by two ordinary white lights visible from all directions, one about 1 m above the other.

2. The vessels, assemblies of floating material and floating establishments shall mark each of their anchors which might be a danger to navigation by a float with a radar reflector bearing an ordinary white light visible from all directions.
III. DAY MARKING

III A. DAY MARKING WHEN UNDERWAY

Article 3.25 - Day marking for towed convoys under way

1. A motorised vessel leading a towed convoy, and a motorised vessel used as an auxiliary in front of another
motorised vessel, a pushed convoy or a side-by-side formation shall have one yellow cylinder, with two black
and white stripes at top and bottom, the white stripes being at the ends of the cylinders. The cylinder shall
be placed vertically in the bow of the vessel, and high enough to be visible in all directions.

2. Where a towed convoy is led by several motorised vessels, or where a motorised vessel, pushed convoy or
side-by-side formation is preceded by several auxiliary motorised vessels proceeding side by side, whether
coupled or not, each of those vessels shall have a cylinder as stipulated in paragraph 1 of this Article. Where
a vessel, an assembly of floating material or a floating establishment is being manoeuvred by more than one
motorised vessel, the provisions of this paragraph shall apply to each of these motorised vessels.

3. Vessels in a towed convoy following the motorised vessel or vessels referred to in paragraphs 1 and 2
above shall carry a yellow ball in a suitable position and high enough to be visible from all directions. However
if a section of the convoy comprises a row of more than two vessels coupled side by side, only the two
outside vessels of the row shall carry such a ball. The marking of all towed vessels in a convoy shall so far as
possible be carried at the same height above the water level.

4. When a pushed convoy is preceded by day by one or more auxiliary motorized vessels, the pusher shall
carry the yellow ball. When a side-by-side formation is preceded by day by one or more auxiliary motorized
vessels, each vessel in the formation shall carry the yellow ball.

5. When passing through the opening of a fixed or closed bridge or weir, or when passing through locks, the
vessels of a towed convoy may carry cylinders stipulated in paragraphs 1, 2 and 3 of this Article at a reduced
height so that passage may be effected without difficulty.

6. The provisions of this Article shall not apply to small crafts towing other small crafts or to the small crafts
being towed.

Article 3.26 - Day marking of vessels under sail and simultaneously using their own mechanical
means of propulsion

All vessels under sail and simultaneously using their own mechanical means of propulsion shall carry a black
cone, point downwards, positioned as high as possible and where it will be most obvious.

Article 3.27 - Day marking of vessels authorized to carry more than 12 passengers with a
hull length of not more than 20 m

Vessels authorized to carry more than 12 passengers with a maximum hull length less of 20 m shall carry
yellow bicone in suitable position and high enough to be visible from all directions.

Article 3.28 - Additional day marking for vessels carrying out certain transport operations
involving dangerous substances

1. Vessels carrying out transport operations involving flammable substances that are referred to in ADN shall
carry, in addition to the marking prescribed elsewhere in these Rules, one blue cone point downward referred
to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. This marking shall be in a suitable position and high enough to be visible from all directions. The cone may be replaced by one blue cone at the bow and one blue cone at the stern of the vessel, at a height of not less than 3 m.

2. Vessels carrying out transport operations involving substances constituting health hazards that are referred to in ADN shall carry, in addition to the marking prescribed elsewhere in these Rules, two blue cones point downward referred to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. The cones must be placed one about 1 m above the other, in a suitable position and high enough to be visible from all directions. The two blue cones may be replaced by two blue cones at the bow and two blue cones at the stern of the vessel at a height not less than 3 m.

3. Vessels carrying out transport operations involving explosives that are referred to in ADN shall carry, in addition to the marking prescribed elsewhere in these Rules, three blue cones point downward referred to in paragraph 7.1.5.0 or paragraph 7.2.5.0 of ADN. These cones shall be about 1 m above the other, in a suitable positions and high enough to be visible from all directions.

4. Insofar as there are one or more vessels referred to in paragraphs 1, 2 or 3 of this Article in the towed convoy, the markings stipulated in the aforementioned paragraphs must also be on the motorised vessel which is at the head of the convoy and towing and a tug acting as an auxiliary to the convoy.

5. When a pushed convoy or side-by-side formation includes one or more of the vessels referred to in paragraphs 1, 2 or 3 above, the markings stipulated in paragraphs 1, 2 and 3 of this Article shall be carried by the vessel propelling the pushed convoy or side-by-side formation.

6. Any vessel, towed convoy, pushed convoy, or side-by-side formation simultaneously carrying out a transport operation involving several dangerous substances that are referred to in paragraphs 1, 2 and 3 above shall carry markings corresponding to the substance that requires the greatest number of blue cones.

7. Any vessel not required to carry the markings referred to in paragraphs 1, 2 or 3 above but which has been issued with an approval certificate in accordance with paragraph 8.1.8 of ADN and which conforms to the safety provisions for vessels referred to in paragraph 1 above, may, on approaching a lock, display the markings referred to in paragraph 1 above, when it wishes to pass through the lock with a vessel required to display the markings referred to in paragraph 1 above.

Article 3.29 - Day marking for ferry-boats under way

1. Ferry-boats must have one green ball positioned at a height of not less than 6 m. Insofar as the ferry-boat does not exceed 20 m, this height may be smaller.

1. Ferry-boats moving independently and enjoying priority, must have a white cylinder, about 1 m below the green ball stipulated in paragraph 1 of this Article.

Article 3.30 - Additional day marking for vessels unable to manoeuvre

A vessel which is unable to manoeuvre shall, if necessary, display, in addition to the marking in accordance with other provisions of these Rules, display a swinging red flag or two black balls, one about 1 m above the other, placed in a suitable position and high enough to be visible from all directions. If necessary, such vessels shall in addition give the stipulated sound signal.
Article 3.31 - Additional day marking for vessels enjoying priority of passage

Vessels for which the competent authorities has authorized priority of passage at points where it regulates the order of passage may carry, in addition to the marking stipulated in other provisions of these Rules, a red pennant at the bow and high enough to be clearly visible.

III. B. DAY MARKING WHEN STATIONARY

Article 3.32 - Day marking for stationary vessels

1. A motorised vessel alone or in a convoy, except small crafts, stationary offshore without direct or indirect access to the bank must have a black ball in a suitable position forward and high enough to be visible from all directions.

2. The marking stipulated in paragraph 1 of this Article are not mandatory when the vessel is stationary in a waterway on which navigation is temporarily impossible or prohibited and when the vessel is stationary outside the waterway in a situation which clearly indicates that there is no danger for either the vessel or other participants in navigation.

3. The provisions of this Article shall not apply to the vessel listed in Article 3.35, paragraph 2 of Article 3.44 and Article 3.45 of these Rules.

Article 3.33 - Additional day marking for stationary vessels carrying out certain transport operations involving dangerous substances

The provisions stipulated in Article 3.28 of these Rules shall also apply to the vessels listed in that Article and when vessels are stationary.

Article 3.34 - Day marking for nets or poles of stationary vessels

When vessels have nets or poles extending into the waterway or near to it, such nets or poles shall be marked by yellow floats or yellow flags in sufficient number to show their position.

Article 3.35 - Day marking for floating equipment at work and for grounded or sunken vessels

1. A floating equipment at work and stationary vessels carrying our work or sounding or measuring operations shall carry on the side or sides on which the fairway is clear, two green bicones positioned at a height of about 1 m one above each other and when necessary, on the side where the fairway is not clear, one ordinary red ball positioned at the same height as the higher of the two green bicones stipulated in this paragraph. These bicones and balls shall be positioned at a height so that it is visible from all directions.

2. When it is necessary to protect the vessels referred to in paragraph 1 of this Article against wash, the vessel must have on the side or on the side of the fairway which is clear, one flag with a red upper half and white lower half, or two flags one above the other, the upper flag being red and the lower flag white or two flags flown or two balls one above the other, given that the red marking is on top and the white on the bottom and on the side where the fairway is not clear, a red flag or one ball positioned at the same height as the red/white flag or red flag on the other side. These markings must be positioned at a height so that it is visible from all directions.
3. The marking stipulated in paragraph 1 of this Article may be replaced on the side or sides on which the
fairway is clear, with the “entry permitted” board E.1 from Annex 7 of these Rules and on the side where the
fairway is not clear, the “no entry” board A.1 from Annex 7 of these Rules placed at the same height as the
board E.1 stipulated in this paragraph.
4. Grounded or sunken vessels shall carry the marking stipulated in paragraph 2 of this Article. If the position
of the sunken vessel prevents the marking from being placed on the vessel, it shall be placed on boats or
buoys or displayed in any other appropriate manner.
5. The flags stipulated in this Article may be replaced by boards of the same colours.

Article 3.36 - Day marking for anchors that may be a danger to navigation
The vessels, assemblies of floating material and floating establishments shall mark each of the anchors
which might be a danger to navigation with a yellow float with a radar reflector.

IV. SPECIAL MARKING

Article 3.37 - Additional marking for vessels of the supervising authorities and fire-fighting
services
1. Vessels of inland navigation inspections and competent authorities' vessels shall display without prejudice
to the marking applicable to them under the provisions of these Rules, on both sides of the bow a marking
in the shape of a white rhomb bordered in blue.
2. In addition to the markings referred to in paragraph 1 of this Article, the vessels listed in paragraph 1
of this Article shall be obliged to display, during the day, the state flag and white pennant with the symbol
referred to in paragraph 1 of this Article in the centre and both day and night an ordinary blue scintillating
light if so required when carrying out their duties.
3. Fire-fighting vessels when on their way to bring assistance shall be obliged to display both day and night
an ordinary blue scintillating light

Article 3.38 - Additional marking for vessels under way carrying out work in the waterway
1. Vessels under way carrying out work in the waterway or engaged in sounding or measuring operations
may, without prejudice to the marking applicable to them under the other provisions of these Rules, display
by day and by night a bright or ordinary yellow scintillating light visible from all directions.
2. The use of this marking shall be restricted to vessels having written authorization from the competent
authorities.

Article 3.39 - Additional marking for protection against wash
1. Vessels, assemblies of floating material and floating establishments under way or stationary (other than
those specified in article 3.23 and 3.35 of these Rules) requiring protection against wash caused by the
passage of other vessels, without prejudice to the marking applicable to them under the provisions of the
other articles of this chapter, display:
By night:
An ordinary red light and an ordinary white light, or a bright red light and a bright white light, one about 1 m above the other with the red light above, and in such a position that they are clearly visible and cannot be confused with other lights;

By day:
A flag with a red upper half and the lower half white, in a suitable position and high enough to be visible from all directions. This flag may be replaced by two flags one above the other, the upper flag red and the lower flag white. These flags may be replaced by boards of the same colour.

2. Without prejudice to the provisions of article 3.23 and 3.35 of these Rules, only the following may use the marking mentioned in paragraph 1 above:

(a) Vessels, assemblies of floating material and floating establishments which are seriously damaged or are engaged in rescue work, and vessels unable to manoeuvre;

(b) Vessels, assemblies of floating material and floating establishments having written authorization from the competent authorities.

Article 3.40 - Distress signals
1. When a vessel in distress needs assistance, it may display:
   (a) A flag or any other suitable object waved in a circle;
   (b) A flag having above or below it a ball or anything resembling a ball;
   (c) A light waved in a circle;
   (d) Rockets or shells throwing red stars, fired one at a time at short intervals;
   (e) A luminous signal consisting of the group ... --- ... (SOS) in Morse Code;
   (f) Flames such as may be produced by burning tar, oil, etc.;
   (g) Parachute flares or hand-held flares emitting a red light;
   (h) Slow, repeated up-and-down movements of the arms extended on each side.

2. These signals replace or supplement the sound signals referred to in article 4.01, paragraph 4 of these Rules.

Article 3.41 - Prohibition of boarding
1. If there are regulations prohibiting unauthorized persons from going on board, the prohibition shall be indicated by circular white boards bordered with red, with a red diagonal and the figure of a pedestrian in black.

2. The boards shall be placed on the vessel or on the gangway, as circumstances require. The boards shall be illuminated, as required, so as to be clearly visible at night.

3. By derogation from article 3.03 of these Rules, tables shall be about 0,60 m in diameter.

Article 3.42 - Prohibition of smoking or using an unprotected light or flame
1. If other regulations prohibit
   (a) smoking,
(b) using an unprotected light or flame, on board, the prohibition shall be indicated by circular white boards bordered with red, with a red diagonal and a picture of a cigarette emitting smoke. The boards shall be placed on the vessel or on the gangway, as circumstances require. By derogation from article 3.03 of these Rules, they shall be about 60 cm in diameter.

2. By night, the boards shall be illuminated so as to be clearly visible on both sides of the vessel.

Article 3.43 - Prohibition of lateral berthing

1. If there are regulations or special requirements laid down by the competent authorities prohibiting lateral berthing near a vessel (for instance because of the nature of its cargo) that vessel shall carry on deck, in the longitudinal axis a square board with a triangle below. Both faces of the square board shall be white with a red border, and have a red diagonal from the top left to the bottom right with the letter ‘P’ in black in the centre. Both faces of the triangle shall be white and show in black figures the distance in metres over which berthing is prohibited.

2. By night, the boards shall be illuminated so as to be clearly visible on both sides of the vessel.

3. This article shall not apply to the vessels, pushed convoys or side-by-side formations referred to in articles 3.19 and 3.33 of these Rules.

Article 3.44 - Additional marking for vessels whose ability to manoeuvre is limited

1. A vessel whose capacity to give way in accordance with the requirements of these Rules is limited when it is carrying out work or underwater operations such as dredging or cable or buoy laying, and whose position may hinder navigation shall carry, in addition to the marking prescribed elsewhere in these Rules by night three bright or ordinary lights, the top and bottom lights red and the middle light white, one above the other not less than 1 m apart and high enough to be visible from all directions; by day a black ball, a black bicone and a black ball, the bicone in the middle, one above the other not less than 1 m apart and high enough to be visible from all directions.

2. When the operation in which they are engaged causes an obstruction, the vessels referred to in paragraph 1 shall carry, in addition to the marking prescribed in paragraph 1, by night two bright or ordinary red lights, one above the other not less than 1 m apart, on the side or sides on which the obstruction occurs, such as to be visible from all directions and two bright or ordinary green lights, one above the other not less than 1 m apart, on the side or sides on which the channel is clear, such as to be visible from all directions; by day two black balls, one above the other not less than 1 m apart, on the side or sides on which the obstruction occurs and two black bicones, one above the other not less than 1 m apart, on the side or sides on which the channel is clear.

The lights, balls and bicones referred to in this paragraph shall be placed not less than 2 m from, and in no case higher than, the lower light or ball referred to in paragraph 1 of this article.

3. The provisions of this article shall not apply to floating equipment at work when stationary.

Article 3.45 - Additional marking for vessels engaged in fishing

1. A vessel engaged in drawing a trawl or other fishing gear through the water (trawler) shall carry, in addition to the marking prescribed elsewhere in these regulations by night two bright or ordinary lights, the upper light green and the lower light white, one above the other, not less than 1 m apart and high enough to be visible from all directions, forward of the light prescribed in article 3.08, paragraph 1 (a), the upper light
lower than that light and the lower light at a height above the lights prescribed in article 3.08, paragraph 1 (b) at least twice the vertical distance referred to above; however, vessels less than 50 m long shall not in this case be required to carry the light prescribed in article 3.08, paragraph 1 (a).

2. A vessel from paragraph 1. of this Article shall carry by day two black cones, point to point, one above the other and high enough to be visible from all directions.

3. Vessels engaged in fishing other than the vessels referred to in paragraph 1 shall carry the arking prescribed in that paragraph, except for the light prescribed in article 3.08, paragraph 1 (a) and, in place of the green light by night a bright or ordinary red light, such as to be visible from all directions and in addition, if the fishing tackle extends more than 150m horizontally from the vessel, in line with the tackle by night bright or ordinary white light, at a horizontal distance not less than 2m and not more than 6m from the two red and white lights prescribed above and at such a height as to be neither above the white light nor lower than the lights prescribed in article 3.08, paragraph 1 (b) and by day a black cone, point upwards.

4. Vessels referred to in this Article whose length is less than 15m may have a basket in place of two cones stipulated in paragraph 2 and 3 of this Article.

Article 3.46 - Additional marking for vessels used for underwater diving

1. A vessel being used for underwater diving shall carry, in addition to the marking prescribed elsewhere in these regulations a rigid reproduction at least 1m high of the “A” flag of the International Code of Signals, in a suitable position and high enough to be visible from all directions by night and day.

2. Where appropriate, such vessels may carry the marking referred to in article 3.44, paragraph 1, instead of the marking prescribed in paragraph 1 above.

Article 3.47 - Additional marking for vessels engaged in minesweeping

A vessel engaged in minesweeping shall carry, in addition to the marking prescribed elsewhere in these regulations by night three bright or ordinary green lights visible from all directions, arranged in a triangle with a horizontal base in a plane perpendicular to the axis of the vessel, the top light at or near the top of the foremast and the other lights at each end of the foremast yard and by day three black balls arranged in the manner prescribed for the lights.

Article 3.48 - Additional marking for vessels on pilotage service

A vessel on pilotage service shall carry, in addition to the marking prescribed elsewhere in these regulations instead of the light prescribed in article 3.08, paragraph 1 (a), two bright or ordinary lights one above the other and visible from all directions, the top light white and the lower light red, at or near the top of the mast.
Chapter 4

SOUND SIGNALS, NAVIGATION AND COMMUNICATION EQUIPMENT ON VESSELS

Article 4.01 - General

1. When sound signals other than bells are prescribed in these Rules or any other provisions applicable, they shall be given:

   (a) On motorized vessels, except certain small craft unless these are vessels with radar equipment, by means of mechanically operated sound signalling devices, placed sufficiently high that the sound signals can spread freely to the front and if possible also to the back; the signalling devices shall conform to the requirements laid down in chapter I of annex 6 of these Rules.

   (b) On non-motorized vessels and motorized small craft whose equipment does not include a sound signalling device, by means of a suitable trumpet or horn; such sound signals shall conform to the requirements of chapter I, paragraphs 1 (b) and 2 (b), of annex 6 to these Rules.

2. The sound signals given by motorized vessels shall be accompanied by light signals synchronized with them, such light signals shall be yellow, bright and visible from all directions. This provision shall not apply to small craft or to the signal prescribed in article 6.32, paragraph 4, to be given by vessels proceeding downstream and navigating by radar, or to be ringing or pealing of a bell.

3. Unless specifically provided to the contrary, in the case of a convoy, prescribed sound signals need be given, only by the vessel carrying the boatmaster of the convoy.

4. When a vessel in distress needs assistance, it may ring a bell or sound repeated long blasts. Such signals may replace or supplement the visual signals referred to in article 3.40.

5. To ensure the audibility of sound signals, the weighted sound pressure level in the wheelhouse in the area of the helmsman’s head shall not exceed 70 dB (A) when the vessel is proceeding under normal conditions.

6. A bell peal shall last about four seconds. It may be replaced by the repeated striking of metal on metal over the same duration.

Article 4.02 - Use of sound signals

1. Without prejudice to the other provisions of these regulations, all vessels except the small craft referred to in paragraph 2 of this article shall, when necessary, use the signals specified in chapter III-A of annex 6 to these Rules.

2. Small craft proceeding alone or towing or propelling in side-by-side formation only small craft may, if necessary, give the general signals specified in chapter III A of annex 6 to these Rules.

Article 4.03 - Prohibited sound signals

1. The use of sound signals other than those mentioned in these Rules, or the use of the signals mentioned otherwise than as prescribed or permitted by these Rules, is prohibited.

2. However, for communication between vessels or between the vessel and the shore, the use of other sound signals is permitted provided that they are not liable to be confused with those mentioned in these Rules.
Article 4.04 - Radiotelephony

1. Every radiotelephone set carried on board a vessel or floating establishment shall conform to, and shall be operated in accordance with, the requirements of the Regional Arrangement concerning the Radiotelephone Service on Inland Waterways - RAINWAT.

2. Motorised vessels and floating equipment, excluding small crafts for personal use and small crafts for commercial use up to 7 m in length and which are not intended for passenger transport, may sail and operating only if they are equipped with two VHF radiotelephone installations in proper working order. When under way and during the operations on or near the fairway, the radiotelephone installations for the ship-to-ship and nautical information channels must be permanently in a ready-to-transmit and ready-to-receive state. The channel allocated to nautical information may only be left for a short time in order to transmit or receive information on other channels.

3. Each vessel equipped with a radiotelephone installation shall make reports on the channel allocated to the ship-to-ship network before entering blind sections, narrow channels or bridge openings and sections determined by competent authorities. Sign B.11 (Annex 7) shall indicate that the competent authority requires the use of radiotelephone communications.

4. VHF radiotelephone installations must be operated by a person authorized in accordance to existing legislation or if the person operating the installation does not have authorization they must be under the direct supervision of an authorized person.

5. When communicating with a VHF radiotelephone device and its testing, procedure in accordance with existing legislation must be used.

Article 4.05 - Radar

1. Vessels may not use radar or Inland ECDIS equipment which may be used for conning the vessel with overlaid radar image (Navigation Mode) unless:

   (a) they are fitted with radar equipment and, if necessary, Inland ECDIS equipment adapted to the needs of inland navigation and a rate-of-turn indicator. This equipment shall be in proper working order and of a type approved for the needs of inland navigation in accordance with the requirements of the competent authorities concerned as well as in accordance with General technical requirements for radar equipment as set out in annex 10. However, ferry boats not moving independently, shall not be required to be fitted with a rate-of-turn indicator;

   (b) a person holding a certificate of aptitude to use radar in accordance with the requirements of the competent authorities is on board. Notwithstanding the provisions of article 1.09, paragraph 2, the radar may be used for training purposes in good visibility by day and by night, even when there is no such person on board;

   (c) they are equipped with a device for emitting the three-tone signal with the exception of small craft and ferry boats. Notwithstanding the provisions of article 4.04, small craft shall also be equipped with a radiotelephone in proper working order for the ship-to-ship network.

2. In pushed, towed convoys and side-by-side formations, the requirements of paragraph 1 above shall apply only to the vessel carrying the boatmaster of the convoy or formation.

3. High-speed vessels under way shall use radar
Chapter 5

WATERWAY SIGNS AND MARKING

Article 5.01 - Signs
1. Annex 7 to these regulations sets out the prohibitory, mandatory, restrictive, recommendatory and informative signs and auxiliary signs for inland waterways. It also defines the meaning of each sign.
2. Without prejudice to the other provisions of these regulations or to any other provisions applicable, including the special instructions referred to in article 1.20, boatmen shall obey the rules and take account of the recommendations and information conveyed to them by the signs referred to in paragraph 1 above on the waterway or its banks.

Article 5.02 - Marking
1. Annex 8 of Rules contains navigational and bank markings used for marking the waterway and navigational hazards and to make navigation easier. Simultaneously annex 8 defines under what conditions certain signs for marking are used.
2. All rivers of waterways are marked using a lateral system, determining the position of its sides in relation to the direction of vessel’s movement. In these Rules the sides of the waterway “left” and “right” and right and left bank are defined in relation to the vessel moving downstream.
A. GENERAL

Article 6.01 - Definitions
1. For the purposes of this chapter, “upstream” on a fairway means the direction towards the source of the river.
2. For the purposes of this chapter, the following terms are used:
   (a) “Meeting”: where two vessels are proceeding on courses directly or almost directly opposite;
   (b) “Overtaking”: where a vessel (the overtaking vessel) comes up to another vessel (the vessel being overtaken) from a direction more than 22.5° abaft the latter vessel's beam and overtakes it;
   (c) “Crossing”: where two vessels are approaching in a situation other than the cases referred to under (a) and (b).

Article 6.01bis - High-speed vessels
High-speed vessels are required to leave all other vessels enough room to hold their course and to manoeuvre; they may not require such vessels to give way to them.

Article 6.02 - Small craft: General rule
1. For the purposes of this chapter, the term “small craft” means small craft navigating alone or convoys consisting only of small crafts.
2. Where the provisions of this chapter provide that a particular rule of the road shall not apply to small craft in relation to other vessels, it shall be incumbent on small craft to leave all other vessels, including high-speed vessels, enough room to hold their course and to manoeuvre; they may not require such vessels to give way to them.

B. MEETING, CROSSING AND OVERTAKING

Article 6.03 - General principles
1. Crossing or overtaking is permitted only when the fairway is unquestionably wide enough for simultaneous passage, taking all the local circumstances and movements of other vessels into account.
2. When vessels are proceeding in convoy, the visual signals prescribed in articles 3.31, 6.04 and 6.05 shall be shown or emitted only by the vessel carrying the boatmaster of the convoy or side-by-side formation or if the head vessel of the convoy is a tug serving as a temporary auxiliary vessel, the visual signals stipulated in Articles 3.31, 6.04 and 6.05 of these Rules shall also be displayed by this vessel.
3. Vessels on courses which preclude all danger of collision shall not change their course or their speed in a manner which might give rise to danger of collision.
4. Crossing shall only be permitted when a boatmaster is convinced that it can be done without danger to other vessels.
5. When, on meeting or crossing, one vessel is required to give way to another, that other vessel shall maintain its course and speed. When, for any reason, the vessel which is required to maintain its course and speed finds itself so near the other vessel that a collision cannot be avoided solely by a manoeuvre on the part of the vessel required to give way, it shall manoeuvre in the manner that can best help to avoid a collision.

Article 6.03 bis - Crossing

1. When two vessels are crossing in such manner that there is a risk of collision, the vessel which has the other vessel to starboard shall give way to it and, if circumstances permit, avoid crossing ahead of it. However, the vessel which is on the starboard side of a marked fairway, shall maintain its course. This rule shall not apply to small craft in relation to other vessels.

2. The provision in paragraph 1 shall not apply when any one of articles 6.13, 6.14 or 6.16 is applicable.

3. Notwithstanding anything to the contrary in paragraph 1 above, when, in the case of small craft of different categories, two small craft are crossing in such a manner that there is a risk of collision, motorized small craft shall give way to all other small craft and small craft neither motorized nor under sail shall give way to small craft under sail. However, the craft which is on the starboard side of the fairway shall maintain its course.

4. Notwithstanding anything to the contrary in paragraph 1 above, when, in the case of vessels under sail, two vessels are crossing in such a manner that there is a risk of collision, one of them shall give way to the other as follows:

   (a) When each vessel has the wind on a different side, the vessel with the wind on the port side shall give way to the other;

   (b) When both vessels have the wind on the same side, the vessel which is to windward shall give way to the vessel to leeward;

   (c) If a vessel which has the wind on the port side sees another vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, the first shall give way to the other.

   (d) The vessel which is on the starboard side of the channel shall maintain its course.

   This paragraph does not apply to small craft in relation to other vessels.

Article 6.04 - Meeting: Normal rules

1. When meeting, vessels proceeding upstream shall, with due regard for local circumstances and movements of other vessels, give way to vessels proceeding downstream.

2. Vessels proceeding upstream which leave the course of those proceeding downstream on their port side give no signal.

3. Vessels proceeding upstream which leave the course of those proceeding downstream on their starboard side shall in good time and to starboard:

   (a) By day, display a strong scintillating white light or wave a light blue flag or board or display a light blue board in conjunction with a bright scintillating white light.

   (b) By night, display a bright scintillating white light in conjunction, if desired, with a light blue board.

4. The signals referred to in paragraph 3 of this Article shall be visible from ahead and from astern and be displayed until passing is completed. Their continued display after passing is completed is prohibited.
unless it is desired to indicate and intention to continue allowing vessels proceeding downstream to pass to starboard. The light blue board shall have a white border not less than 5 cm wide. The frame and lath structure and the lantern of the scintillating light shall be dark in colour.

5. As soon as it appears that the intentions of a vessel proceeding upstream may not have been understood by a vessel proceeding downstream, the vessel proceeding upstream shall sound one short blast when the meeting is to be to port and two short blasts when the meeting is to be to starboard.

6. Without prejudice to the provisions of Article 6.05 of these Rules, vessels proceeding downstream shall follow the course indicated by those proceeding upstream in accordance with the above provisions of this Article. They shall repeat the visual signals referred to in paragraph 3 or the sound signals referred to in paragraph 5 of this Article made to them by vessels proceeding upstream.

7. Paragraphs 1 to 6 of this Article shall not apply to boats in relation to other vessels or to boats meeting other boats.

Article 6.05 - Meeting: Departures from normal rules

1. By derogation from the provisions of Article 6.04 of these Rules, passenger vessels providing a regular service and whose authorized maximum passenger capacity is not below 24, when proceeding downstream and wishing to call at a landing-stage on the side used by vessels proceeding upstream and towed convoys proceeding downstream which wish to keep close to a particular bank in order to turn upstream have the right to ask vessels proceeding upstream to change the course left clear for them in accordance with Article 6.04 of this Article if that course does not suit them. However, they may not so ask unless certain that their request can be safely met.

2. In the cases referred to in paragraph 1 of this Article, the vessels proceeding downstream shall give the following signals in good time if they wish to pass to port, one short blast and if they wish to pass to starboard, two short blasts and, in addition, the visual signals referred to in paragraph 3, Article 6.04 of these Rules.

3. Vessels proceeding upstream shall, in the cases referred to in paragraph 1 of this Article, grant the request of those proceeding downstream and confirm the fact as follows:

   (a) if they are to pass to port, by sounding one short blast and, in addition, removing the visual signals referred to in paragraph 3, Article 6.04 of these Rules.

   (b) if they are to pass to starboard, by sounding two short blasts and, in addition, displaying the visual signals referred to in paragraph 3, Article 6.04 of these Rules.

4. As soon as it appears that the intentions of a vessel proceeding downstream may not have been understood by a vessel proceeding upstream, the vessel proceeding downstream shall repeat the sound signals referred to paragraph 3 of this Article.

5. If a vessel proceeding upstream sees that the course requested by one proceeding downstream is unsuitable and will cause a danger of collision, it shall sound a series of very short blasts. The helmsmen shall then take all the steps required by the situation to obviate the danger.

6. Paragraphs 1 to 5 above shall not apply to small craft in relation to other vessels or to small craft meeting other small craft.

Article 6.06 - Meeting boats towed from the bank

In the event of a meeting between a vessel being towed from the bank and a vessel not being so towed, the latter shall, by derogation from articles 6.04 and 6.05, always leave the towing side to the former.
Article 6.07 - Meeting in narrow channels
1. In order to avoid so far as possible meetings on sections or at points where the fairway is not unquestionably wide enough for vessels to pass (narrow channels), the following rules shall apply:
   (a) All vessels shall proceed through narrow channels as quickly as possible;
   (b) Where the view is restricted, vessels shall sound one long blast before entering a narrow channel; if necessary, especially when the narrow channel is long, they shall repeat this signal while passing through it.
   (c) A vessel and convoy proceeding upstream, on becoming aware that a vessel and convoy proceeding downstream is about to enter a narrow channel, shall stop below the channel until the vessel and convoy has passed through it.
2. When a meeting in a narrow channel has become inevitable, the vessels concerned shall take every possible precaution to ensure that they pass at a point and under conditions involving the minimum danger. A boatmaster seeing any danger of collision shall sound a series of very short blasts.

Article 6.08 - Meeting prohibited by waterway signs
1. On approaching a section marked with the prohibitory sign A.4 or A.4.1 (annex 7), vessels or convoys proceeding upstream shall stop at the approach of vessels or convoys proceeding downstream and wait until they have passed through the section.
2. If, in order to prevent any meeting, the competent authorities prescribe alternate one-way traffic, prohibition of passage shall be indicated by a general prohibitory sign (A.1, annex 7), authorization of passage shall be indicated by a general “entry permitted” sign (E.1, annex 7). Depending on local circumstances, warning of the sign prohibiting passage may be given by the mandatory sign B.8 (annex 7) used as an advance sign.
3. When in the sectors from paragraph 2. the signs referred to in paragraph 2 above cannot be displayed, vessels shall stop and wait until authorization to proceed is given by representatives of the competent authorities by radiotelephone or suitable signs.

Article 6.09 - Overtaking: General provisions
1. Overtaking is permitted only if the overtaking vessel has made certain that it can be accomplished without danger.
2. The vessel being overtaken shall facilitate overtaking insofar as it is necessary and possible. It shall slow down, if necessary, to permit overtaking to be accomplished without danger and quickly enough not to hamper the movements of other vessels.
   This provision shall not apply to a small craft overtaking a vessel of another category.

Article 6.10 - Overtaking
1. As a general rule, the overtaking vessel shall pass to port of the vessel being overtaken. Where the channel is unquestionably wide enough, the overtaking vessel may also overtake to starboard of the vessel being overtaken.
2. In the case of two sailing vessels, the overtaking vessel shall as a general rule pass on the side on which the vessel being overtaken has the wind. This provision shall not apply to a small sailing craft which is overtaken by another sailing vessel.

3. When a vessel is being overtaken by a sailing vessel, it shall facilitate overtaking on the side on which the overtaking craft has the wind. This provision shall not apply to a small sailing craft overtaking another vessel.

4. If overtaking is possible without the vessel being overtaken changing its course or speed, the overtaking vessel need give no sound signal.

5. When overtaking is impossible without the vessel being overtaken changing course, or when it appears that the vessel being overtaken may not have noticed the intention to overtake and that this may cause a danger of collision, the overtaking vessel shall sound:
   (a) Two long blasts followed by two short blasts if it wishes to pass to port;
   (b) Two long blasts followed by one short blast if it wishes to pass to starboard.

6. If the vessel being overtaken can grant this request by the overtaking vessel, it shall leave the necessary space on the side requested, moving over towards the other side if necessary, and sound:
   (a) One short blast when it is to be overtaken to port;
   (b) Two short blasts when it is to be overtaken to starboard.

7. When overtaking is not possible on the side requested by the overtaking vessel, but possible on the other side, the vessel being overtaken shall sound:
   (a) One short blast when overtaking is possible to port;
   (b) Two short blasts when overtaking is possible to starboard.

8. If the overtaking vessel still wishes to pass, it shall then sound two short blasts in case (a) or one short blast in case (b). The vessel being overtaken shall then leave the necessary space on the side on which it is to be overtaken, moving over to the other side if necessary.

9. When overtaking is impossible without danger of a collision, the vessel being overtaken shall sound five short blasts.

10. Paragraphs 4 to 9 above shall not apply to small craft in relation to other vessels or to small craft overtaking other small craft.

**Article 6.11 - Overtaking prohibited by waterway signs**

Without prejudice to the provisions of article 6.08, paragraph 1, overtaking is prohibited:
   (a) Generally on sections marked by the sign A.2 (annex 7);
   (b) Between convoys in the areas marked by the sign A.3 (annex 7). However, this prohibition shall not apply when at least one of the convoys is a pushed convoy whose maximum dimensions do not exceed 110 m by 12 m or side by side formation whose maximum dimensions do not exceed 110 m x 23 m.

**C. OTHER RULES OF THE ROAD**

**Article 6.12 - Navigation on sections where the course is prescribed**

1. On sections where the course to be followed is prescribed, that course shall be marked by the mandatory signs B.1, B.2, B.3 or B.4 (annex 7). The end of the section may be indicated by the informative sign E.11 (annex 7).
2. On such a section, vessels proceeding upstream shall in no case impede the progress of those proceeding downstream; in particular, on approaching the mandatory sign B.4 (Annex 7) they shall if necessary reduce speed or even stop to allow vessels proceeding downstream to manoeuvre.

Article 6.13 - Turning

1. Vessels may turn only after making certain that the movements of other vessels will allow them to do so safely, and without obliging such other vessels to change their course or speed abruptly.

2. If the intended manoeuvre will obliger other vessels to change their course or speed, the vessel wishing to turn shall, before turning, announce its intention in good time by sounding:
   (a) A long blast followed by a short blast if it wishes to turn to starboard; or
   (b) A long blast followed by two short blasts if it wishes to turn to port.

2. The other vessels shall, so far as is necessary and possible, change their speed and course to allow the turn to be made safely. In particular, when vessels wish to turn in order to head against the current, the other vessels shall help to ensure that they can do so in good time.

4. The provisions of paragraphs 1 to 3 above shall not apply to small craft in relation to other vessels. For small craft among themselves, only paragraphs 1 and 3 shall apply.

5. All turning is prohibited on sections marked with the prohibitory sign A.8 (annex 7). On the other hand, if sections of a waterway are marked with the informative sign E.8 (annex 7), boatmasters are recommended to choose such sections for turning, to which manoeuvre the provisions of this article remain applicable.

Article 6.14 - Procedure on departure

The provisions of article 6.13 above shall apply also to vessels, other than ferry-boats, when leaving their anchorage or berth without turning; however, the signals prescribed in paragraph 2 of article 6.13 shall be replaced by the following:
One short blast when the vessels are approaching on the starboard side;
Two short blasts when they are approaching on the port side.

Article 6.15 - Prohibition of entering the spaces between vessels in a towed convoy

Entering the spaces between vessels in a towed convoy is prohibited.

Article 6.16 - Harbours and tributary waterways: entering and leaving; leaving followed by crossing the waterway

1. Vessels may enter or leave a harbour or a tributary waterway or enter or cross the waterway only after making certain that they can do so safely and without obliging other vessels to change their course or speed abruptly.

2. If a vessel proceeding downstream is obliged to turn upstream in order to enter a harbour or tributary waterway, it shall accord priority to any vessel proceeding upstream which also wishes to enter the harbour or tributary waterway.

3. In certain cases, waterways considered to be tributaries may be marked by one of the signs E.9 or E.10 (annex 7).
4. If the intended manoeuvre is likely or certain to oblige other vessels to change their course or speed, vessels carrying out any of the manoeuvres referred to in paragraph 1. and 2. above shall announce the manoeuvre by sounding in good time:

   (a) Three long blasts followed by one short blast when, to enter or after leaving, they have to turn to starboard;

   (b) Three long blasts followed by two short blasts when, to enter or after leaving, they have to turn to port;

   (c) Three long blasts when, after leaving, they wish to cross the waterway and before completing the crossing, they shall, if necessary, sound one long blast followed by one short blast if they wish to turn to starboard, or one long blast followed by two short blasts if they wish to turn to port.

5. The other vessels shall change their course and speed if necessary. This provision shall also apply when the sign B.10 (annex 7) is placed on the main waterway near the exit from a harbour or tributary waterway.

6. If the sign B.9 (a) or B.9 (b) (annex 7) is placed near the exit from a harbour or tributary waterway, vessels leaving that harbour or waterway may enter or cross the main waterway only if their doing so will not oblige vessels proceeding on it to change their course or speed.

7. Vessels may not enter a harbour or tributary waterway when the sign A.1, together with the additional sign shown in annex 7, section II, paragraph 2, is displayed on the main waterway. Vessels may not leave a harbour or tributary waterway when the sign A.1, together with the additional sign shown in annex 7, section II, paragraph 2, is near the exit.

8. If the sign E.1 together with the additional sign shown in annex 7, section II, paragraph 2, is displayed on the main waterway, vessels may enter a harbour or tributary waterway even if their doing so might oblige vessels proceeding on the main waterway to change their course or speed. Vessels may leave if the sign E.1, together with the additional sign shown in annex 7, section II, paragraph 2, is displayed near the exit; in this case, the sign B.10 (annex 7) shall be displayed on the main waterway.

9. The provisions of paragraphs 1 to 5 shall not apply to small craft in relation to other vessels, nor shall those of paragraph 6 apply to vessels which are not small craft in relation to small craft. The provisions of paragraph 4 shall not apply to small craft among themselves.

Article 6.17 - Sailing abreast

1. Vessels may sail abreast only if there is enough room to do so without inconvenience or danger to shipping.

2. Except when overtaking or passing, it is prohibited to sail within 50 m of a vessel or convoy showing the two or three blue lights referred to in article 3.14, paragraphs 2 or 3 or two or three blue cones referred to in article 3.28, paragraphs 2 or 3.

3. Without prejudice to the provisions of article 1.20, it is prohibited to go alongside a vessel or an assembly of floating material under way, to grapple it or to ride along in its wake, without the express permission of its boatmaster.

4. Water skiers and persons practising aquatic sports without the use of a vessel shall keep at a sufficient distance from vessels and assemblies of floating material under way and from floating equipment at work.

Article 6.18 - Prohibition of trailing of anchors, cables or chains

The trailing of anchors, cables or chains is prohibited. This prohibition shall not apply to small movements
at stopping places or to manoeuvring; it shall, however, apply to movements and manoeuvring on sections marked, in accordance with article 7.03, paragraph 1 (b), with the prohibitory sign A.6 (annex 7). This prohibition shall not apply either on sections marked, in accordance with article 7.03, paragraph 2, with the informative sign E.6 (annex 7).

Article 6.19 - Drifting
1. Drifting is prohibited. This prohibition shall not apply to small movements of the vessels not engaged in the process of the transport of the dangerous goods and only at places of stopping, loading or unloading.
2. By derogation of the provisions of paragraph 1 of this Article, the competent Portmaster’s office may exceptionally approve navigation by drifting on particular sections of inland waters, keeping account of safe navigation in this section.
3. Vessels drifting downstream while facing upstream with engines running “ahead” are considered to be going upstream, not drifting.

Article 6.20 - Wash
1. Vessels shall regulate their speed to avoid creating excessive wash or suction likely to cause damage to stationary or moving vessels or structures. In particular, they shall reduce speed in good time, but not to below the speed required to steer safely:
   (a) Outside harbour entrances;
   (b) Near vessels made fast to the bank or to a landing-stage, or loading or discharging cargo;
   (c) Near vessels lying at normal stopping places;
   (d) Near ferry-boats which are not moving independently;
   (e) On sections of the waterway designated by the competent authorities; such sections may be marked by the sign A.9 (annex 7).
   (f) Next to places where works or underwater works are being carried out,
   (g) In narrow passages and canals.
2. Subject to the provisions of article 1.04, vessels are not required to fulfil the obligations imposed by paragraph 1 (b) and (c) above in respect of small craft.
3. When passing vessels displaying the lights stipulated in paragraph 2, Article 3.23 of these Rules, or flag or flags stipulated in paragraph 2, Article 3.35 of these Rules or vessels, assemblies of floating material or floating equipment displaying lights, flag, flags or boards stipulated in paragraph 1, Article 3.42 of these Rules, other vessels shall reduce speed as stipulated in paragraph 1 of this Article and they shall also keep as far off as possible.

Article 6.21 - Convoys
1. Motorised vessels propelling a convoy shall have sufficient power to ensure proper control of the convoy, taking into account the size of the convoy, type of navigation and section of the waterway on which they are navigating.
2. The pusher of a pushed convoy shall be capable without turning of stopping the convoy in good time in such a way that the convoy remains under proper control.
3. It is prohibited for motorized vessels towing or pushing other vessels or propelling them in side-by-side formation to leave them during making-fast or anchoring operations before the fairway has been cleared of such vessels and the boatmaster of the convoy has satisfied himself that they are in a secure position.

4. Ship-borne barges shall not be placed at the head of a pushed convoy unless anchors may be presented at the head of the convoy.

5. Passenger vessel with passengers on board shall not sail in side-by-side formation. Sailing in side-by-side formation shall be permitted only for the emergency towing of a passenger vessel.

Article 6.21 bis - Relocation of pushed barges outside a pushed convoy

Outside a pushed convoy, a pushed barge, may only be moved:

(a) Being coupled side-by-side to a motorized vessel;
(b) Being coupled side-by-side with vessel which has a steering device and crew according to the provisions of paragraph 3, Article 1.08 of these Rules,
(c) On short distances when a pushed convoy is being formed or broken up except a pushed barges which are obliged to carry one, two or three blue cones or blue lights in accordance with articles 3.14 and 3.28.

Article 6.22 - Suspension of navigation

When the competent authorities announce by the general prohibitory sign A.1 (annex 7) that navigation is suspended, all vessels shall stop short of that sign.

Article 6.22 bis - Navigation when passing floating equipment at work or grounded or sunken vessels, and vessels whose ability to manoeuvre is limited

It is prohibited to pass the vessels referred to in article 3.23 and 3.35 on the side on which they show the red light or lights prescribed in article 3.23 paragraphs 1. and 2., the red ball, the red flag or the board bearing the sign A.1 (annex 7) prescribed in article 3.35, paragraph 1, 2 and 3, or to pass the vessels referred to in article 3.44 on the side on which they show the two red lights or the two black balls prescribed in article 3.44, paragraph 2.

D. FERRY-BOATS

Article 6.23 - Rules applicable to ferry-boats

1. Ferry-boats may cross the waterway only after making certain that the movement of other vessels enables them to do so without risk and that the latter are not obliged to change their course or speed abruptly. These provisions shall not apply to ferry-boats not sailing independently in relation to small crafts.

2. A ferry-boat which is not moving independently shall, in addition, comply with the following rules:

(a) When not operating, it shall lie at the berth assigned to it by the competent Competent authorities. If no berth has been assigned to it, it shall lie in such a position that the fairway remains clear;

(b) When using an air cable for navigation, the lowest point of the cable must be located above the height of the stipulated dimensions of the free profile of the waterway above the high navigable water level.
(c) when using a underwater cable (longitudinal or transversal) for crossing over the waterway, immediately after putting to shore the cable shall be freed and placed on the bottom of the fairway.

(d) A ferry-boat shall not remain in the channel longer than is necessary for the service it provides.

3. Vessels may not obstruct the putting a shore and work of the ferry-boat with its putting a shore.

E. PASSAGE UNDER BRIDGES AND THROUGH WEIRS AND LOCKS

Article 6.24 - Passage under bridges and through weirs: General

1. At the opening of a bridge or weir, the rules of article 6.07 shall apply unless the fairway is wide enough for simultaneous passage.

2. When passage through the opening of a bridge or weir is authorized and the opening is marked by the sign A.10 (annex 7) navigation is prohibited outside the area between the two boards constituting this sign and when the opening is marked by the sign D.2 (annex 7), vessels are recommended to keep within the area between the two boards or lights constituting this sign.

Article 6.25 - Passage under fixed bridges

1. When certain openings of fixed bridges are marked by one or more red lights or red-white-red boards (sign A.1, annex 7), such bays are prohibited to shipping.

2. When certain openings of fixed bridges are marked by the sign D.1 (a) (annex 7), or the sign D.1 (b) (annex 7), placed above the opening, it is recommended that these openings should be given preference. If the fairway is marked with the sign D.1 (a) (annex 7), it is open to shipping in either direction.

3. If it is marked with the sign D.1 (b) (annex 7), it is closed to shipping coming from the other direction. At this time, the opening of the bridge on the other side shall be marked with the prohibitory sign A.1 in Annex 7.

4. When certain openings of fixed bridges are marked as specified in paragraph 2 above, vessels may use the unmarked openings only at their own risk.

Article 6.26 - Passage trough movable bridges

1. The user of the bridge is obliged to have on or near the bridge a radiotelephone device corresponding to the provisions of Article 4.04. For the entire time the bridge is on the waterway and navigation is taking place through it, the radiotelephone device must be turned on.

2. Without prejudice to the other provisions of these Rules and to any other provisions applicable, boatmasters shall, on approaching and passing under movable bridges, obey any instructions given them by the bridge staff to ensure safe and orderly navigation or quick passage. The boatmaster of a vessel shall announce his intention of navigation through the opening in a bridge to the staff on the bridge by means of a long blast and radiotelephone.

3. On approaching a movable bridge, vessels shall reduce speed. If they cannot or do not wish to pass under the bridge, and if boards bearing the sign B.5 (annex 7) are placed on the bank, they shall stop short of those boards.

4. Overtaking when approaching movable bridges is prohibited unless special instructions are given by the bridge staff.

5. Passage under movable bridges may be regulated by the following signals:
(a) One or more red lights mean: passage prohibited;
(b) A red light and a green light at the same height or a red light above a green light mean: passage is still prohibited, but the bridge is being opened and vessels should prepare to get under way;
(c) One or more green lights mean: passage permitted;
(d) Two red lights one above the other mean: the opening of the bridge for shipping is suspended;
(e) A yellow light placed on the bridge together with the marking referred to under (a) and (d) above means passage prohibited except for vessels of reduced height; passage authorized in both directions;
(f) Two yellow lights placed on the bridge together with the marking referred to under (a) and (d) above mean: passage prohibited except for vessels of reduced height; passage prohibited in the other direction.

6. The red lights referred to in paragraph 5 above may be replaced by red-white-red boards (sign A.1, annex 7), the green lights by green-white-green boards (sign E.1, annex 7) and the yellow lights by yellow boards (sign D.1, annex 7).

7. By derogation of the provisions of paragraph 1 of this Article, a small craft which can easily and without danger to itself, other vessels, the bridge, devices and signs on the bridge pass under the bridge, does not need to announce its intention to pass under the bridge.

Article 6.27 - Passage through weirs

1. The trailing of anchors, cables or chains at or near a weir is prohibited.
2. Passage through an opening in a weir is permitted only when the opening is marked to the left and to the right by a sign E.1 (annexes 7).
3. Prohibition of passage through an opening in a weir shall be indicated by one or more red lights or red-white-red boards (sign A.1, annex 7).
4. By derogation from paragraph 2 above, in the case of weirs with an overhead bridge, passage through an opening may also be authorized by a sign D.1 (annex 7) placed on the bridge above the fairway.

Article 6.28 - Passage through locks

1. Vessels approaching lock basins shall reduce speed. If they cannot or do not wish to enter the lock immediately, and if a board bearing the sign B.5 (annex 7) is placed on the bank, they shall stop short of that board.
2. In lock basins and locks, vessels equipped with a radiotelephone permitting communication on the nautical information network shall listen on the channel allotted to the lock.
3. Passage through locks shall be in the order of arrival in the lock basins. Small craft shall not be entitled to demand separate locking. They shall not enter the lock until invited to do so by the lock staff. Furthermore, when small craft are passing through at the same time as other vessels, they shall enter the lock only after the latter.
4. Overtaking in or near locks, and especially in lock basins, is prohibited.
5. In locks, anchors shall be in the fully raised position; the same shall apply in lock basins, unless the anchors are in use.
6. On entering locks, vessels shall reduce speed so as to avoid bumping against the gates or protective devices or against other vessels, assemblies of floating material or floating establishments.
7. In locks:
   (a) If limits are marked on the side-walls, vessels shall keep within those limits;
   (b) While the lock is being filled or emptied and until they are allowed to leave, vessels shall be made
       fast and the mooring ropes shall be so handled as to prevent bumping against the walls, gates or protective
       devices or against other vessels or assemblies of floating material;
   (c) The use of fenders, which shall be floating fenders if movable, shall be compulsory;
   (d) It is prohibited for vessels and assemblies of floating material to discharge or run off water onto the
       copings or onto other vessels or assemblies of floating material;
   (e) The use of mechanical means of propulsion is prohibited from the time the vessel is made fast until it
       is allowed to leave unless when this is necessary because of the safe passage trough lock
   (f) Small craft shall keep away from other vessels.
8. In locks and lock basins it is obligatory to keep a minimum lateral distance of 10 m from the vessels or
   convoys carrying the blue light or the blue cone referred to in articles 3.14 and 3.28. However, this obligation
   shall not apply to vessels and convoys also showing this marking.
9. Vessels and convoys showing the two or three blue lights referred to in article 3.14 or two or three blue
   cones referred to in article 3.28 , shall be locked separately.
10. Vessels and convoys showing carrying the blue light or the blue cone referred to in articles 3.14 and
    3.28. shall not be locked with passenger vessels.
11. On approaching the lock basin and on entering and leaving a lock, high-speed vessels shall move at a
    speed that will preclude any damage to the locks, to vessels or to floating equipment and that will not cause
    any danger for the persons on board.
12. In order to ensure safe and orderly navigation, quick passage through locks or their full use, the lock staff
    may give instructions supplementing or departing from the provisions of this article. Vessels in locks and lock
    basins shall comply with such instructions.

Article 6.28 bis - Entering and leaving locks
1. Admittance to a lock shall be regulated both by day and by night by visual signals (marking) placed on one
   side or on both sides of the lock. Such signals shall have the following meaning:
   (a) Two red lights one above the other no entry, lock out of service;
   (b) A single red light or two red lights side by side no entry, lock closed;
   (c) Extinction of one of the two red lights side by side or one red light and one green light side by side
       or a red light above a green light no entry, lock being prepared for opening;
   (d) A single green light or two green lights side by side entry permitted.
2. Exit from a lock shall be regulated both by day and by night by the following visual signals (marking): one
   or two red lights: No exit; One or two green lights: Exit permitted.
3. The red light or lights referred to in paragraphs 1 and 2 above may be replaced by a board bearing the
   sign A.1 (annex 7). The green light or lights referred to in the same paragraphs may be replaced by a board
   bearing the sign E.1 (annex 7).
4. In the absence of lights and boards, it is prohibited to enter or leave locks except by express order of the
   lock staff.
Article 6.29 - Priority of passage through locks
1. By derogation from article 6.28, paragraph 3, the following shall have priority of passage through locks:
   (a) Vessels belonging to the competent authority or to the fire, police or customs services under way on urgent duty;
   (b) Vessels to which the competent authority has expressly granted priority, and carrying the red pennant prescribed in article 3.31.
   (c) Passenger ships providing regular services
2. When these vessels approach lock basins or are made fast in them, other vessels shall facilitate as much as possible passage by such vessels.

F. REDUCED VISIBILITY - NAVIGATION BY RADAR

Article 6.30 - General rules for navigation in reduced visibility
1. In reduced visibility and notwithstanding the provisions of article 6.32, only vessels equipped with a radar installation according to article 4.05 are permitted to proceed. They shall use the radar installation.
2. Vessels under way in reduced visibility shall proceed at a safe speed as required by the reduced visibility and the presence and movements of other vessels and local circumstances. The radiotelephone installation shall be placed on listening watch on the channel allocated to the ship-to-ship network and they shall use the radiotelephone to give other vessels the necessary information for safety of navigation.
3. When stopping because of reduced visibility, vessels shall, as far as possible, keep clear of the fairway.
4. Vessels proceeding on their course shall, when meeting another vessel, keep to the right as far as is necessary to allow passing port to port. However, passing starboard to starboard can also be allowed by the competent authorities when navigational conditions of particular waterways so require.
5. Notwithstanding the provisions of paragraph 1 of this article, for towed convoys proceeding downstream, navigation using the radar installation is prohibited. For such towed convoys provisions of the Article 6.33 are applicable.

Article 6.31 - Sound signals when stationary
1. In reduced visibility, vessels and floating equipment stationary in or near the fairway outside ports or places specially designated by the competent authorities for berthing shall have radiotelephone in work on ship-to-ship channel. As soon as they hear by radiotelephone, of the approach of other vessels, or as soon and as long as they hear from an approaching vessel one of the signals prescribed in article 6.32, paragraph 5 or article 6.33, paragraph 1 (b), they shall indicate their position by radiotelephone or give sound signals as follows:
   (a) When they are to the left of the fairway (for an observer facing downstream) one peal of a bell,
   (b) When they are to the right of the waterway (for an observer facing downstream) two peals of a bell,
   (c) When their position is uncertain three peals of a bell.
2. These signals shall be repeated at intervals of not more than one minute.
3. The provisions of paragraph 1 and 2 of this Article shall not apply to vessels in a pushed convoy other than a pusher. In the case of a side-by-side formation, they shall apply only to one vessel in the formation. In the case of a towed convoy, they shall apply only to the towing vessel and the last vessel in the convoy.
4. This article shall also apply to vessels grounded in or near the fairway which may present a danger to other vessels.

Article 6.32 - Navigation by radar
1. A vessel is considered to be navigating by radar when, in conditions of reduced visibility, it navigates using radar in accordance with article 4.05.
2. When a vessel is navigating by radar, there shall be at all times in the wheelhouse a person holding a diploma required by the competent authorities for that section of the inland waterway and for the type of vessel he navigates and the certificate referred to in article 4.05, paragraph 1 (b) and a second person sufficiently conversant with this method of navigation. However, if the wheelhouse is equipped with a centralized control post, it is sufficient that the second person can, if necessary, be summoned to the wheelhouse immediately.
3. As soon as a vessel proceeding upstream observes oncoming vessels on the radar screen, or when it is approaching a sector where there might be vessels not yet visible on the screen, it shall communicate by radiotelephone to the oncoming vessels its category, name, direction and position and agree with these vessels on a procedure for passing.
4. As soon as a vessel proceeding downstream observes on the radar screen a vessel whose position or course may cause a dangerous situation and which has not established contact by radiotelephone, the vessel proceeding downstream shall draw the attention of this vessel to the dangerous situation by radiotelephone and agree on a procedure for passing.
5. When radiotelephone contact cannot be established with the oncoming vessels, the vessel shall:
   (a) Give the three-tone signal and repeat it as often as necessary. This provision does not apply to small craft;
   (b) Reduce speed and, if necessary, stop.
6. A vessel proceeding upstream shall, as soon as it hears the signals referred to in paragraph 5 (a) above or observes on the screen vessels whose position or movements might cause a dangerous situation, or when it is approaching a section where there might be vessels not yet visible on the screen:
   (a) Give one long blast and repeat this signal as often as necessary;
   (b) Reduce speed and, if necessary, stop.
7. Any vessel navigating by radar and called by radiotelephone shall reply by radiotelephone, giving its category, name, direction and position. It shall then, agree on a passing procedure with the oncoming vessel; a small craft, however, shall only indicate on which side it is giving way.
8. In convoys and side-by-side formations, the requirements of paragraphs 1-6 above shall apply only to the vessel carrying the boatmaster of the convoy or formation.

Article 6.33 - Provisions for vessels not navigating by radar
In reduced visibility, vessels and convoys unable to use radar shall immediately proceed to the nearest safe berth. The following provisions shall apply during the voyage to this berth:
   (a) As far as possible they shall proceed on the navigable side of the fairway.
   (b) Any vessel proceeding alone and any vessel carrying the boatmaster of a convoy shall sound one long blast; this signal shall be repeated at intervals of not more than one minute. Such vessels shall have
a lookout forward; in the case of convoys, however, a lookout is required on the leading vessel only. The lookout shall be within sight or hearing or in communication through a voice link with the boatmaster of the vessel or convoy.

(c) When a vessel is called by radiotelephone from another vessel it shall reply by radiotelephone, giving its category, name, direction and position. It shall also state that it is not navigating by radar and that it is making for a berthing area. It shall then agree on a passing procedure with this vessel.

(d) As soon as a vessel hears the sound signal from another vessel with which it has not been possible to establish contact by radiotelephone, it shall:
- if it is near to a bank: keep close to that bank and, if necessary, stop there until this vessel has passed;
- if it is not near to a bank and especially if it is crossing from one bank to another: clear the channel as fully and as quickly as possible.

G. SPECIAL RULES

Article 6.34 - Special priorities
1. When meeting or crossing the course of a vessel showing the marking referred to in article 3.44 and a vessel showing the marking referred to in article 3.45, other vessels shall give way.
2. Where a vessel of the category referred to in Article 3.44 meets or crosses the course of a vessel of the category referred to in article 3.45, the latter vessel give way to the former.
3. Vessels shall not approach within 1,000 m of the rear of a vessel showing the marking referred to in article 3.47.

Article 6.35 - Water skiing and similar activities
1. Water skiing and similar activities shall be permitted only during the day and in good visibility and in regions which have been determined and marked by the competent Competent authorities (bodies).
2. The boatmaster of the towing vessel shall be accompanied by a person, minimum age of 18, responsible for the tow and for supervision of the skier and competent for those purposes.
3. Except when navigating in a channel reserved for their exclusive use, towing vessels and water skiers shall keep at a sufficient distance from all other vessels, from the bank and from bathers.
4. The tow rope shall not be trailed unheld.
5. Bathers are prohibited from swimming on a fairway.
6. Windsurfing is prohibited at the entry into a port and in narrow passages where navigation takes place.

Article 6.36 - Fishing vessels
1. Trolling with several vessels abreast is not permitted. Trolling with several vessels abreast and setting of fishing equipment in or near a fairway is not permitted.
2. All vessels are prohibited from passing at a short distance behind a vessel engaged in fishing showing the marking prescribed in article 3.45.
Article 6.37 - Underwater divers for sport
1. Underwater diving for sport shall be prohibited in areas where navigation might be hindered, particularly:
   (a) On the normal course of vessels showing the marking referred to in article 3.25 and 3.29;
   (b) At entrances to harbours;
   (c) On or near berthing areas;
   (d) In areas reserved for water skiing or similar activities.
   (e) On fairway without special permission
   (f) In ports without special permission
2. All vessels shall keep at a sufficient distance from a vessel showing the marking referred to in article 3.46.
3. Persons carrying out underwater fishing or other activities under water must have an orange ball attached and pulled by them for the duration of their dive floating on the water's surface which may not be smaller than 30 cm in diameter.

Article 6.38 - Structures on bank and in the fairway
1. Investors or users of structures or devices constructed or erected on an embankment or on fairway are obliged to maintain them in a state which shall not pose a danger to human life or safe navigation.
2. If there is outside night illumination located on the structures or devices which have been constructed or erected on the bank, on the water or above the water, then there must be shields on the lights in the direction towards the fairway.
Chapter 7

BERTHING RULES

Article 7.01 - General principles of berthing
1. Without prejudice to the other provisions of these regulations, vessels and assemblies of floating material shall choose their berths as near the bank as their draught and local conditions permit and, in any case, so as not to obstruct shipping.
2. Except under special conditions laid down by the competent portmaster offices, floating establishments shall be so placed as to leave the channel clear for shipping.
3. Vessels, assemblies of vessels and of floating material and floating establishments shall, when stationary, be anchored or made fast in such a way that they cannot change position and thus constitute a danger or obstruction to other vessels taking into account, in particular, the wind, changes in the water level, suction and wash.

Article 7.02 - Berthing
1. Vessels, assemblies of floating material or floating establishments may not berth:
   (a) In sections of the waterway where berthing is generally prohibited;
   (b) In sectors designated by the competent authorities;
   (c) In sectors marked by the sign A.5 (annex 7); the prohibition then applies on the side of the waterway on which the sign is placed;
   (d) Under bridges and high-voltage electric lines;
   (e) In or near narrow channels within the meaning of article 6.07 or in or near sectors which would become narrow channels if vessels berthed there;
   (f) At the entrances to or exits from tributary waterways;
   (g) On the course of ferry-boats;
   (h) On the course taken by vessels to come alongside or leave a landing stage;
   (i) In turning areas marked by the sign E.8 (annex 7);
   (j) Laterally to a vessel carrying the sign prescribed in article 3.41 within the distance in metres indicated in the white triangle on that sign;
   (k) On stretches of water marked by the sign A.5.1 (annex 7) whose breadth, measured from the sign, is shown in metres on the sign.
2. In sections where berthing is prohibited under the provisions of paragraph 1 (a) to (d) above, vessels, assemblies of floating material and floating establishments may berth only in berthing areas marked by one of the signs E.5 to E.7 (annex 7) and under the conditions laid down in articles 7.03 to 7.06 below.

Article 7.03 - Anchoring
1. Vessels, assemblies of floating material or floating establishments may not anchor:
   (a) In sections of the waterway where anchoring is generally prohibited;
   (b) In sectors marked by the sign A.6 (annex 7); the prohibition then applies on the side of the waterway on which the sign is placed.
2. In sections where anchoring is prohibited under the provisions of paragraph 1 (a) above, vessels, assemblies of floating material and floating establishments may anchor only in sectors marked by the sign E.6 (annex 7) and only on the side of the waterway on which the sign is placed.

Article 7.04 - Making fast
1. Vessels, assemblies of floating material or floating establishments may not make fast to the bank:
   (a) In sections of the waterway where making fast is generally prohibited;
   (b) In sectors marked by a sign A.7 (annex 7); the prohibition then applies on the side of the waterway on which the sign is placed.
2. In sections where making fast to the bank is prohibited under the provisions of paragraph 1 (a) above, vessels, assemblies of floating material and floating establishments may make fast only in sectors marked by the sign E.7 (annex 7) and only on the side of the waterway on which the sign is placed.
3. It is prohibited to use trees, railings, posts, marker stones, pillars, metal steps, handrails, etc., for making fast or warping.

Article 7.05 - Berthing areas
1. In berthing areas marked by the sign E.5 (annex 7), vessels and assemblies of floating material may berth only on the side of the waterway on which the sign is placed.
2. In berthing areas marked by the sign E.5.1 (annex 7), vessels and assemblies of floating material may berth only on the stretch of water whose breadth, measured from the sign, is shown in metres on the sign.
3. In berthing areas marked by the sign E.5.2 (annex 7), vessels and assemblies of floating material may berth only on the stretch of water bounded by the two distances shown in metres on the sign. These distances shall be measured from the sign.
4. In berthing areas marked by the sign E.5.3 (annex 7), vessels and assemblies of floating material may not, on the side of the waterway on which the sign is placed, berth abreast in a number greater than that shown in Roman figures on the sign.
5. In berthing areas, vessels shall, in the absence of instructions to the contrary, berth abreast from the bank outwards, on the side of the waterway on which the sign is placed not entering the fairway with exterior vessel.
6. When the aquatorium of the berthing area, as a supplement of signs on the bank, is marked with buoy markers, they should be as in A.4, Annex 8 of these Rules.
7. In the cases referred to in paragraph 6 of this Article lighted buoys shall separate the waterway from the berthing place.

Article 7.06 - Berthing authorized for certain types of vessel
In berths displaying one of the signs E.5.4 to E.5.15 (annex 7), berthing shall be authorized only for the types of vessel for which the sign is valid, and only on the side of the waterway on which the sign is placed.

Article 7.07 - Berthing in the vicinity of vessels, pushed convoys and side-by-side formations carrying out certain transport operations involving dangerous substances
1. The minimum distance to be left between two vessels, pushed convoys or side-by-side formations when berthed shall be:
(a) 10 m if one of them shows the marking referred to in article 3.14, paragraph 1 or article 3.28 paragraph 1;
(b) 50 m if one of them shows the marking referred to in article 3.14, paragraph 2 or article 3.28 paragraph 2;
(c) 100 m if one of them shows the marking referred to in article 3.14, paragraph 3 or article 3.28 paragraph 3.
If the two vessels, pushed convoys or side-by-side formations each carry one or more lights or cones, the higher number of lights or cones indicates the distance to be left clear.
2. The obligation referred to in paragraph 1 (a) above shall not apply to:
   (a) Vessels, pushed convoys and side-by-side formations also carrying this marking;
   (b) Vessels not carrying this marking but issued with a certificate of approval in accordance with paragraph 8.1.8 of ADN and conforming to the safety requirements applicable to vessels referred to in article 3.14 paragraph 1 and article and 3.28 paragraph 1.
3. The competent authority may make exceptions with regard to berthing in particular cases

Article 7.08 - Watch and surveillance
1. An efficient watch shall be kept continuously on board vessels lying in the fairway.
2. All other berthed vessels shall be kept under surveillance by a person capable of acting quickly if the need arises when necessary due to local conditions and competent competent authorities.
3. An efficient watch shall be kept continuously on board berthed vessels compelled to carry one, two or three lights according to Article 3.14 or one, two or three blue cones according to Article 3.28. The provisions of this paragraph shall not apply to vessels without crews obliged to carry the above mentioned lights or cones when berthed in a port or other berthing areas where surveillance of vessels is secured.
4. When the vessel has no boatmaster, the responsibility for setting up such a watch or surveillance shall lie with the operator and, in case the operator is not identifiable, with the owner.
Article 8.01 - ‘Do not approach’ signal

1. In case of incidents or accidents that may result in leakage of the dangerous substances carried, the ‘Do not approach’ signal shall be given by vessels carrying the markings referred to in paragraphs 1, 2 or 3 of articles 3.14 or 3.28, if the crew cannot avert the attendant danger to human life or navigation.

This provision does not apply to pushed barges and other non-self-propelled vessels. Nevertheless, if they are part of a convoy, the ‘Do not approach’ signal shall be given by the vessel with the convoy boatmaster on board.

2. The ‘Do not approach’ signal consists of a sound signal and a light signal. The sound signal is made up of one short and one long sound which are constantly repeated for not less than 15 consecutive minutes. The light signal, referred to in article 4.01, paragraph 2, shall be given simultaneously with the sound signal.

After being activated, the ‘Do not approach’ signal shall be emitted automatically; the control device shall be set up in such a way as to make it impossible for the signal to be activated unintentionally.

3. Vessels detecting a ‘Do not approach’ signal shall take all possible measures to avert the threat to them. In particular, they shall:

   (a) If moving towards the dangerous area, keep as far away from it as possible and, if needed, make a turn;
   (b) If past the dangerous area, continue under way at the highest possible speed.

4. On board of the vessels referred to in paragraph 3 above, the immediate imperative shall be to:

   (a) Close all windows and openings to the outside;
   (b) Extinguish all unprotected lights;
   (c) Stop smoking;
   (d) Stop all unessential auxiliary machinery;
   (e) Avoid creating sparks.

5. Paragraph 4 applies also to vessels berthed close to the dangerous area. Upon detecting a ‘Do not approach’ signal, the crew shall leave such vessels, if necessary.

6. When taking the action referred to in paragraphs 3 to 5, current and wind direction shall be taken into account.

7. The action prescribed in paragraphs 3 to 6 above shall also be taken by vessels if a ‘Do not approach’ signal is emitted from the shore.

8. Boatmasters receiving a ‘Do not approach’ signal shall do their utmost to report it without delay to the closest competent authority.

Article 8.02 - Reporting requirements

1. Boatmasters of vessels and convoys carrying dangerous goods in accordance with the provisions of ADN shall, prior to entering the sectors, traffic control posts, traffic centres and locks indicated by the competent
authority, eventually by B.11 signs (annex 7), report their presence on the indicated radiotelephone channel and communicate the following data:

(a) category of vessel;
(b) name of vessel;
(c) position, direction of navigation (if applicable);
(d) official number of vessel; for seagoing vessels: IMO number;
(e) deadweight tonnage (maximum load);
(f) length and breadth of vessel;
(g) type, length and breadth of convoy;
(h) draught (only on special request);
(i) loading port;
(j) route;
(k) unloading port;
(l) nature and quantity of cargo (for dangerous goods: name of substance and, where appropriate, class and UN number);
(m) signalization required for the carriage of dangerous goods;
(n) number of persons on board.

2. The data given in paragraph 1 above, except those in (c) and (h), may be communicated by other services or persons to the competent authority either in writing, or by telephone. In all cases, the boatmaster shall report when his vessel or convoy enters the sector subject to the reporting requirement and when it leaves the sector again.

3. When a vessel’s journey is interrupted in the sector subject to the reporting requirement for more than two hours, the boatmaster shall report the beginning and end of the interruption.

4. When the data covered by paragraph 1 above change during the journey through the sector subject to the reporting requirement, the competent authority shall be notified immediately.

5. These data are confidential and the competent authority shall not transmit them to third parties. However, in the event of an accident, the competent authority is allowed to communicate data essential for emergency rescue operations to the emergency services.
Chapter 9

PREVENTION OF POLLUTION OF WATER AND DISPOSAL OF WASTE OCCURRING ON BOARD VESSELS

Article 9.01 - Definitions

For the purposes of this chapter, the terms set out below have the following meaning:

1. Terms concerning waste in general

   (a) “waste occurring on board”: substances or articles defined in (b) to (f) below, of which the person in charge disposes or of which he intends or is required to dispose;

   (b) “waste resulting from the operation of the vessel”: waste and waste water generated on board as a result of the operation and maintenance of the vessel; it includes oily and greasy waste and other waste occurring during the operation of the vessel;

   (c) “oily and greasy waste occurring during the operation of the vessel”: waste oil, bilge water and other oily and greasy waste such as waste grease, used filters, used rags, containers and packagings for such waste;

   (d) “waste oil”: used oil or other non-reusable grease from engines, gears and hydraulic equipment;

   (e) “bilge water”: oily water from the engine-room bilges, peak, cofferdams or side compartments;

   (f) “waste grease”: used grease collected from run-off from greasers, bearings and greasing facilities and other non-reusable grease;

   (g) “other waste occurring during the operation of the vessel”: domestic waste water, household refuse, sludge, slops and other special waste as defined in paragraph 3 below;

   (h) “cargo-related waste”: waste and waste water occurring on board the vessel and deriving from the cargo; cargo remnants and handling residues as defined in paragraph 2, (b) and (d) below are not included in this category;

   (i) “reception facility”: a vessel within the meaning of article 1.01 (a) of these Rules or a facility on land approved by the competent authorities for the collection of waste occurring on board.

2. Cargo terms

   (a) “exclusive transport operations”: successive transport operations during which the same cargo or another cargo the carriage of which does not require the prior cleaning of holds or tanks is carried in the vessel’s hold or cargo tank;

   (b) "cargo remnants": liquid cargo remaining in the cargo tanks or in the pipes after unloading when a stripping system in accordance with the European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) has not been used, and dry cargo remaining in the holds after unloading before manual or mechanical sweepers or suction facilities are used;

   (c) “cargo residues”: liquid cargo which cannot be discharged from tanks or pipes using the stripping system and dry cargo which cannot be removed from the hold by the use of manual or mechanical sweepers or suction facilities;

   (d) “handling residues”: cargo which falls on the vessel outside the hold during handling;
(e) “swept hold”: hold from which the cargo has been removed using means of cleaning such as manual or mechanical sweepers, but without the use of suction or washing apparatus and containing only cargo residues;

(f) “stripped tank”: tank from which cargo remnants have been removed using a stripping system in accordance with ADN and containing only cargo residues;

(g) “vacuum-cleaned hold”: a hold from which cargo remnants have been removed using a suction technique and containing considerably fewer cargo residues than a swept hold;

(h) “swilled-out hold or tank”: a hold or tank which following swilling-out is suitable for any category of cargo;

(i) “discharge of remnants”: removal of cargo remnants from the holds and from the tanks and pipes using suitable means (e.g. manual or motorized sweepers, suction facility, stripping system) enabling the standard of “swept” or “vacuumed” clean for the hold or “stripped” clean for the cargo tank to be achieved along with the removal of handling residues, packagings and means of stowage;

(j) “swilling-out”: removal of cargo residues from swept or vacuumed holds using steam or water;

(k) “swilling-out water”: water from the swilling-out of swept or vacuumed holds or stripped tanks; it also includes ballast water or rainwater from these holds or tanks.

3. Terms concerning other types of waste

(a) “domestic waste water”: waste water from galleys, messes, bathrooms and laundries and human waste water;

(b) “household refuse”: on-board organic and inorganic household waste and food remains, which do not, however, contain components of the other types of waste defined in article 9.01 above occurring during the operation of the vessel;

(c) “sludge”: residues occurring on board the vessel during the operation of an on-board sewage plant;

(d) “slops”: mixtures of cargo residues with swilling-out water, rust or mud, whether or not suitable for pumping;

(e) “other special waste”: waste occurring during the operation of the vessel other than oily and greasy waste and other than the waste covered by (a) to (d) above.

Article 9.02 - General obligation to exercise vigilance
The boatmaster, other crew members and other persons on board shall exercise every care required by the circumstances in order to avoid polluting the waterway and to restrict to the maximum the amount of waste occurring on board and to avoid as far as possible any mixing of the various categories of waste.

Article 9.03 - Prohibition on discharging and dumping
1. Vessels shall be prohibited from throwing, discharging or allowing to run into the waterway oily or greasy waste occurring during the operation of the vessel or household refuse, sludge, slops and other special waste.

2. Vessels shall be prohibited from throwing, discharging or allowing to run into the waterway any parts of the cargo or cargo-related waste. Packagings and means of stowage shall also be included.

3. Domestic waste water and swilling-out water from the holds shall not be discharged or allowed to flow into the waterway except in accordance with the respective national provisions.
4. Discharge into the waterway of water separated by approved oil-separator vessels shall be exempted from the prohibition contained in paragraph 1 if the maximum content of residual oil after separation is consistently and without prior dilution in accordance with national requirements.

5. In the event of the accidental discharge of waste referred to in paragraphs 1 and 2 above or the threat of such discharge, the boatmaster shall notify the nearest competent authorities without delay indicating as precisely as possible the nature, quantity and position of the discharge. In the event of the accidental discharge of waste referred to in paragraphs 3 above or the threat of such discharge, the boatmaster shall, in accordance with the respective national requirements, notify the nearest competent authorities without delay, indicating as precisely as possible the nature, quantity and position of the discharge.

6. The boatmaster of a vessel is obliged to report to the nearest Portmaster’s office any observed water contamination.

Article 9.04 - On-board collection and processing of waste

1. The boatmaster shall ensure the separate collection on board of oily and greasy waste occurring during the operation of the vessel and referred to in article 9.03, paragraph 1 above in receptacles provided for the purpose and the collection of bilge-water in the engine-room bilges. The receptacles shall be stored on board in such a way that any leakage of the contents may be noticed in time and easily prevented.

2. It shall be prohibited:
   (a) to use mobile tanks stored on the deck for the collection of waste oil;
   (b) to burn waste on board;
   (c) to introduce oil or grease-dissolving or emulsifying cleaning agents into the engine-room bilges except for products which do not make the treatment of bilge water by the reception facilities more difficult.

3. The boatmaster shall ensure the separate collection on board and delivery to a reception facility of the waste referred to in article 9.03, paragraph 1 above, such as household refuse, sludge, slops and other special waste. If possible, household refuse shall be deposited separately according to the following categories: paper, glass, other recyclable materials and other refuse.

Article 9.05 - Pollution prevention register (used-oil log), requirements for delivery to reception facilities

1. All vessels equipped with an engine room, excluding small craft, shall carry on board a valid pollution prevention register (used-oil log) issued and identified by the competent authorities and conforming to the model in annex 9. The used-oil log shall be kept on the ship. After receipt of a new log it shall be necessary to keep the previous log on board for not less than 6 months after the last entry.

2. The oily and greasy waste occurring during the operation of the vessel and referred to in article 9.04, paragraph 1 above shall be delivered, against a receipt, to the reception facilities at regular intervals, depending on the condition and operation of the vessel. The receipt shall consist of an entry in the pollution prevention register (used-oil log) by the reception facility.

3. A vessel carrying on board other documents concerning the deposit of waste occurring during the operation of the vessel in accordance with regulations applicable outside the Sava basin shall be able to prove by means of these documents that the deposit of waste has taken place outside the above-mentioned waterways. This proof may also be furnished by the oil record book as provided for by the International Convention for the Prevention of Pollution by Ships (MARPOL).
Article 9.06 - Painting and external cleaning of vessels

1. It shall be prohibited to oil or clean the outside of vessels using products which may not be discharged into water.

2. Nor shall it be permitted to use anti-fouling systems containing the following substances or preparations thereof:
   
   (a) Mercury compounds;
   
   (b) Arsenic compounds;
   
   (c) Organotin compounds which act as biocides;
   
   (d) Hexachlorocyclohexane.
Annex 1

DISTINGUISHING LETTER OR GROUP OF LETTERS INDICATING COUNTRY OF VESSEL’S HOME PORT OR PLACE OF REGISTRATION

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ANNEX 2

DRAUGHT SCALES ON INLAND WATERWAY VESSELS

1. Draught scales shall be graduated in units not larger than 1 decimetre, from the light water-line to the maximum draught level, in the form of clearly visible bands painted alternately in two different colours. The graduation shall be indicated by figures painted beside the scale not more than 5 decimetres apart and at the top of the scale; and the position of the intervals shall be fixed and punched, incised or welded marks.

2. If the vessel bears tonnage scales meeting the requirements of paragraph 1 above, such tonnage scales may serve instead of draught scales.
VISUAL SIGNALS (MARKING) ON VESSELS

1. GENERAL

1.1 The sketches which follow relate to the signals (marking) provided for in the articles of chapter 3 of these rules, but not to those provided for in, or authorized by, the footnotes.

1.2 The sketches are for guidance only; reference should be made to the text of the regulations, which alone is authoritative.

In the case of additional markings which may be prescribed, the sketches illustrate:
- either the additional marking alone; or
- where necessary for clarity, both the basic marking (or one of the possible basic markings) and additional marking.

Only the additional marking is described below the sketch.

1.3 Pushed convoys of maximum dimensions not exceeding 110m by 12m are regarded as single motorized vessels (see article 3.01, paragraph 4).

1.4 Unless otherwise specified, the meaning of the following terms is that given in article 3.01, paragraph 6:

1.4.1 “Masthead light”: a strong white light, projecting an uninterrupted beam throughout a horizontal arc of 225° and placed so as to project this beam from the bow to 22° 30’ the beam on each side;

1.4.2 “Side lights”: a bright green light to starboard and a bright red light to port, each of these lights projecting an uninterrupted beam throughout a horizontal arc of 112° 30’ and placed so as to project this beam from the bow to 22° 30’ abaft the beam on each side;

1.4.3 “Stern light”: an ordinary or bright white light projecting an uninterrupted beam throughout a horizontal arc of 135° and placed so as to project this beam throughout an arc of 67° 30’ along each side from the stern;

1.4.4 “Light visible from all directions”: a light projecting an uninterrupted beam throughout a horizontal arc of 360°.
### 1.3 Explanation of symbols:

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<tr>
<td><strong>a</strong></td>
<td><img src="image" alt="Fixed light visible from all directions (a light projecting an uninterrupted beam throughout a horizontal arc of 360°)." /></td>
<td>Fixed light visible from all directions (a light projecting an uninterrupted beam throughout a horizontal arc of 360°).</td>
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<tr>
<td><strong>b</strong></td>
<td><img src="image" alt="Fixed light visible over a limited horizontal arc. A light which is invisible to the observer is marked by a dot in the centre." /></td>
<td>Fixed light visible over a limited horizontal arc. A light which is invisible to the observer is marked by a dot in the centre.</td>
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<td><img src="image" alt="Scintillating light." /></td>
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<td><img src="image" alt="Optional light." /></td>
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2. MARKING WHEN UNDER WAY

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<td><img src="image2" alt="Sketch" /></td>
<td><img src="image3" alt="Day Sketch" /></td>
</tr>
</tbody>
</table>

1. Motorized vessels proceeding alone (article 3.08, paragraph 1).

2. Motorized vessels proceeding alone with a second masthead light. Compulsory for vessels more then 110m long (article 3.08, paragraph 2).

3. Motorized vessel temporarily proceeded by an auxiliary motorized vessel (article 3.08, paragraph 3).

4. Motorized vessel leading a towed convoy alone or as an auxiliary (article 3.09 paragraph 1; article 3.25 paragraph 1).

5. Each of several motorized vessels leading a towed convoy or as auxiliaries, when several vessels are proceeding side by side (article 3.09 paragraph 2; article 3.25 paragraph 2.)
<table>
<thead>
<tr>
<th>Night</th>
<th>Sketch</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Towed vessels" /></td>
<td><img src="image2" alt="Towed vessels" /></td>
<td><img src="image3" alt="Towed vessels" /></td>
</tr>
<tr>
<td>Towed vessels (article 3.09, paragraph 3; article 3.25 paragraph 3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image4" alt="Section" /></td>
<td><img src="image5" alt="Section" /></td>
<td><img src="image6" alt="Section" /></td>
</tr>
<tr>
<td>Section of a towed convoy more than 110m long (article 3.09, paragraph 3; article 3.25 paragraph 3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image7" alt="Section" /></td>
<td><img src="image8" alt="Section" /></td>
<td><img src="image9" alt="Section" /></td>
</tr>
<tr>
<td>Section of a towed convoy comprising a row of more than two vessels coupled side by side (article 3.09, paragraph 3; article 3.25 paragraph 3).</td>
<td></td>
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<tr>
<td><img src="image10" alt="Last section" /></td>
<td><img src="image11" alt="Last section" /></td>
<td><img src="image12" alt="Last section" /></td>
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<tr>
<td>Last section of a towed convoy. (article 3.09, paragraph 4)</td>
<td></td>
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<tr>
<td><img src="image13" alt="Last section" /></td>
<td><img src="image14" alt="Last section" /></td>
<td><img src="image15" alt="Last section" /></td>
</tr>
<tr>
<td>Towed vessels forming the last section of a convoy. (article 3.09, paragraph 4).</td>
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<tr>
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<td>SKETCH</td>
<td>DAY</td>
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<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Pushed convoys (article 3.10; paragraph 1).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td>12</td>
</tr>
<tr>
<td>Pushed convoys, when more than two vessels are visible from astern over the full width (article 3.10; paragraph 1).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td>13</td>
</tr>
<tr>
<td>Pushed convoys proceded by one or more auxiliary motorized vessels (article 3.10; paragraph 2; article 3.25 paragraph 3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>14</td>
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<tr>
<td>Pushed convoys with two pushers (article 3.10; paragraph 4).</td>
<td></td>
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<tr>
<td><img src="image8.png" alt="Image" /></td>
<td>15</td>
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</tr>
<tr>
<td>Side by side formations: two motorized vessels (article 3.11; paragraph 1).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIGHT</td>
<td>SKETCH</td>
<td>DAY</td>
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<td>-----</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>16</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Side by side formations: one motorized and one non-motorized vessel (article 3.11; paragraph 1).</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td>17</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Side by side formations: proceeded by one or more auxiliary motorized (article 3.11; paragraph 2; article 3.25 para. 3).</strong></td>
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<td></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td>18</td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Sailing vessels (article 3.12; paragraphs 1 and 2).</strong></td>
<td></td>
<td></td>
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<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>19</td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Vessels proceeding under sail and making use at the same time of its own mechanical means of propulsion (articles 3.12 and 3.26).</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td>20</td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Motorized small craft proceeding alone (article 3.13).</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIGHT</td>
<td>SKETCH</td>
<td>DAY</td>
</tr>
<tr>
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</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Motorized small craft proceeding alone with side lights side by side or in the same lamp at or near the bow (article 3.13)</td>
<td><img src="image2.png" alt="Image" /></td>
<td>22</td>
</tr>
<tr>
<td>Motorized small craft proceeding alone: the masthead light replaced by a bright white light visible from all directions (article 3.13).</td>
<td><img src="image3.png" alt="Image" /></td>
<td>23</td>
</tr>
<tr>
<td>Motorized small craft less than 7m long proceeding alone (article 3.13).</td>
<td><img src="image4.png" alt="Image" /></td>
<td>24</td>
</tr>
<tr>
<td>Small craft towed or propelled in side by side formation (article 3.13).</td>
<td><img src="image5.png" alt="Image" /></td>
<td>25</td>
</tr>
<tr>
<td>Small sailing craft (article 3.13).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*ISRBC*  
**NAVIGATION RULES ON THE SAVA RIVER BASIN**
<table>
<thead>
<tr>
<th>NIGHT</th>
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<th>DAY</th>
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</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>26</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>Small sailing craft, with side lights and a stern light in the same lamp near the top of the mast (article 3.13).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td>27</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Small sailing craft less than 7m long carrying a white light visible from all directions, and on the approach of other vessels displaying a second ordinary white light (article 3.13).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td>28</td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>Small craft proceeding alone, neither motorized nor under sail (article 3.13).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>29a</td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td>29b</td>
<td></td>
</tr>
<tr>
<td>Additional marking for vessels carrying out certain transport operations involving flammable substances that are referred to in ADN (articles 3.14 and 3.28).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
30a

Additional marking for vessels carrying out certain transport operations involving substances constituting health hazards that are referred to in ADN (articles 3.14 and 3.28).

30b

Additional marking of vessels carrying out certain transport operations involving explosives that are referred to in ADN (articles 3.14 and 3.28).

31

Additional marking of pushed convoys carrying out certain transport operations involving dangerous substances: that are referred to in ADN (articles 3.14 and 3.28).

32

Additional marking of side by side formations carrying out certain transport operations involving dangerous substances: that are referred to in ADN (art. 3.14 and 3.28)
<table>
<thead>
<tr>
<th>NIGHT</th>
<th>SKETCH</th>
<th>DAY</th>
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<tbody>
<tr>
<td></td>
<td>34</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>Vessels authorized to carry more than 12 passengers with a maximum hull length of less than 20m (article 3.27).</td>
<td></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>35</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>Ferry-boats not moving independently (articles 3.15 and 3.29).</td>
<td></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>36</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
<td>Ferry-boats moving independently (articles 3.15 and 3.29).</td>
<td></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>37</td>
<td><img src="image7.png" alt="Image" /></td>
</tr>
<tr>
<td>Ferry-boats moving independently and enjoying priority (articles 3.15 and 3.29).</td>
<td></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>38</td>
<td><img src="image9.png" alt="Image" /></td>
</tr>
<tr>
<td>Vessels having priority of passage (article 3.31).</td>
<td></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
</tbody>
</table>
### Additional marking for vessels unable to manoeuvre. (articles 3.16 and 3.30).

### Assemblies of floating material and floating establishments under way. (article 3.17).
### 3. Marking When Stationary

<table>
<thead>
<tr>
<th>NIGHT</th>
<th>SKETCH</th>
<th>DAY</th>
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<tbody>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td><img src="image4" alt="Image" /></td>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
</tr>
<tr>
<td><img src="image7" alt="Image" /></td>
<td><img src="image8" alt="Image" /></td>
<td><img src="image9" alt="Image" /></td>
</tr>
</tbody>
</table>

- **Stationary vessels (article 3.18 and 3.32).**
- **Pushed convoys stationary offshore (article 3.18i).**
- **Stationary small craft (article 3.18).**
- **Additional marking for stationary vessels carrying out certain transport operations involving dangerous substances (articles 3.19 and 3.33).**
- **Additional marking for stationary pushed convoys carrying out certain transport operations involving dangerous substances (articles 3.19 and 3.33).**
### Navigation Rules on the Sava River Basin

<table>
<thead>
<tr>
<th><strong>NIGHT</strong></th>
<th><strong>SKETCH</strong></th>
<th><strong>DAY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Night Sketch" /></td>
<td><img src="image2" alt="Sketch" /></td>
<td><img src="image3" alt="Day Sketch" /></td>
</tr>
</tbody>
</table>

46. Additional marking for stationary side by side formations out certain transport operations involving dangerous substances (articles 3.19 and 3.33).

47. Ferry-boats not moving independently when made fast at their landing stage (article 3.20).

48. Ferry-boats not moving independently but made fast at their landing stage (article 3.20).

49. Assemblies of floating material and floating establishments when stationary (article 3.21).

50. Stationary vessels engaged in finishing with nets or poles (articles 3.22 and 3.34).
<table>
<thead>
<tr>
<th>NIGHT</th>
<th>SKETCH</th>
<th>DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><strong>51</strong></td>
</tr>
<tr>
<td>Floating equipment at work and vessels carrying out work or sounding or measuring operations; channel clear on both sides (articles 3.23 and 3.35).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Diagram" /></td>
<td><img src="image4.png" alt="Diagram" /></td>
<td><strong>52</strong></td>
</tr>
<tr>
<td>Floating equipment at work and vessels carrying out work or sounding or measuring operations; channel clear on one side (articles 3.23 and 3.35).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image5.png" alt="Diagram" /></td>
<td><img src="image6.png" alt="Diagram" /></td>
<td><strong>53</strong></td>
</tr>
<tr>
<td>Floating equipment at work and vessels carrying out work or sounding or measuring operations and grounded or sunken vessels; protection against wash; channel clear on both sides (articles 3.23 and 3.35).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image7.png" alt="Diagram" /></td>
<td><img src="image8.png" alt="Diagram" /></td>
<td><strong>54</strong></td>
</tr>
<tr>
<td>Floating equipment at work and vessels carrying out work or sounding or measuring operations and grounded or sunken vessels; protection against wash; channel clear on one side (articles 3.23 and 3.35).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image9.png" alt="Diagram" /></td>
<td><img src="image10.png" alt="Diagram" /></td>
<td><strong>55</strong></td>
</tr>
<tr>
<td>Vessels whose anchors may be a danger to navigation (article 3.24 and 3.36).</td>
<td></td>
<td></td>
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</table>
Assemblies of floating material or floating establishments whose anchors may be a danger to navigation (article 3.24 and 3.36).
### 4. SPECIAL MARKING

<table>
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<td><img src="image2" alt="Day Sketch" /></td>
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<td><img src="image7" alt="Night Sketch" /></td>
<td>60</td>
<td><img src="image8" alt="Day Sketch" /></td>
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<tr>
<td><img src="image9" alt="Night Sketch" /></td>
<td>61</td>
<td><img src="image10" alt="Day Sketch" /></td>
</tr>
</tbody>
</table>

- Additional marking for vessels of the supervisory authorities and fire-fighting services (article 3.37).
- Additional marking for vessels under way carrying out work in the waterway (article 3.38).
- Additional marking for protection against wash (article 3.39).
- Distress signals (article 3.40).
- Boarding prohibited (article 3.41).
<table>
<thead>
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<th>NIGHT</th>
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<tbody>
<tr>
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<td><img src="image" alt="No Smoking Symbol" /></td>
<td><img src="image" alt="No Smoking Symbol" /></td>
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<tr>
<td>Smoking prohibited (article 3.42).</td>
<td></td>
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</tr>
<tr>
<td><img src="image" alt="Lateral Berthing Symbol" /></td>
<td><img src="image" alt="Lateral Berthing Symbol" /></td>
<td><img src="image" alt="Lateral Berthing Symbol" /></td>
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<tr>
<td>Lateral berthing prohibited (article 3.43).</td>
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<tr>
<td><img src="image" alt="Additional Marking Symbol" /></td>
<td><img src="image" alt="Additional Marking Symbol" /></td>
<td><img src="image" alt="Additional Marking Symbol" /></td>
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<tr>
<td>Additional marking for vessels whose ability to manoeuvre is limited (article 3.44)</td>
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</tr>
<tr>
<td>Additional marking for vessels whose ability to manoeuvre is limited; channel clear on one side (article 3.44)</td>
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<td><img src="image" alt="Additional Marking Symbol" /></td>
<td><img src="image" alt="Additional Marking Symbol" /></td>
</tr>
<tr>
<td>Additional marking for vessels engaged in drawing a trawl or other fishing gear through the water (trawler) (article 3.45)</td>
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<tr>
<td>NIGHT</td>
<td>SKETCH</td>
<td>DAY</td>
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</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>67</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Fishing vessels other than trawlers if the fishing tackle extends more than 150m horizontally from the vessel (article 3.45)</strong></td>
<td></td>
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<tr>
<td><img src="image3.png" alt="Image" /></td>
<td>68</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Additional marking for vessels used for underwater diving (article 3.46).</strong></td>
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<tr>
<td><img src="image5.png" alt="Image" /></td>
<td>69</td>
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</tr>
<tr>
<td><strong>Additional marking for vessels engaged in minesweeping (article 3.47).</strong></td>
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<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>70</td>
<td><img src="image8.png" alt="Image" /></td>
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<tr>
<td><strong>Additional marking for vessels on pilotage service (article 3.48).</strong></td>
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<td><img src="image9.png" alt="Image" /></td>
<td>71</td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>High-speed motorized vessel proceeding alone (article 3.08).</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. GENERAL
Definitions

1. Lanterns
A lantern is a device for distributing the flux from a light source; it also includes the components needed to filter, refract or reflect the light, and hold or operate the light source. Lanterns intended to give signals on board a vessel are called signal lanterns.

2. Signal lights
Signal lights are the light signals emitted by signal lanterns.

3. Light sources
Light sources are electrical or non-electrical devices designed to produce light flux in signal lanterns.

4. Technical requirements
The construction of and materials of signal lanterns shall be such as to ensure their safety and durability. The components of the lantern (for example the cross braces) shall not modify the intensity, colours or dispersion of the light.

   • It shall be possible to install the lights on board simply and in the correct position.
   • It shall be easy to replace the light source.

II. COLOUR OF SIGNAL LIGHTS

1. A five colour signal system is applied to the lights, and comprises the following colours:

   “white”
   “red”
   “green”
   “yellow” and
   “blue”.

   This system conforms to the recommendations of the International Commission on Illumination, “Colours of Signal Lights”, IEC publication No. 2.2 (TC-1.6) 1975.

   The colours apply to the light fluxes emitted by the lantern.

2. The colour boundaries of signal lights are demarcated by the coordinates (table 1) of the intersecting points of the chromatic diagram of IEC publication No. 2.2 (TC-1.6) 1975 (see chromaticity diagram).
### Table 1

<table>
<thead>
<tr>
<th>Colour of signal light</th>
<th>Coordinates of the intersecting points</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>x 0.310 0.443 0.500 0.500 0.453 0.310</td>
</tr>
<tr>
<td></td>
<td>y 0.283 0.382 0.382 0.440 0.440 0.348</td>
</tr>
<tr>
<td>Red</td>
<td>x 0.690 0.710 0.680 0.660</td>
</tr>
<tr>
<td></td>
<td>y 0.290 0.290 0.320 0.320</td>
</tr>
<tr>
<td>Green</td>
<td>x 0.009 0.284 0.207 0.013</td>
</tr>
<tr>
<td></td>
<td>y 0.720 0.520 0.397 0.494</td>
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<tr>
<td>Yellow</td>
<td>x 0.612 0.618 0.575 0.575</td>
</tr>
<tr>
<td></td>
<td>y 0.382 0.382 0.425 0.406</td>
</tr>
<tr>
<td>Blue</td>
<td>x 0.136 0.218 0.185 0.102</td>
</tr>
<tr>
<td></td>
<td>y 0.040 0.142 0.175 0.105</td>
</tr>
</tbody>
</table>

**IEC Chromaticity diagram**

2360 K corresponds to the light of a vacuum filament lamp.
2848 K corresponds to the light of a gas-filled filament lamp.
Annex 5

INTENSITY AND RANGE OF SIGNAL LIGHTS ON VESSELS

I. GENERAL

1. Signal lights

Signal lights are classified according to their luminous intensity as:
   - “ordinary lights”
   - “bright lights”
   - “strong lights”.

2. Relation between $I_o$, $I_b$, and $t$

   $I_o$ is the photometric luminous intensity in candela (cd), measured at normal voltage for electric lights.
   $I_b$ is the operation luminous intensity in candela (cd).
   $t$ is the range in kilometres (km).

Taking into account, for example, the ageing of the light source, the degree of dirtiness of the optic and variations in the voltage of the on-board grid, $I_b$ is 25% less than $I_o$.

   Consequently $I_b = 0.75 \cdot I_o$

The relation between $I_b$ and $t$ of signal lights is given by the following equation:

   $I_b = 0.2 \cdot t^2 \cdot q^t$

The atmospheric transmission coefficient $q$ has been taken as 0.76, corresponding to a meteorological visibility of 14.3 km.
II. INTENSITY AND RANGE

1. Luminous intensity and range of the signal lights

The following table contains the permitted limits for $I_0$, $I_b$ and $t$ according to the nature of signal lights. The values indicated apply to the light flux emitted by the lantern. $I_0$ and $I_b$ are given in cd and $t$ in km.

Minimum and maximum values

<table>
<thead>
<tr>
<th>Nature of the signal lights</th>
<th>Colour of signal lights</th>
<th>Colour of signal lights</th>
<th>Colour of signal lights</th>
<th>Colour of signal lights</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>white</td>
<td>Green/red</td>
<td>yellow</td>
<td>blue</td>
</tr>
<tr>
<td></td>
<td>min.</td>
<td>max.</td>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>ordinary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I_0$</td>
<td>2.7</td>
<td>10.0</td>
<td>1.2</td>
<td>4.7</td>
</tr>
<tr>
<td>$I_b$</td>
<td>2.0</td>
<td>7.5</td>
<td>0.9</td>
<td>3.5</td>
</tr>
<tr>
<td>$t$</td>
<td>2.3</td>
<td>3.7</td>
<td>1.7</td>
<td>2.8</td>
</tr>
<tr>
<td>bright</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I_0$</td>
<td>12.0</td>
<td>33.0</td>
<td>6.7</td>
<td>27.0</td>
</tr>
<tr>
<td>$I_b$</td>
<td>9.0</td>
<td>25.0</td>
<td>5.0</td>
<td>20.0</td>
</tr>
<tr>
<td>$t$</td>
<td>3.9</td>
<td>5.3</td>
<td>3.2</td>
<td>5.0</td>
</tr>
<tr>
<td>strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I_0$</td>
<td>47.0</td>
<td>133.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$I_b$</td>
<td>35.0</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$t$</td>
<td>5.9</td>
<td>8.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

However, for daytime use of the yellow scintillating lights a minimum luminous intensity $I_0$ of 900 cd shall apply.

III. SIGNAL LIGHT DISPERSION

1. Horizontal dispersion of intensity

(a) The luminous intensities indicated in section II apply to all directions of the horizontal plane passing through the focus of the optic or the luminous centre of gravity of the light source correctly adjusted within the operational sector of a vertically positioned lantern;

(b) For the masthead lights, stern lights and side lights, the luminous intensities prescribed shall be maintained throughout the horizontal arc within the sectors prescribed at least up to within 5° of the limits. As from 5° within the sectors prescribed up to the limit, the luminous intensity may decrease by 50%; it shall subsequently decrease gradually in such a way that, as from 5° beyond the limits of the sector, only a negligible amount of light remains;

(c) The side lights shall have the prescribed luminous intensity in the direction parallel to the axis of the vessel forward. The intensities shall decrease practically to zero between 1° and 3° beyond the limits of the prescribed sector;

(d) For bicoloured or tricoloured lanterns, the dispersion of the luminous intensity shall be uniform so that 3° on either side of the prescribed sector limits, the maximum permitted intensity is not exceeded and the minimum prescribed intensity is reached;
(e) The horizontal dispersion of the luminous intensity of the lanterns shall be uniform throughout the sector, so that the minimum and maximum values observed do not differ more than by a factor of 1.5 from the photometric luminous intensity.

2. Vertical dispersion of intensity

In the event of heeling of up to $\pm 5^\circ$ or $\pm 7.5^\circ$ from the horizontal, the luminous intensity shall remain at least equal to 80% in the first case, and 60% in the second case, of the luminous intensity corresponding to $0^\circ$ heeling, although it shall not exceed it by more than 1.2 times.
ANNEX 6

SOUND SIGNALS

I. SOUND INTENSITY OF SIGNALS
Mechanically-operated sound signalling devices used by inland waterway vessels shall be capable of producing sound signals with the following characteristics:

1. Frequency
   (a) For motorized vessels other than the small craft referred to in paragraph (b), the fundamental frequency shall be 200 Hz, with a tolerance of ± 20%;
   (b) For non-motorized vessels and small craft the fundamental frequency shall be above 350 Hz;
   (c) For the three-tone signals used by vessels navigating by radar under conditions of reduced visibility, the fundamental frequencies of the tones shall be between 165 and 297 Hz, with an interval of at least two full tones between the highest-pitched and the lowest-pitched sound.

2. Sound pressure level
The sound pressure levels given below shall be measured at, or referred to, a point 1 metre in front of the centre of the opening of the horn, the measurement being made, as far as possible, away from any sound-reflecting surfaces.
   (a) For motorized vessels other than the small craft referred to in paragraph (b), the weighted sound pressure level shall be between 120 and 140 dB (A);
   (b) For non-motorized vessels and small craft which are not equipped or used to tow vessels other than small craft, the weighted sound pressure level shall be between 100 and 125 dB (A);
   (c) For the three-tone signals used by vessels navigating by radar under conditions of reduced visibility, the weighted sound pressure level of each tone shall be between 120 and 140 dB (A).

II. MONITORING OF SOUND PRESSURE LEVEL
The sound pressure level shall be checked by the competent authorities by means of the sonometer standardized by the International Electrotechnical Commission (reference IEC.179) or by means of the ordinary sonometer standardized by IEC (reference IEC.123).

III. SOUND SIGNALS TO BE USED BY VESSELS
Sound signals other than the ringing of a bell and the three-tone signal shall consist in the emission of one blast or of several successive blasts having the following characteristics:
   − short blast: a blast lasting about one second;
   − long blast: a blast lasting about four seconds.
The interval between two successive blasts shall be about one second except for the signal “series of very short blasts” which shall comprise a series of not less than six blasts, each lasting about a quarter of a second, separated by a silence of the same duration.
A. General signals:

- 1 long blast
- 1 short blast
- 2 short blasts
- 3 short blasts
- 4 short blasts
- Series of very short blasts
- Repeated long blasts
- Peals of a bell

- “Caution”
- “I am altering my course to starboard”
- “I am altering my course to port”
- “I am going astern”
- “I am unable to maneuver”
- “Imminent danger of collision”
- “Distress signal”

Article 4.01 paragraph 4
B. Meeting signals

First case

- 1 short blast by vessel proceeding upstream: „I wish to pass on the port side“

- 1 short blast by vessel proceeding downstream: „Agreed; pass on the port side“

- 2 short blasts by vessel proceeding downstream: „No; pass on the starboard side“

- 2 short blasts by vessel proceeding upstream: „Agreed; I will pass on the starboard side“

Second case

- 2 short blasts by vessel proceeding upstream: „I wish to pass on the starboard side“

- 2 short blasts by vessel proceeding downstream: „Agreed; pass on the starboard side“

- 1 short blast by vessel proceeding downstream: „No; pass on the port side“

- 1 short blast by vessel proceeding upstream: „Agreed; I will pass on the port side“
C. Overtaking signals

First case

- - -
2 long blasts followed by
2 short blasts, by overtaking vessel
„I wish to overtake on your port side“ (Article 6.10 paragraph 5).

- -
1 short blast by vessel to be overtaken
„Agreed, overtake on my starboard side“ (Article 6.10 paragraph 6).

- -
2 short blasts by vessel to be overtaken
„No; overtake on my starboard side“ (Article 6.10 paragraph 7).

- -
1 short blast by overtaken vessel
„Agreed; I will pass on your starboard side“ (Article 6.10 paragraph 7(8)).

Second case

- - -
2 long blasts followed by
1 short blast by overtaking vessel
„I wish to pass on your starboard side“ (Article 6.10 paragraph 5).

- -
2 short blasts by vessel to be overtaken
„Agreed; overtake on my starboard side“ (Article 6.10 paragraph 6).

- -
1 short blast by vessel to be overtaken
„No; overtaken on my port side“ (Article 6.10 paragraph 7).
2 short blasts by overtaken vessel  "Agreed; I will overtake on your port side"  Article 6.10 paragraph 7. (b)

Overtaking impossible

5 short blasts by vessel to be overtaken  "I cannot be overtaken"  Article 6.10 paragraph 9.

D. Turning signals:

1 long blast ba 1 short blast  "I am going to turn to starboard"  Article 6.13 paragraph 2.

1 long blast followed by 2 short blasts  "I am going to turn to port"  Article 6.13 paragraph 2.

E. Harbours and tributary waterways: entering and leaving, followed by crossing the waterway

E.1 Signals on entering and leaving harbours and tributary waterways

3 long blasts followed by 1 short blast  "I am going to starboard"  Article 6.16 paragraph 4.

3 long blasts followed by 2 short blasts  "I am going to port"  Article 6.16 paragraph 4.
E.2. Signals on crossing after entering the waterway

3 long blasts, "I am going to cross"  
followed if necessary by

1 long blast followed by 1 short blast, "I am going to starboard"
1 long blast followed by 2 short blasts, "I am going to port"

F. Signals in reduced visibility

F.1. Waterways of class I
   a) Vessels navigating by radar

(i) Vessels, other than small craft, proceeding downstream  
Three-tone signal repeated as often as necessary  
Article 6.32 paragraph 4.

(ii) Single vessel proceeding upstream  
1 long blast  
Article 6.32 paragraph 6.

b) Vessels not navigating by radar

(i) Any vessel proceeding alone  
1 long blast repeated at least once a minute  
Article 6.33 paragraph 1.
c) Stationary vessels

- 1 peal of a bell, repeated at least once a minute: I am lying on left side of channel
- 2 peals of a bell, repeated at least once a minute: I am lying on right side of channel
- 2 peals of a bell, repeated at least once a minute: I am stationary, position uncertain
**WATERWAY SIGNS AND MARKING**

(1) The main signs given in section I below may be supplemented or clarified by auxiliary signs given in section II.

(2) Board may be surrounded by a thin white line.

### Section I  MAIN SIGNS

<table>
<thead>
<tr>
<th>A. PROHIBITORY SIGNS</th>
<th>boards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.1  No entry (general sign)</strong> (see articles 6.08, 6.16, 6.22, 6.22bis 6.25, 6.26, 6.27 and 6.28bis) Two boards, two flags, one above the other, indicate a prolonged prohibition</td>
<td></td>
</tr>
<tr>
<td>or red lights</td>
<td></td>
</tr>
<tr>
<td>or red lights</td>
<td></td>
</tr>
<tr>
<td><strong>A.2 No overtaking (see article 6.11)</strong></td>
<td></td>
</tr>
</tbody>
</table>

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**ISRBC**

NAVIGATION RULES ON THE SAVA RIVER BASIN
| A.3  | No overtaking of convoys  
     | (see article 6.11)         |
|------|--------------------------|
| A.4  | No passing or overtaking  
     | (see article 6.08)         |
| A.4.1| No passing or overtaking of convoys by convoys  
     | (see article 6.08)         |
| A.5  | No berthing (i.e. no anchoring or making fast to the bank)  
     | (see article 7.02)         |
| A.5.1| No berthing within the breadth indicated in meters  
<pre><code> | (measured from the sign)(see article 7.02) |
</code></pre>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.6</td>
<td>No anchoring or trailing of anchors, cables or chains (see articles 6.18 and 7.03)</td>
</tr>
<tr>
<td>A.7</td>
<td>No making fast to the bank (see article 7.04)</td>
</tr>
<tr>
<td>A.8</td>
<td>No turning (see article 6.13)</td>
</tr>
<tr>
<td>A.9</td>
<td>Do not create wash (see article 6.20)</td>
</tr>
<tr>
<td>A.10</td>
<td>No passing outside the area marked (in openings of bridges or weirs) (see article 6.24)</td>
</tr>
<tr>
<td>A.11</td>
<td>Entry prohibited, but prepare to get under way (see articles 6.26 and 6.28bis)</td>
</tr>
<tr>
<td>A.12 Motorized craft prohibited</td>
<td><img src="image1.png" alt="No Motor" /></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>A.13 All sports or pleasure craft prohibited</td>
<td><img src="image2.png" alt="No Sports" /></td>
</tr>
<tr>
<td>A.14 Water skiing prohibited</td>
<td><img src="image3.png" alt="No Water Skiing" /></td>
</tr>
<tr>
<td>A.15 Sailing vessels prohibited</td>
<td><img src="image4.png" alt="No Sailing" /></td>
</tr>
<tr>
<td>A.16 All craft other than motorized vessels or sailing craft prohibited</td>
<td><img src="image5.png" alt="No Other Craft" /></td>
</tr>
<tr>
<td>A.17 Use of sailboards prohibited</td>
<td><img src="image6.png" alt="No Sailboards" /></td>
</tr>
<tr>
<td></td>
<td>A.18 End of zone authorized for high speed navigation of small sport and pleasure craft</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>A.19 No launching or beaching of vessels</td>
</tr>
<tr>
<td></td>
<td>A.20 Water bikes prohibited</td>
</tr>
</tbody>
</table>
### B. MANDATORY SIGNS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B.1</strong></td>
<td>Proceed in the direction shown by the arrow (see article 6.12)</td>
</tr>
</tbody>
</table>
| **B.2** | (a) Mowe to the side of the channel on your port side (see article 6.12)  
(b) Mowe to the side of the channel on your starboard side (see article 6.12) |
| **B.3** | (a) Keep to the side of the channel on your port side (see article 6.12)  
(b) Keep to the side of the channel on your starboard side (see article 6.12) |
<table>
<thead>
<tr>
<th></th>
<th>B.4</th>
<th>B.5</th>
<th>B.6</th>
<th>B.7</th>
<th>B.8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) Cross channel to port (see article 6.12)</td>
<td>Stop as prescribed in the Regulations (see articles 6.26 and 6.28)</td>
<td>Do not exceed the speed indicated (in km/h)</td>
<td>Give a sound signal</td>
<td>Keep a particularly sharp lookout (see article 6.08)</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>B.9</td>
<td>Do not enter or cross the main waterway until certain that this will not oblige vessels proceeding on in to change their course or speed (see article 6.16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td><img src="image1.png" alt="Image" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td><img src="image2.png" alt="Image" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.10</td>
<td>Vessels proceeding on the main waterway must, if necessary, change course and speed to allow vessels to leave harbours or tributary waterways (see article 6.16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image3.png" alt="Image" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.11</td>
<td>(a) Obligation to enter into a radiophone link (see article 4.04, paragraph 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image4.png" alt="Image" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Obligation to enter into a radiophone link on the channel as indicated on the board (see article 4.04, paragraph 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image5.png" alt="Image" /></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
## C. RESTRICTIVE SIGNS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.1</td>
<td>Depth of water limited</td>
</tr>
<tr>
<td>C.2</td>
<td>Headroom limited</td>
</tr>
<tr>
<td>C.3</td>
<td>Width of passage or channel limited</td>
</tr>
</tbody>
</table>

Note: Board C.1, C.2 and C.3 may carry, in addition, figures indicating in metres the depth of water, the headroom and the width of passage or the channel respectively.
C.4 There are restrictions on navigation: make enquiries

C.5 The channel lies at a distance from the right (left) bank; the figure shown on the sign indicates the distance in metres, measured from the sign, to which vessels should keep

D. RECOMMENDATORY SIGNS

D.1 Recommended channel
a) In both directions (see articles 6.25, 6.26 and 6.27)
b) Only in the direction indicated (passage in the opposite direction prohibited) (see articles 6.25, 6.26 and 6.27)
D.2 You are recommended to keep within the area indicated (in openings of bridges or weirs (see article 6.24)

D.3 You are recommended to proceed
In the direction shown by the arrow
In the direction from the fixed light towards the isophase light

E. INFORMATIVE SIGNS

E.1 Entry permitted (general sign) (see articles 6.08, 6.16, 6.26, 6.27 and 6.28bis)

E.2 Overhead cable crossing
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.3</strong></td>
<td>Weir</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.4</strong></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Ferry-boat not moving independently</td>
</tr>
<tr>
<td>b)</td>
<td>Ferry-boat moving independently</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.5</strong></td>
<td>Berthing (i.e. anchoring or making fast to the bank) permitted (see articles 7.02 and 7.05)</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.5.1</strong></td>
<td>Berthing permitted on the stretch of water of the breadth measured from, and shown on the board in metres (see article 7.05)</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.5.2</strong></td>
<td>Berthing permitted on the stretch of water bounded by the two distances measured from, and shown on the board in metres (see article 7.05)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>E.5.3</strong></td>
<td>Maximum number of vessels permitted to berth abreast (see article 7.05)</td>
</tr>
<tr>
<td><strong>E.5.4</strong></td>
<td>Berthing area reserved for pushing-navigation vessels that are not required to carry the marking prescribed in articles 3.14 and 3.28 (see article 7.06)</td>
</tr>
<tr>
<td><strong>E.5.5</strong></td>
<td>Berthing area reserved for pushing-navigation vessels that are required to carry one blue light under article 3.14, paragraph 1 or one blue cone under article 3.28, paragraph 1 (see article 7.06)</td>
</tr>
<tr>
<td><strong>E.5.6</strong></td>
<td>Berthing area reserved for pushing-navigation vessels that are required to carry two blue lights under article 3.14, paragraph 2 or two blue cones under article 3.28, paragraph 2 (see article 7.06)</td>
</tr>
<tr>
<td><strong>E.5.7</strong></td>
<td>Berthing area reserved for pushing-navigation vessels that are required to carry three blue lights under article 3.14, paragraph 3 or three blue cones under article 3.28, paragraph 3 (see article 7.06)</td>
</tr>
<tr>
<td><strong>E.5.8</strong></td>
<td>Berthing area reserved for vessels other than pushing-navigation vessels that are not required to carry the marking prescribed in articles 3.14 and 3.28 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.9</td>
<td>Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry one blue light under article 3.14, paragraph 1 or one blue cone under article 3.28, paragraph 1 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.10</td>
<td>Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry two blue lights under article 3.14, paragraph 2 or two blue cones under article 3.28, paragraph 2 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.11</td>
<td>Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry three blue lights under article 3.14, paragraph 3 or three blue cones under article 3.28, paragraph 3 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.12</td>
<td>Berthing area reserved for all vessels that are not required to carry the marking prescribed in articles 3.14 and 3.28 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.13</td>
<td>Berthing area reserved for all vessels that are required to carry one blue light under article 3.14, paragraph 1 or one blue cone under article 3.28, paragraph 1 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.14</td>
<td>Berthing area reserved for all vessels that are required to carry two blue lights under article 3.14, paragraph 2 or two blue cones under article 3.28, paragraph 2 (see article 7.06)</td>
</tr>
<tr>
<td>E.5.15</td>
<td>Berthing area reserved for all vessels that are required to carry three blue lights under article 3.14, paragraph 3 or three blue cones under article 3.28, paragraph 3 (see article 7.06)</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>E.6</td>
<td>Anchoring (see article 7.03) or trailing of anchors, cables or chains permitted (see article 6.18)</td>
</tr>
<tr>
<td>E.7</td>
<td>Making fast to the bank permitted (see article 7.04)</td>
</tr>
<tr>
<td>E.7.1</td>
<td>Berthing area reserved for loading and unloading vehicles. (maximum duration of berthing permitted may be added on an information plate below the board)</td>
</tr>
<tr>
<td>E.8</td>
<td>Turning area (see articles 6.13 and 7.02)</td>
</tr>
<tr>
<td>E.9</td>
<td>The waterways being approached are considered to be tributaries of this waterway (see article 6.16)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>E.10</strong> This waterway is considered to be a tributary of the waterway being approached (see article 6.16)</td>
<td><img src="image1" alt="Diagram" /></td>
</tr>
<tr>
<td><strong>E.11</strong> End of a prohibition or obligation applying to traffic in one direction only, or end of a restriction</td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
</tbody>
</table>
| **E.12** Advance signals: one or two white lights  
(a) Fixed light(s): Difficulty ahead-stop if the regulations so require  
(b) Isophase light(s): You may proceed | ![Diagram](image3) or ![Diagram](image4) or ![Diagram](image5) |
<p>| <strong>E.13</strong> Drinking-water supply | <img src="image6" alt="Diagram" /> |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E.14</strong> Telephone</td>
<td><img src="image" alt="Telephone" /></td>
</tr>
<tr>
<td><strong>E.15</strong> Motorized vessels permitted</td>
<td><img src="image" alt="Motorized Vessels" /></td>
</tr>
<tr>
<td><strong>E.16</strong> Sports or pleasure craft permitted</td>
<td><img src="image" alt="Sports" /></td>
</tr>
<tr>
<td><strong>E.17</strong> Water skiing permitted</td>
<td><img src="image" alt="Water Skiing" /></td>
</tr>
<tr>
<td><strong>E.18</strong> Sailing vessels permitted</td>
<td><img src="image" alt="Sailing" /></td>
</tr>
<tr>
<td><strong>E.19</strong> Craft other than motorized vessels or sailing craft permitted</td>
<td><img src="image" alt="Craft" /></td>
</tr>
<tr>
<td></td>
<td>Rule Description</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>E.20</td>
<td>Use of sailboards permitted</td>
</tr>
<tr>
<td>E.21</td>
<td>Zone authorized for high speed navigation of small sport and pleasure craft</td>
</tr>
<tr>
<td>E.22</td>
<td>Launching or beaching of vessels permitted</td>
</tr>
<tr>
<td>E.23</td>
<td>Possibility of obtaining nautical information by radio-telephone on the channel indicated</td>
</tr>
<tr>
<td>E.24</td>
<td>Water bikes permitted</td>
</tr>
</tbody>
</table>
Section II. **AUXILIARY SIGNS**

The main signs (see section I) may be supplemented by the following auxiliary signs:

1. **Panels showing the distance at which the regulation applies or the special feature indicated by the main sign is to be found**

   *Note:* The panels are placed above the main sign.

   **Examples**

<table>
<thead>
<tr>
<th>1 000</th>
<th>1 500</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Panel 1000m stop" /></td>
<td><img src="image" alt="Panel 1500m ferry-boat not moving independently" /></td>
</tr>
<tr>
<td>In 1 000m stop</td>
<td>In 1 500m ferry-boat not moving independently</td>
</tr>
</tbody>
</table>

2. **Additional luminous signal**

Luminous white arrow combined with certain lights, with the following meanings

(a) With green light
   Example: Permission to enter the basin to which the arrow is pointing

(b) With red light
   Example: No entry to the basin to which the arrow is pointing
3. **Pointers showing the direction of the section to which the main sign applies**

*Note:* The pointers need not necessarily be white and may be placed beside or below main sign.

### Examples

<table>
<thead>
<tr>
<th><img src="image1" alt="Berthing permitted" /></th>
<th><img src="image2" alt="Berthing prohibited" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Berthing permitted</td>
<td>Berthing prohibited (over a distance of 1 000m)</td>
</tr>
</tbody>
</table>

4. **Panels giving explanations or additional information**

*Note:* These panels are placed below the main sign.

### Examples

<table>
<thead>
<tr>
<th><img src="image3" alt="Stop for Customs" /></th>
<th><img src="image4" alt="Give one long blast" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop for Customs</td>
<td>Give one long blast</td>
</tr>
</tbody>
</table>
Aneks 8.

BUOYAGE AND MARKING OF WATERWAYS

I. GENERAL

<table>
<thead>
<tr>
<th>1. Definitions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-hand side/left-hand:</td>
<td>the designations “right-hand side” and “left-hand side” of the waterway or channel are to be understood as for an observer facing downstream; on canals, lakes and broad waterways the terms “right” and “left” shall be defined by the authorities.</td>
</tr>
<tr>
<td>Light:</td>
<td>a distinctive light used as a marking.</td>
</tr>
<tr>
<td>Fixed light:</td>
<td>an uninterrupted light of constant intensity and colour.</td>
</tr>
<tr>
<td>Rhythmic light:</td>
<td>a light of constant intensity and colour operating in a characteristic and regularly repeated succession of spells of illumination and extinction.</td>
</tr>
</tbody>
</table>

2. Rhythm of light

| Single occulting light                             | ![Diagram] |
| Group occulting light                              | ![Diagram] |
| Izophase light                                     | ![Diagram] |
| Single-flashing light                              | ![Diagram] |
| Group-flashing light                               | ![Diagram] |
| Composite group-flashing light                     | ![Diagram] |
| Continuous scintillating light or continuous quick scintillating light | ![Diagram] |
| Group scintillating light or group quick scintillating light | ![Diagram] |
II. BUOYAGE OF CHANNEL LIMITS IN THE WATERWAY

1. Right-hand side of the channel

Colour: red
Form: cylindrical buoy or buoy with a topmark, or spar
Topmark (if any): red cylinder
Light (when fitted): rhythmic red light
Generally with radar reflector.

![Figure 1](image1.png)

2. Left-hand side of the channel

Colour: green
Form: conical buoy or buoy with a topmark, or spar
Topmark (if any): green cone, point upwards
Light (when fitted): rhythmic green light
Generally with radar reflector.

![Figure 2](image2.png)

3. Bifurcation of the channel

Colour: horizontal red and green bands
Form: spherical buoy or buoy with a topmark, or spar
Topmark (if any): sphere with horizontal red and green bands
Light (when fitted): continuous scintillating white light, or isophase white light
(may be the group-flashing white light with a group of three flashes). Generally with radar reflector.

![Figure 3](image3.png)
Where necessary, a red cylindrical topmark or green conical topmark placed above the bifurcation mark indicates on which side it is preferable to pass (main channel).

The mark shall then bear a rhythmic red light or a rhythmic green light, as appropriate.

3. A letter “p” painted in white on the buoys described in paragraphs 1 and 2 indicates that the channel is adjacent to a berthing area. If the buoys showing the letter “P” carry a light, its rhythm shall be different from that of the lights of other buoys placed along the channel limit.

III. MARKS ON LAND INDICATING THE POSITION OF THE CHANNEL

A. Marks on land indicating the position of the channel in relation to the banks

These marks indicate the position of the channel in relation to the bank and, together with the buoyage of the waterway, mark the channel at points where it approaches a bank; they also serve as landmarks.

1. Channel near the right bank

Colour: red/white
Form: post with topmark
Topmark: square boards (sides horizontal and vertical), red, two horizontal white stripes; or square frame (sides horizontal and vertical), painted red
Light (when fitted): rhythmic red light.
Generally with radar reflector.
2. Channel near the right bank

Colour: green/white
Form: post with topmark
Topmark: square board (diagonals horizontal and vertical), upper half painted green and lower half white; or square frame (diagonals horizontal and vertical), painted green
Light (when fitted): rhythmic green light.

B. Marking of cross-overs
1. Right bank

Colour: yellow/black
Form: post with topmark
Topmark: square yellow board (sides horizontal and vertical), with a central vertical black stripe; or a lath-assembled St. George’s Cross painted yellow
Light (when fitted): yellow light flashing or occulting, with an even-number characteristic other than the group-flashing rhythm with a group of two flashes.
2. Left bank

Colour: yellow/black
Form: post with topmark
Topmark: square yellow board (diagonals horizontal and vertical), with a central vertical black stripe; or a lath-assembled St. George’s Cross painted yellow
Light (when fitted): yellow light flashing or occulting, with an odd-number characteristic other than the group-flashing rhythm with a group of three flashes.

3. Use of marks
3.1 Mere indication of cross-over

3.2 Indication of the axis of a long cross-over
Two identical signs placed one behind the other on the same bank, forming an alignment marking the axis of a long cross-over
Light (if any): yellow (the forward light and rearward light generally having the same rhythm; however, the rearward light may be a fixed light).
IV. BUOYAGE AND MARKING OF DANGER POINTS AND OBSTACLES

A. Fixed marks

1. Right-hand side

Colour: red
Form: post with topmark
Topmark: red cone, point downwards
Light (when fitted): rhythmic red light.

(fig. 11)

2. Left-hand side

Colour: green
Form: post with topmark
Topmark: green cone, point upwards
Light (when fitted): rhythmic green light.

(fig. 12)
3. Bifurcation

Colour: red/green
Form: post with topmark
Topmark: red cone, point downwards, above a green cone, point upwards
Light (when fitted): continuous scintillating white light or isophase white light (may be the group-flashing white light with a group of three flashes).

The above cones may be replaced by triangular panels with a white background and a red or green border

4. Secondary arms of the waterway, mouths of waterways and entrances to harbours

On the approach to secondary arms of the waterway, to mouths of waterways and to harbour entrances, the bank walls on both sides of the waterway may be marked as far as the head of dividing mole by the fixed marks described in 1 and 2 above, figures 12 and 13. Vessels entering the harbour are regarded as upstream traffic.

B. Buoys
1. Right-hand side

Colour: horizontal red and white bands
Form: spar-buoy or spar
Topmark: red cylinder
Light (when fitted): rhythmic red light
Generally with radar reflector.
2. Left-hand side

Colour: horizontal green and white bands
Form: spar-buoy or spar
Topmark: green cone, point upwards
Light (when fitted): rhythmic green light
Generally with radar reflector.

Example of use of the buoyage and marking described in chapters II and IV
V. ADDITIONAL MARKING FOR NAVIGATION BY RADAR

A. Marking of bridge piers (if necessary)
   1. Yellow floats with radar reflector (placed upstream and downstream from piers)
   2. Pole with radar reflector placed upstream and downstream from bridge piers

B. Marking of overhead cables (if necessary)
   1. Radar reflectors secured to the overhead cable (giving a radar image of a series of points to identify the overhead cable)
   2. Radar reflectors placed on yellow floats arranged in pairs near each bank (each pair giving a radar image of two points side by side to identify the overhead cable)
ANNEX 9

Model used-oil log
USED-OIL LOG

Page 1

Order No: .................................................................

.................................................................
Type of vessel .............................................................
Name of vessel ............................................................

Official number
or tonnage measurement number: .................................................................

Place of issue: .................................................................

Date of issue: .................................................................

This log contains ........ pages

Seal and signature of the authority issuing the log

.................................................................

Making-out of used-oil logs

The first used-oil log, carrying order number 1 on page 1, is issued only by the authority which made out the
vessel's certificate. This authority shall also enter the required particulars on page 1.

All the following logs, numbered by order, shall be made out by a competent local authority, but shall only
be issued on presentation of the previous log. The previous log shall be indelibly stamped “Not valid” and
returned to the boatmaster. It shall be kept on board for six months following the last entry.
Oily and greasy wastes accepted, occurring during the operation of the vessel:

Waste oil .................................................. l

Bilge water from:

Aft engine room ........................................... 1

Fore engine room ........................................... 1

Other premises ............................................ 1

Other oily and greasy waste:

Used rags .................................................. kg

Waste grease ................................................ kg

Used filters .................................................. units

Receptacles .................................................. units

Other comments:

Place: ..................................................
Date: ..................................................

Seal and signature of the reception facility
Annex 10

GENERAL TECHNICAL SPECIFICATIONS APPLICABLE TO RADAR EQUIPMENT

The technical parameters of radar installations must satisfy the following requirements:

Minimum range of detection 15 m

Distance resolution 15 m at scales 0.5-1.6 km; 1% of the scale value at other scales

Angular resolution 1.2°

Accuracy of measurement: range 10 m for variable range circles; 1% of fixed range circles at scales 0.5-2.0 km; 0.8% of the value of the selected scale.

Accuracy of measurement: bearings + 1°

Heading line:
- Width 0.5°
- Deviation 0.5°

Effective diameter of screen indicator 270mm

Range scales 0.5; 1; 1.6; 2; 3.2; 4; 8; 16; 32 km: not less than 4 fixed range circles within each scale

Off-centring 1/4-1/3 of the effective diameter of the image

Bearing facilities:
- Timing Up to 5 seconds + 1°
- Error

Transmission frequency 9.3 – 9.5 GHz (3.2 cm)

Warm-up time 4 minutes

Minimum antenna speed 24 revolutions per minute
RULES ON MINIMUM MANNING REQUIREMENTS FOR THE VESSELS ON THE SAVA RIVER BASIN
**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,


**Believing** that public authorities can contribute significantly to the development of the transport on the Sava River through their engagement to the provision and maintenance of the safe navigation system,

**In accordance** with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 8 Paragraph 2 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) on its VIII Special Session held on November 12-13, 2007, has adopted the following

**DECISION – 33/07**

on adoption of

RULES ON MINIMUM MANNING REQUIREMENTS FOR THE VESSELS

ON THE SAVA RIVER BASIN

1. Text of the Rules on Minimum Manning Requirements for the Vessels on the Sava River Basin is attached to this decision as its integral part.
2. This Decision shall apply as of June 01, 2008.
3. Parties shall adopt the measures necessary to implement this Decision and notify the Sava Commission.
4. This Decision shall be binding for the Parties 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 State.

If 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 State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.
5. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 13, 2007.

If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 13, 2007.
6. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
7. The Secretariat of the Sava Commission shall notify the Parties of the entry into force of the Decision.

Ref. No: 1S-8-D-07-9/1-3

Zagreb, November 13, 2007

Mr. Kemal Karkin
Chairman of the Sava Commission
CONTENT

Chapter 1 GENERAL PROVISIONS.............................................................................................................. 5
Chapter 2 CREW........................................................................................................................................... 7
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ANNEX 1 SERVICE RECORD.................................................................................................................... 21
Chapter 1

GENERAL PROVISIONS

Article 1.0 - Scope
The present Rules shall be applied on the inland waterways on the Sava River from the river kilometer 0.00 to the river kilometer 586.00, on the Kolubara River from the river kilometer 0.00 to the river kilometer 5.00, on the Drina River from the river kilometer 0.00 to the river kilometer 15.00, 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 3.00, on the Una River from 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.

Article 1.1 - Purpose
1. These Rules shall apply to all inland navigation vessels, except pushers and tugs operating exclusively in the port areas and unmanned pushed barges, small craft, floating equipment, assembly of floating material and ferry-boats within the meaning of the Navigation Rules on the Sava River Basin.
2. Crew member is a person on board of the vessel performing works in connection to vessel, which is mandatory listed under the crew list.
3. Minimum crew on board on the inland navigation vessels shall conform to the requirements of these Rules for all operating modes. The Rules do not preclude competent authorities from prescribing any additional personnel which may be needed in special cases such as the transport of dangerous goods.
4. The minimum crew prescribed for the operating modes shall be on board of the vessel at all times when it is underway. No departure shall be permitted without the minimum prescribed crew.
5. Vessels, on which due to certain unpredictable circumstances (such as disease, accident, order of the competent authority) happen the disembarking of at most one member of the prescribed crew during navigation, may continue navigating to the next berthing place, and vessels with passengers to the last daily stop, if there’s, besides the boatmaster who has appropriate license, another member of the prescribed crew on board, as well as, if the uninterrupted communication with the required means of communication with the authorities competent for navigation safety is in function.

Article 1.2 - Physical Fitness
1. The crew member must demonstrate his physical fitness by passing a medical examination which, among else, tests the visual and auditory acuity, color vision, motility of the upper and lower limbs and the neuro-psychiatric state and cardiovascular condition. Fulfillment of the prescribed health requirements shall be proven by a valid certificate of medical fitness issued by the health institute recognized by the competent authority, not older than three months.
2. Certification of fitness in accordance with paragraph 1 above shall be renewed periodically in accordance with the requirements of the competent authorities.
3. On reaching the age of 65 years, the holder of a certificate must, in the following three months and subsequently every year, undergo the examination referred to in paragraph 1 above.
4. Where a competent authority has doubts as to the physical fitness of a crew member, it may request a medical examination in accordance with the provisions of paragraph 1 above.
5. Future mothers/mothers in postnatal period may not be member of the crew during the pregnancy or postnatal period in period of at least 14-weeks. Thereof, at least 6 weeks refer to the period prior to labor and at least 7 weeks after the labor.

Article 1.3 - Navigation Service
1. Navigation service is the time spent on board of the vessel in navigation, where 180 days of uninterrupted navigation shall be considered as a one year of navigation service. Within 365 consecutive days only 180 days of navigation can be taken into account.

2. 250 days of sea navigation shall be also considered as a one year of navigation service.
Chapter 2

CREW

Article 2.1 - Crew Members
1. The minimum crew of a vessel, ensuring the safety of its operation, may consist of the following crew members:
   (i) Boatmaster;
   (ii) Chief Mate
   (iii) Helmsman;
   (iv) Boatswain;
   (v) Ordinary crewman;
   (vi) Engineer;
   (vii) Engine-minder.

Article 2.2 - Minimum Requirements for Crew Members
1. Boatmaster:
   a) means the person referred to in the Article 1.02 of the Navigation Rules on the Sava River Basin who has the necessary aptitude and qualifications to navigate a vessel on the Sava River waterway as well as the general responsibility for the ship and navigation;
   b) shall hold a boatmaster’s license issued in accordance with the Rules on Minimum Requirements for the Issuance of Boatmaster’s Licenses on the Sava River Basin.

2. Chief Mate
   a) means the person in charge for navigational watch who has the necessary aptitude and qualifications to navigate a vessel on the Sava River waterway and who has nautical responsibility on board during the watch.
   b) shall hold a boatmaster’s license issued in accordance with the Rules on Minimum Requirements for the Issuance of Boatmaster’s Licenses on the Sava River Basin.

3. Helmsman:
   a) shall have not less than one year of navigation service on board of the motorized vessel in inland navigation as an boatswain or not less than three years of navigation service on board of the motorized vessel as an ordinary crewman including not less than one year in inland navigation and two years either in inland navigation or at sea, or
   b) shall have successfully completed vocational training and have passed final examination approved by the competent authority, provided that the training includes navigation service in inland navigation as a helmsman-apprentice or as an ordinary crewman for a period determined by the competent authority.

4. Boatswain:
   a) shall have not less than one year of navigation service in inland navigation as an ordinary crewman and
   - have successfully completed the vocational training and have passed the final examination at a professional college of inland navigation or a correspondence course approved by the competent authority to be taken in
the preparation of an equivalent diploma, or
- have passed any other examination for ordinary crewman recognized by the competent authority, or
b) shall have successfully completed vocational training referred to in item (a) above of a duration of not less than three years or have passed a final examination following training of not less than three years in a professional college of inland navigation provided the training includes not less than one year of experience in inland navigation, or
c) shall have not less than two years of navigation service in inland navigation as an ordinary crewman within the meaning of paragraph 3. item (a).

5. Ordinary crewman:
a) shall be not less than 17 years of age and
- have passed an examination on completion of the vocational training referred to in paragraph 4 (a) above, or have passed any other examination for ordinary crewman recognized by the competent authority, or
b) shall have not less than three years of navigation service as a member of the vessel’s deck department, including not less than one year in inland navigation and two years either in inland navigation or at sea.

6. Engineer:
a) Shall be at least 18 years of age and have passed an examination on completion of a full vocational training course in the engine or mechanics sectors, or
b) Shall have worked for not less than two years as an engine-minder on a motorized inland navigation vessel.

7. Engine-minder:
Shall be not less than 17 years of age and either:
a) be an ordinary crewman and have passed an engine-minder’s examination recognized by the competent authority, or
b) have not less than one year of navigation service on board of a motorized inland navigation vessel as an ordinary crewman and have a basic knowledge of engines.

8. Crew member shall be authorized to perform works on the vessels to the extent of responsibility he/she is trained for and for which he/she acquired the certificate on aptitude, as well as the all other works originating from his/her vocation requiring lesser extent of responsibility.

Article 2.3 - Proof of Qualifications – Service Record
1. Every member of the minimum crew shall have a personal service record pursuant to the Annex 1. to these Rules. All the essential information required in the service record should be printed as a minimum, in the official language of the country concerned and either in German or English. On enlistment, the service record shall be presented to the boatmaster and kept up to date and carefully preserved by him until discharge. The service record shall be returned to the holder on request at any time and without delay.

The service record shall contain general information such as diplomas obtained, medical certificates and the holder’s qualifications under 2.2, as well as the specific information concerning voyages made or positions held during service on board of vessels.

2. The holder of the service record shall have the record certified at least once in the course of the 12-month period following the date of issuance by a competent authority.
3. The authority referred to in paragraph 2 above shall be responsible for entering the general information referred to in paragraph 1 above. The boatmaster shall be responsible for entering the specific information referred to in paragraph 1 above. The particulars concerning the preceding voyage shall be entered before the start of the next voyage. The instructions concerning the keeping of the service record and the definitions (e.g. “voyage”, start and finish) are to be found in the service record.

4. For crew members holding a boatmaster’s license in accordance with the Rules on Minimum Requirements for the Issuance of Boatmaster’s Licenses on the Sava River Basin, such license shall stand in lieu of the service record.

5. It shall be possible to provide proof of qualification for employment on board at any time:
   a) for the boatmasters, in form of the boatmaster’s license;
   b) for the other crew members in form of the service record or the boatmaster’s license.
Chapter 3

OPERATING MODES AND VESSELS’ EQUIPMENT

Article 3.1 - Operating modes
1. A distinction shall be made between the following operating modes:
   A1 daytime navigation for a maximum of 14 hours
   A2 semi-continuous navigation for not more than 18 hours
   B continuous navigation for 24 hours

   Daytime navigation may be extended to a maximum of 16 hours, not more than once a week, if the vessel
   is equipped with a tachograph approved by the competent authority and in proper working order, and if the
   members of the minimum crew include one holder of the boatmaster’s license and a helmsman.

2. A vessel navigating under mode A1 or mode A2 shall cease navigation for 8 hours continuously, in the
   former case, and 6 hours continuously, in the latter case, as follows:
   - a vessel navigating under mode A1 shall cease navigation for the whole of the period between
     10 p.m. and 6 a.m.
   - a vessel navigating under mode A2 shall cease navigation for the whole of the period between
     11 p.m. and 5 a.m.

   If the vessel is equipped with a tachograph of a type approved by the competent authority and in proper
   working order, vessels can cease navigation in different time of the day.

Article 3.2 - Mandatory rest period
1. In operating mode A1, all members of the crew shall have eight hours of uninterrupted rest outside the
   navigating time for each 24-hour period, calculated from the end of each 8-hour rest period.

2. In operating mode A2, all crew members shall have eight hours of rest including six hours uninterrupted
   rest time outside the navigating times for each 24-hour period, calculated from the end of each 6-hour rest
   period. For all crew members under 18, eight hours of uninterrupted rest including six hours outside the
   navigating times.

3. In operating mode B, all crew members shall have 24 hours rest time per 48-hour period including at least
   two 6-hour periods of uninterrupted rest.

4. During the mandatory rest time, a crew member may not be called on to perform any duty, including
   surveillance or standby, unless in case of emergency situation referring to the obvious danger to human life,
   material goods and environment; the watch and surveillance duties provided for in the Navigation Rules on
   the Sava River Basin for stationary vessels shall not be considered as an obligation under this paragraph..

5. The provisions of labour regulations and in collective agreements concerning longer rest periods shall
   remain valid.

Article 3.3 - Change or Repetition of Operating Mode
1. A change or repetition of operating mode may take place only if the requirements from paragraphs 2. to
   6. below are complied with:
2. The change-over from operating mode A1 to mode A2 may take place only if:
   - the crew has been entirely replaced, or
   - the crew members required for the operating mode A2 have, immediately prior to the change, completed the 8-hour rest period, including six hours outside the navigating-time, and the extra crew required for operating mode A2 are on board.

3. The change-over from operating mode A2 to mode A1 may take place only if:
   - the crew has been entirely replaced, or
   - the crew members required for the operating mode A1 have, immediately prior to the change, completed the uninterrupted rest period of eight hours outside the navigating-time.

4. The change-over from mode B to mode A1 or A2 may take place only if:
   - the crew has been entirely replaced, or
   - the crew members required for operating modes A1 and A2 have, immediately prior to the change, completed the 8-hour and 6-hour uninterrupted rest periods, respectively.

5. The change-over from operating mode A1 or A2 to mode B may take place only if:
   - the crew has been entirely replaced, or
   - the crew members required for operating mode B have, immediately prior to the change, completed the 8-hour and 6-hour uninterrupted rest periods, respectively, outside the navigating time and the extra crew required for mode B are on board.

6. A repetition of the operating mode A1 or A2 may take place only if:
   - the crew has been entirely replaced, and
   - the crew members required for the repeated mode A1 or A2, have, immediately prior to the change, completed the 8-hour or 6-hour uninterrupted rest periods respectively, outside the navigating time.

Article 3.4 - Ship’s Log, Tachograph

1. A ship’s log pursuant to the requirements of the Competent Authorities shall be kept on board of each vessel to which the provisions of present Rules apply. The ship’s log shall be kept in accordance with the instructions it contains. The responsibility for keeping the ship’s log and making the necessary entries in it shall devolve on the boatmaster. The first ship’s log, which shall bear the number 1, the name of the vessel and its official number, shall be issued by the authority, which issued the ship’s certificate.

   Number 2. under the instructions in Ship’s Log is valid only for crew members in operating mode B. For the operating modes A1 and A2 the beginning and end of rest periods for each crew member shall be entered each day during the voyage. The particulars related to a change of operating mode shall be entered on a fresh page of the ship’s log.

   Number 3. subsequent ship’s logs may be issued by a competent local authority which shall affix to them their serial number; however, they may be issued only on production of the preceding log. The preceding log shall be marked indelibly “cancelled” and returned to the boatmaster.

   Number 4. the cancelled log shall be kept on board for six months following the last entry.

   Number 5. on issue of the first ship’s log in accordance with paragraph 1 above, the issuing authority shall certify that it has done so by means of a certificate indicating the name of the vessel, its official number, the number of the ship’s log, and the date of issue. This certificate shall be kept on board and produced on request. The
issue of subsequent ship’s logs in accordance with paragraph 2 above shall be entered by the competent authority on the certificate.

5. Tachograph recordings shall be kept on board for six months following the last entry, if the vessel is equipped with a tachograph.

6. While replacing or supplementing the crew in accordance with the Article 3.3, it shall be necessary to enclose copy of page of the ship’s log from the vessel on which he/she was previously embarked with the data on rest period for each new member of the crew, if the new crew member has been on board of the vessels in previous 72 hours.

Article 3.5 – Equipment of Vessels

1. In addition to other regulations, the self-propelled vessels, self-propelled pusher vessels, pushers, pushed convoys and passenger vessels operating with a minimum crew shall meet the following requirements:
   a) The propulsion equipment shall be so arranged as to enable the speed to be changed and the direction of propulsion reversed from the vessel’s steering station.
   It shall be possible to start and stop the auxiliary machinery required to operate the vessel from the steering station, unless they function automatically or continuously during each voyage.
   b) The critical levels of the temperature of the water for cooling the main engines, the oil pressure of the main engines and transmission gear, the oil and air pressure of the devices for reversing the main engines, the reversible transmission gear or the propellers, and the filling level of the engine room hold shall be indicated by devices which set off sound and visual alarms in the wheelhouse. The sound alarms may be contained in a single sound apparatus and can be stopped once the breakdown has been noted. The visual alarms shall be extinguished only when the relevant problems they indicate have been eliminated.
   c) The fuel feed and the cooling of the main engines shall be automatic.
   d) It shall be possible for one person to man the helm without special effort even at the maximum authorized draught.
   e) It shall be possible to initiate the visual and sound signals prescribed by the regulations for vessels under way from the steering station.
   f) If direct communication between the steering station and the bow of the vessel, the stern of the vessel, the crew accommodation and the engine room is not possible, a sound link shall be provided. For the engine room, the sound link may be replaced by visual and sound signals
   g) It shall be possible for a single crew member on his own to launch the required ship’s boat with due dispatch.
   h) A spotlight, which can be manipulated from the steering station, shall be installed on board.
   i) The effort required to manipulate cranks and similar pivoting devices for lifting equipment shall not be more than 16 kg.
   j) The towing winches shall be power-driven.
   k) The bilge pumps and the deck swabbing pumps shall be power-driven.
   l) The main control devices and monitoring instruments shall be arranged ergonomically.
   m) It shall be possible to control the steering gear from the steering station.

2. The conformity or non-conformity of the vessel with the requirements of this article shall be entered into the ship’s certificate.
### Article 4.1 – Self-Propelled Cargo Vessels and Pushers

1. The minimum crew for self-propelled vessels and pushers comprises:

<table>
<thead>
<tr>
<th>Length of the vessel L in m</th>
<th>Crew members</th>
<th>Number of crew members for the operating mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$A_1$</td>
</tr>
<tr>
<td>$L &lt; 70$</td>
<td>boatmaster, chief mate, helmsman, boatswain, ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td>$70 &lt; L &lt; 86$</td>
<td>boatmaster, chief mate, helmsman, boatswain, ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td>$L &gt; 86$</td>
<td>boatmaster, chief mate, helmsman, boatswain, ordinary crewman</td>
<td>1</td>
</tr>
</tbody>
</table>

*$^*$ If the helmsman is replaced by a third person with boatmaster licence, one ordinary crewman shall be enough.
### Article 4.2 – Rigid Convoys and other Rigid Formations

1. The minimum crew for rigid convoys and other rigid formations comprises:

<table>
<thead>
<tr>
<th>Type of convoy</th>
<th>Crew members</th>
<th>Number of crew members for the operating mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$A_1$</td>
</tr>
<tr>
<td>pusher + one pushed barge or formation with the dimensions: $L \leq 116.5$ m $B \leq 15$ m</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>-</td>
</tr>
<tr>
<td>pusher + two pushed barges or self-propelled vessel + one pushed barge</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>-</td>
</tr>
<tr>
<td>pusher + three or four pushed barges or self-propelled vessel + two or three pushed barges</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
<tr>
<td>pusher + more than four pushed barges</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
</tbody>
</table>

$^{2}$ If the helmsman is replaced by a third person with boatmaster license, one ordinary crewman shall be enough.

$^{3}$ If the helmsman is replaced by a third person with boatmaster license the crew may not need to include an engineer or an engine-minder.

$^{4}$ If the helmsman is replaced by a third person with boatmaster license two ordinary crewmen shall be enough.

$^{5}$ If the helmsman is replaced by a third person with boatmaster license three ordinary crewmen shall be enough.
### Article 4.3 – Passenger Vessels

1. The minimum crew for passenger vessels for day excursions comprises

<table>
<thead>
<tr>
<th>Maximum permitted number of passengers</th>
<th>Crew members</th>
<th>Number of crew members for the operating mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$A_1$</td>
</tr>
<tr>
<td>up to 75 persons</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>-</td>
</tr>
<tr>
<td>between 76 and 250 persons</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>2&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>-</td>
</tr>
<tr>
<td>between 251 and 600 persons</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
<tr>
<td>more than 1 000 persons</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
</tbody>
</table>

The minimum crew for steamboats for day excursions should be increased by one engineer in all operating modes.

<sup>6</sup> Both ordinary crewmen may be replaced by one engineer or an engine-minder.
2. The minimum crew for passenger cabin vessels comprises:

<table>
<thead>
<tr>
<th>Group according to the number of berths</th>
<th>Crew members</th>
<th>Number of crew members for the operating mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A₁</td>
</tr>
<tr>
<td>up to 50 berths</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
<tr>
<td>between 51 and 100 berths</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
<tr>
<td>more than 100 berths</td>
<td>boatmaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>chief mate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>helmsman</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>boatswain</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ordinary crewman</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>engineer or engine-minder</td>
<td>1</td>
</tr>
</tbody>
</table>

Article 4.4 – Minimum crews for other vessels

1. Tugs performing towing operation shall increase minimum crew prescribed in article 4.1 in all operating modes by one boatswain.

2. The minimum crew for non-motorized barge with steering gear comprises of:
   a) one boatswain in operating modes A₁ and A₂
   b) one boatswain and one ordinary crewman in operating mode B.

3. Regardless of the paragraph 2 of this Article, the minimum crew for non-motorized barges with steering gear engaged in the process of transport of the dangerous goods should comprise of one boatswain and one ordinary crewman in all operating modes.

4. Some of the towed vessels in a rigid group are not required to have a crew when the crew of the other vessels in the rigid group is sufficiently large and skilled to ensure the safety of those on board and safe navigation, except in case when this is explicitly otherwise regulated by the authority competent for navigation safety (taking into account the nautical-technical characteristics of the vessels, state or type of the cargo).

5. The competent bodies shall determine for vessels not mentioned in these Rules, according to their dimensions, form of construction, equipment and intended use, what crews shall be on board during navigation.
Article 4.5 – Manning of vessels whose minimum equipment is incomplete

1. When the equipment of a self-propelled vessel, pusher, tug, rigid convoy, or other rigid assembly or passenger vessel does not correspond to the standard of equipment required in article 3.5, the minimum crew prescribed in this chapter shall be increased by:
   a) one ordinary crewman in operating modes A1 and A2 and
   b) two ordinary crewmen in operating mode B. When, however, the requirements of article 3.5, items (i) and (j) only, or of one of these items are not met, the crew shall be increased in operating mode B by one ordinary crewman instead of two.

2. In addition, when one or more of the requirements of article 3.5, items (a) to (c), are not met,
   a) the ordinary crewman prescribed in paragraph 1. (a) above shall be replaced by an engine-minder in operating modes A1 and A2 and
   b) the two ordinary crewmen prescribed in paragraph 1. (b) above shall be replaced by two engine-minders in operating mode B.
ANNEX 1.

SERVICE RECORD

Issued by:

Holder: ........................................................................................................................................
Name: ........................................................................................................................................
First name(s): ...........................................................................................................................
Born on: ....................................................................................................................................
Born at: ....................................................................................................................................
Nationality: ...............................................................................................................................  Photograph of holder

The holder of this Service Record has given the following proof of identity:

◊ passport
◊ national identity card
◊ the document referred to below, with its official translation:

Description of the document:

No. of the document:

Document issued by:

Place, date, stamp and signature of the authority
The first Service Record bearing the
No.: .................................................................
was issued by:
....................................................................................................................................................................
....................................................................................................................................................................
....................................................................................................................................................................
on (date): .....................................................................................................................................................

The previous Service Record bearing the
No.: .................................................................
Date: .................................................................

Remarks by the authority (for example, details of a replacement record):
....................................................................................................................................................................

HOLDER’S QUALIFICATIONS

Qualification: .............................................................
as from (date)

Stamp, date and signature of the authority:
CERTIFICATE OF FITNESS

The holder of this Service Record qualifies on the basis of the medical certificate

issued by: ..................................................................................................................................................................

issued on: ...........................................................................................................................................................

◊ fit
◊ limited fitness

subject to the following condition(s):

......................................................................................................................................................................
......................................................................................................................................................................
......................................................................................................................................................................

Period of validity: ..............................................................................................................................................

SAILING TIME ON BOARD, NAME OF VESSEL:

Official number of vessel: ........................................................................................................................................

Type of vessel: ...................................................................................................................................................

Flag: .................................................................................................................................................................

Length of vessel in m*, number of passengers: ...................................................................................................

Owner (name, address): .....................................................................................................................................

Entry on duty of holder with the position of: ....................................................................................................... 

Entry on duty on (date): .....................................................................................................................................

Until (date): ....................................................................................................................................................... 

Boatmaster (name, address): ..............................................................................................................................

........................................................................................................................................................................

Place, date and signature of boatmaster: ............................................................................................................

........................................................................................................................................................................

* Delete as appropriate
### Sailing Times and Sectors Covered During the Year

Sailing times must correspond to the entries in the log!

<table>
<thead>
<tr>
<th>Name of vessel or registration number of vessel</th>
<th>Voyage from (k.p.)</th>
<th>Via (k.p.)</th>
<th>to (k.p.)</th>
<th>Start of voyage (Date)</th>
<th>Days interrupted</th>
<th>End of voyage (Date)</th>
<th>Number of days of voyage</th>
<th>Signature of boatmaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Entry by the authority: total days of voyage taken into account on this page.

Control stamp Presented on (date) .......................................................... Signature and stamp of the authority
RULES ON MINIMUM REQUIREMENTS FOR THE ISSUANCE OF BOATMASTER’S LICENSES ON THE SAVA RIVER BASIN
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,

Having regard to the Council Directive 96/50/EC and Resolution 31 of the ECE/UN,

Believing that public authorities can contribute significantly to the development of the transport on the Sava River through their engagement to the provision and maintenance of the safe navigation system,

In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 8 Paragraph 2 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) on its VIII Special Session held on November 12-13, 2007, has adopted the following

**DECISION – 32/07**

on adoption of

RULES ON MINIMUM REQUIREMENTS FOR THE ISSUANCE OF BOATMASTER’S LICENSES ON THE SAVA RIVER BASIN

1. Text of the Rules on Minimum Requirements for the Issuance of Boatmaster’s Licenses on the Sava River Basin is attached to this decision as its integral part.

2. This Decision shall apply as of June 01, 2008.

3. Parties shall adopt the measures necessary to implement this Decision and notify the Sava Commission.

4. This Decision shall be binding for the Parties 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 State.

If 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 State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.

5. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 13, 2007.

6. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.

7. The Sava Commission Secretariat shall notify the Parties of the entry into force of the Decision.

Ref. No: 1S-8-D-07-8/1-3

Zagreb, November 13, 2007

Mr. Kemal Karkin

Chairman of the Sava Commission
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ANNEX 2 PROFESSIONAL KNOWLEDGE REQUIRED TO OBTAIN THE BOATMASTERS’ LICENCE FOR NAVIGATION ON THE SAVA RIVER.................................................................14
Chapter 1

GENERAL PROVISIONS

Article 1.0 - Scope
The present Rules shall be applied on the inland waterways on the Sava River from the river kilometer 0.00 to the river kilometer 586.00, on the Kolubara River from the river kilometer 0.00 to the river kilometer 5.00, on the Drina River from the river kilometer 0.00 to the river kilometer 15.00, 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 3.00, on the Una River from 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.

Article 1.1 - Purpose
1. These rules are to provide minimum requirements for the issuance and method for acquiring the boatmaster’s licenses for the Sava River as well as the recognition of licenses.
2. In general, these rules shall apply to boatmasters of motorized vessels except the small crafts, floating equipment, assembly of floating material and ferry-boats.
3. Parties to the FASBR (hereinafter “the Parties”) issuing a boatmaster’s license for the carriage of goods and passengers by inland waterway (hereinafter “the license”), shall do so in accordance with the model described in Annex 1.
4. Parties shall take all appropriate measures to preclude the risk of licenses being forged.

Article 1.2 - Definitions
For the purposes of these Rules:
(a) ‘competent authority’ means the authority designated by a Party to issue licenses after verifying that the applicants meet the requirements;
(b) ‘boatmaster’ means the person referred to in the Article 1.02 of the Navigation Rules on the Sava River Basin who has the necessary aptitude and qualifications to navigate a vessel on the Sava River waterway, as well as the general responsibility for the ship and navigation;
(c) ‘member of the bridge crew’ means a person who has regularly participated in navigating a vessel in inland navigation, including manning the tiller.

Article 1.3 - Types of licenses
1. Types of the boatmaster licenses are:
a) Type A - valid for all vessels;
b) Type B - valid for vessels less than 35 m long, except vessels authorized to carry more than 12 passengers, when vessel is not engaged in towing, pushing or propelling side by side formation.
Chapter 2

MINIMUM REQUIREMENTS FOR THE ISSUANCE OF BOATMASTER’S LICENSES

Article 2.1 - Boatmaster license type A
1. The issuance of boatmaster’s licenses type A shall be contingent on their satisfying the following minimum requirements:
   (a) The applicant must be not less than 21 years of age;
   (b) The candidate must have minimum elementary education
   (c) The applicant must demonstrate his physical fitness by passing a medical examination which, among else, tests the visual and auditory acuity, color vision, motility of the upper and lower limbs and the neuro-psychiatric state and cardiovascular condition; Fulfillment of the prescribed health requirements shall be proven by a valid certificate of medical fitness issued by the health institute recognized by the competent authority, not older than three months.
   (d) The applicant must have a minimum of four years navigation service, acquired in the deck department on board of a motorized inland navigation vessel, of which at least two years of navigation service as a member of the bridge crew. To be taken into account navigation service must be validated by the competent authority by being entered in a personal service record.
   (e) The applicant must possess valid radio operator’s certificate for the radiotelephone service on Inland Waterways in accordance with provisions of the Regional Arrangement Concerning the Radiotelephone Service on Inland Waterways – RAINWAT.
   (f) The applicant shall perform navigation on the section of the Sava river for which he/she is taking the exam, in 16 sailings within 10 years, of which at least 3 sailings in both directions (upstream/downstream) within 3 years preceding the registration for the exam.
   (g) The applicant must have passed the examination of professional knowledge to the satisfaction of the competent authorities; this examination shall cover at least the subjects set out in the Annex 2 to these Rules.

Article 2.2 - Boatmaster license type B
1. The issuance of boatmaster’s licenses type B shall be contingent to the satisfying the following minimum requirements:
   (a) Requirements from Article 2.1, paragraph 1, items (a), (b), (c), (e), (f) and (g).
   (b) The applicant must have a minimum of one year navigation service, acquired in the deck department on board a motorized inland navigation vessel as a member of the bridge crew. To be taken into account navigation service must be validated by the competent authority by being entered in a personal service record.

Article 2.3 - Special provisions concerning professional experience
1. Navigation service is the time spent on board of the vessel in navigation, where 180 days of uninterrupted navigation shall be considered as a one year of navigation service. Within 365 consecutive days only 180 days of navigation can be taken into account.
2. The minimum duration of the professional experience stipulated in paragraph 2.1 item (c) may be reduced up to two years maximum:

(a) when the applicant holds a diploma of the specialized inland navigation training or school which comprises a period of mandatory on-board service in the deck department.

(b) when the applicant has a navigation service, acquired in the deck department on board of a motorized sea vessel, where 250 days of sea navigation shall be considered as a one year of navigation service.
Chapter 3
EXAMINATION OF PROFESSIONAL KNOWLEDGE

Article 3.1 - Examination Committee
1. The Competent Authority shall designate the Examination Committee responsible for administering the appropriate examination of professional knowledge. Examination Committee shall be composed of the president, who is the staff member from the competent authority, and two or more members with different qualifications. The president and members shall have sufficient professional knowledge and minimum one member shall have the boatmaster A license for the section of the Sava river for which applicants are taking the exam.
2. The Competent Authority or the Examination Committee duly mandated by it shall establish the procedure and conditions of the examinations, so as to enable the verification of theoretical and practical knowledge required for the operation of vessels on the Sava river waterway. The Competent Authority shall inform the Sava Commission about the above mentioned procedure and conditions.
Chapter 4

PERIODICAL MEDICAL EXAMINATIONS

Article 4.1 – Physical fitness
1. On reaching the age of 50 years, the holder of a license must, in the following three months and subsequently every five years, undergo the examination referred to in Article 2.1, paragraph 1, item (b).
2. On reaching the age of 65 years, the holder of a license must, in the following three months and subsequently every year, undergo the examination referred to in Article 2.1, paragraph 1, item (b).
3. Fulfillment of the requirements referred to in paragraph 1 and 2 hereof shall be proven by valid certificate of medical fitness issued by the recognized health institute.
Chapter 5

RECOGNITION OF THE LICENCE

Article 5.1 — Conditions for the recognition

1. Each Party shall recognize licenses issued in accordance with these Rules by the competent authorities of the other Parties.

2. Licenses issued by the bodies outside the Sava River Basin can be recognized as the subject to approval of the Sava Commission.

ANNEX 1

Specimen of the licence: dimensions 85 mm x 54 mm; basic color - blue
ANNEX 2

PROFESSIONAL KNOWLEDGE REQUIRED TO OBTAIN THE BOATMASTERS’ LICENCE FOR NAVIGATION ON THE SAVA RIVER

CHAPTER 1
General subjects relating to the transport of goods and passengers

1. Navigation
   a) Detailed knowledge of the traffic regulations of inland waterways, particularly Navigation Rules on the Sava River Basin, including nautical signing (designation and buoying of waterways);
   b) Detailed knowledge of the general geographical, hydrological, meteorological and morphological characteristics of the Sava and its tributaries;
   c) Detailed knowledge of the navigational characteristics of the Sava fairway (description, dimensions);
   d) Basic knowledge of the general geographical, hydrological, meteorological and morphological characteristics of the main European inland waterways;
   e) Determination of the course, nautical printed matters and publications, buoyage systems.

2. Vessel maneuvering and handling
   a) Handling of the vessel taking account of the effect of wind, current, thrust deduction and draught for the evaluation of sufficient buoyancy and stability;
   b) Role and functioning of the rudder and propeller;
   c) Anchoring and berthing in all conditions;
   d) Maneuvers in locks and ports; maneuvers when meeting and passing other vessels.

3. Vessel construction and stability
   a) Knowledge of the basic principles of vessel construction with regard in particular to the safety of persons, the crew and the vessel;
   c) Basic knowledge of the main component parts of the vessel;
   d) Theoretical knowledge of the buoyancy and stability rules and their practical application.

4. Engines
   a) Basic knowledge of the design and working of the engines in order to ensure their proper functioning;
   b) Operation and inspection of the main and auxiliary engines and action to be taken in case of disorder.

5. Loading and unloading
   a) Use of draught indicators;
RULES ON MINIMUM REQUIREMENTS FOR THE ISSUANCE OF BOATMASTER’S LICENSES ON THE SAVA RIVER BASIN

(b) Determination of the loading weight using the certificate of measurement;
(c) Loading and unloading, stowage of cargo (stowage plan).

6. Action in special circumstances
(a) Principles of accident prevention;
(b) Measures to be taken in the event of damage, collision and running aground, including the sealing of leaks;
(c) Use of rescue apparatus and equipment;
(d) First aid in the event of accidents;
(e) Prevention of fires and use of fire-fighting equipment;
(f) Prevention of pollution of waterways.

CHAPTER 2
Obligatory additional subjects for radar navigation

(a) Knowledge of radar theory: general knowledge of radioelectric waves and principles of radar operation;
(b) Ability to use radar equipment, interpretation of the radar display, analysis of the information supplied by the equipment and knowledge of the limits of the information supplied by radar;
(c) Use of the turn indicator;
(d) Knowledge of the rules on radar navigation.

CHAPTER 3
Obligatory additional knowledge for passenger transport

1. Basic knowledge of technical regulations on: the stability of passenger vessels in case of damage, division into watertight compartments, plane of maximum draught.
2. First aid in case of accidents.
3. Fire prevention and fire-fighting equipment.
4. Life-saving methods and equipment.
5. How to protect passengers in general, especially in the case of evacuation, damage, collision, running aground, fire, explosion and other situations which may give rise to panic.
RULES FOR WATERWAY MARKING ON THE SAVA RIVER BASIN
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,

Having regard to the European Agreement on Main Inland Waterways of International Importance (AGN), and in particular Annex III thereof,

Believing that public authorities can contribute significantly to the development of the waterway of the Sava river through their engagement to the provision and maintenance of an appropriate waterway based on internationally agreed classifications and parameters,

In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 9 Paragraph 4 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) on its VIII Special Session held on November 12-13, 2007, has adopted the following

DECISION – 31/07

on adoption of

RULES FOR WATERWAY MARKING ON THE SAVA RIVER BASIN

1. Text of the Rules for Waterway Marking on the Sava River Basin is attached to this Decision as its integral part.
2. Parties shall adopt the measures necessary to implement this Decision and notify the Sava Commission.
3. This Decision shall be binding for the Parties 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 State.

If 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 State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.
4. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 13, 2007.
5. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
6. The Sava Commission Secretariat shall notify the Parties of the entry into force of the Decision.

Ref. No: 1S-8-D-07-7/1-3

Zagreb, November 13, 2007

Mr. Kemal Karkin
Chairman of the Sava Commission
Chapter 1
GENERAL

Article 1.0
The present Rules shall be applied on the waterways on the Sava River from the river kilometer 0.00 to the river kilometer 586.00, on the Kolubara River from the river kilometer 0.00 to the river kilometer 5.00, on the Drina River from the river kilometer 0.00 to the river kilometer 15.00, 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 3.00, on the Una River from 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.

Article 1.1
In terms of the objective pursued, the marking comprises two categories of signs:
(a) signs used to regulate navigation on the waterway, set out in Annex 7 to the Navigation Rules on the Sava River Basin, and
(b) signs for the waterway marking, set out in Annex 8 to the Navigation Rules on the Sava River Basin.

Article 1.2
The signs set out in Annex 7 to the Navigation Rules on the Sava River Basin are prohibitory, mandatory, restrictive, recommendatory or informative signs and auxiliary signs.

Article 1.3
In accordance with article 5.01 to the Navigation Rules on the Sava River Basin, boatmen shall obey the requirements and take into account the recommendations or indications brought to their attention by these signs.

Article 1.4
The signs and signals on the water and bank marks of Annex 8 to the Navigation Rules on the Sava River Basin are used to indicate the limits, the direction and the depth of the fairway and, in addition, are used to mark obstacles and permanent structures on the fairway or its vicinity.

Article 1.5
The number of bank marks and signs and signals on the water and the plan for their on-site location shall meet the requirements of navigational safety.

Article 1.6
The choice of the mark and the establishment of their number depends on the local characteristics of the waterway and the function of the mark. Their installation shall be effected in such a way as to ensure visibility from one mark to the next.
Article 1.7
The luminous range of lights is established by the competent authorities of the respective countries in terms of local navigational conditions. In calculating the luminous range, the atmospheric transmission coefficient 0.6 should be used over a distance of 1 nautical mile.

Article 1.8
In principle, the colours of lights should be kept with the recommendations of the International Commission on Illumination (“Colours of light signals”, in ICI publication No. 2.2 (T.C. 1.6) 1975).

Article 1.9
The marks shall be installed by the competent authorities which shall:
(a) regularly observe the state of the river bed and the changes taking place in it, and correct the positioning of the signs and marks on the basis of the results of these observations, and, where necessary, add the additional so that they indicate the fairway dimensions;
(b) regularly measure the depth and the width of the marked fairway and provide boatmasters with the necessary information concerning the minimum channel depths and widths and the river level regime;
(c) establish the plan for installation of signs and marks in their respective sectors and establish the type and number of signs and signals on the water and bank marks to be used, in terms of the requirements of navigational safety and local conditions;
(d) ensure the uninterrupted operation of all signs and signals on the water and bank marks;
(e) timely inform the boatmasters of the date of the installation and removal of signs and signals, of all alterations to their number, type, positioning and lighting, and the rules they establish permitting the passage of vessels in restricted sections where meeting and passing are prohibited.
Chapter 2

REQUIREMENTS TO BE MET BY SIGNS AND MARKS AND THE PLAN FOR THEIR INSTALLATION

Article 2.1
Marking shall be continuously (by day and night) in operation all along the navigable section of the river, as of the waterway is free from ice until the ice appears; it shall be corrected as changes occur in the waterlevel and in the fairway.

Article 2.2
During periods of high water and icing, the regular marking removed to preserve it from possible damage shall be replaced, as far as possible, by marker posts and spars, the topmarks and colours of which shall correspond to those adopted for the respective side of the fairway.

Article 2.3
The bank marks and the additional signs and signals on the water shall, if possible, operate until navigation becomes completely impossible because of ice.

Article 2.4
The positioning of the signs shall, as already said, be effected so as to ensure the day and night visibility from one sign to the next.

Article 2.5
Signs and signals on the water shall be installed so as to ensure the safety of vessels on the fairway.

Article 2.6
Buoys shall be unsinkable and shall remain unsinkable in all storms, and their main body shall therefore be watertight; they shall not only float but also be stable, i.e. conserve a vertical position as far as possible and not be tipped excessively by waves and wind.

Article 2.7
The basic condition that the plan for the installation of the signs and marks shall meet is to ensure the safety of the vessels and the continuity of traffic, by day and by night, throughout the sailing season and to give the boatmasters clear and unambiguous indications concerning the direction and the limits of the fairway.

Article 2.8
The plan for the installation of the signs and marks shall be prepared in such a way as to permit a rational
combination of bank marks and signs and signals on the water. When the plan is drawn up, it should be based on the conditions of navigation, and specific hydrographical and hydro meteorological conditions, the need to ensure the established dimensions of the fairway and create the necessary conditions for the safety and continuity of navigation of all river vessels.

Article 2.9
Bank marks serve to guide the boatmasters and to indicate the direction of the fairway. Signs and signals on the water supplement the bank marks in sectors where, in order to ensure the safety of navigation, it is essential to indicate not only the direction of the fairway but also its limits, and to mark places where there are obstacles.

Article 2.10
In preparing the plan for the installation of signs and marking, the following requirements should be taken into account:
(a) Only the signs set out in Annexes 7 and 8 to the Navigation Rules on the Sava River Basin are to be used to mark the fairway and regulate navigation; in exceptional cases, special additional bank marks may also be used, provided, however, that the marks are not in contradiction with those contained in the Navigation Rules on the Sava River Basin;
(b) The dimensions of the marked fairway shall correspond to the dimensions published by the competent authorities;
(c) The choice of where the signs are to be placed shall be based on the most recent measurements, acquired experience and available data on the state of the fairway, critical points, water levels, etc.;
(d) Signs and marker lights shall be visible, whatever the level of the water, at all points of the fairway and as long as may be necessary for the guidance of boatmasters.

Article 2.11
The marking plan shall contain information on type of the placed signs, bank/rim whereon placed, river kilometre of the set-up and recapitulation of all signs and signals on the water and bank signs used whilst marking.

Article 2.12
If there is a subsequent drop in the level of the water, reconnaissance soundings shall be taken on some sections of the river in order to check whether the positioning of the signs is adequate and to establish whether the marking needs to be supplemented by new signs.

Article 2.13
The frequency of these soundings shall be determined by changes in water level. The more rapid the drop in levels, the more frequent the soundings need to be.
Chapter 3

VISIBILITY OF SIGNS AND LIGHTS

Article 3.1
Whatever the position of the vessel in relation to the sign or the marker light, the characteristics of the sign or light shall remain unchanged. For daytime signs, these characteristics are: the form (topmark) and the colour; for signs and signals at night: the type and colour of the lights.

Article 3.2
The forms and the colours of the topmarks and the types and colours of the lights are set out in detail in Annexes 7 and 8 to the Navigation Rules on the Sava River Basin.

Article 3.3
Sketches of the signs are given in the Annex 1 to these Rules. The numbering of the sketches corresponds to the numbering of the signs given in Annexes 7 and 8 to the Navigation Rules on the Sava River Basin.

Conditions of visibility and dimensions of signs

Article 3.4
The basic requirement to be met by signs and marking is the guarantee of good visibility of all signs and signals by day or night.

Article 3.5
There are three degrees of visibility of signs and signals:
(a) When, because of the distance, the sign is no more than a blotch on the background and neither shape nor colour can be distinguished (dotted outline);
(b) When the sign is visible and its shape and outline can be seen, but the colour remains unclear;
(c) When the shape and colour of the sign can be seen distinctly.

Article 3.6
Due to the proper orientation of the boatmaster, it is necessary to ensure the visibility of second and third degree. Accordingly, the type and dimensions of signs should be selected.

Article 3.7
The degree of visibility of a sign, as of any object, depends primarily on the size of the viewing angle, the colour contrast, the contrast in luminance and weather conditions.

1 The competent authorities may provide for values of the height and width.
Article 3.8
In order to ensure the visibility of first degree, it is necessary to see the sign under 1’ angle by day and under 10’ angle by night.

Article 3.9
Detailed form and colour of the sign (visibility of second and third degree) are identified even under larger angles.

Article 3.10
The largest angle of distinction by day for simple shapes (quadrant, triangle, circle, etc.) shall be within 3.5’ – 5’ scale, and for complex shapes (numbers, letters, etc.) within 5’ – 8’ scale. For boatmaster to be able to recognize (without any optical aids) shape of the sign at appropriate distances and visibility, the above-mentioned implies that following formula can be used for calculation of the sign’ dimension:

\[ H = L \cdot \tan \alpha = L \cdot \sin \alpha \]

- \( H \) (m) – height of the sign;
- \( L \) (m) – distance;
- \( \alpha \) (’) – viewing angle.

Values for \( H \) (m) in function of \( L \) (m) and \( \alpha \) (’) are presented in the Table 1.

<table>
<thead>
<tr>
<th>( \alpha ) (’)</th>
<th>( L ) (m)</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0.44</td>
<td>0.87</td>
<td>1.74</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.58</td>
<td>1.16</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.73</td>
<td>1.45</td>
<td>2.90</td>
<td></td>
</tr>
</tbody>
</table>

Table 1:
Article 3.11
The Table 1 shows that shape of sign with dimension H = 0,5 m is recognizable at distance L = 500m and viewing angle $\alpha = 4^\circ$; when L = 1000m then H = 1m, etc.
If there are simple drawings (dot, line, arrow) on the signs, 15% visibility reduction must be taken into account, while at the complex drawings it shall be 30%.

Article 3.12
The least dimensions should be:
(a) For boards of the bank marks regulating the navigation on inland waterways given in Annex 7 to the Navigation Rules on the Sava River Basin in accordance with Annex 1 to the these Rules.
(b) For navigation marks marking the fairway and marking the obstacles to navigation given in Annex 8 to the Navigation Rules on the Sava River Basin
1) Minimal dimensions of figures for recognizing buoys:
   • Height of figure > 0.60m;
   • Width of figure > 0.35m;
   • Height from the water level to the highest extent of buoy > 1m;
2) Minimal dimensions of marker posts and spars are given in Annex 1 to these Rules;
(c) For bank marks/ marking the fairway and the obstacles to navigation given in Annex 8 to the Navigation Rules on the Sava River Basin:
1) Minimal height of the lower rim of board down-to the ground is 3m. At high water-levels, height of the water level up-to the lower rim of board should not be less than 1.5m;
2) Minimal dimensions of boards and topmarks are given Annex 1 to these Rules.

Article 3.13
Examples of the minimum measurements for the signs are given in the Annex to these Rules. Alphanumeric characters on traffic signs should intend to provide a standard for the various traffic signs.

Article 3.14
As in regard to the signs and signals of Annex 7 and Annex 8 to the Navigation Rules on the Sava River Basin, unlighted buoys and unlighted bank mark boards shall be covered with reflective material. Light buoys and lighted bank mark boards may also be covered so. The colours of these materials shall correspond to those established for the buoy lights or the boards. In all cases, the topmarks of light buoys shall be covered with reflective paint or material.

Article 3.15
In order to ensure that bank marks are clearly visible, their dimensions shall be determined in terms of their purpose, the distance between the fairway and the banks, the nature of the region and the characteristics or other specific conditions of the sector in question.
Article 3.16
The good visibility of a sign or signal depends on the contrast between the luminance of the sign or signal and the background. This shall be taken into consideration in choosing a site for signs and signals. For example, of two boards, one red and the other white, positioned one beside the other against a light background, the red board will be more visible and visible at a greater distance than the white board while, in contrast, the white board will be easier to see than the red board against a dark background.

Article 3.17
The visibility of signs and signals regulating navigation on the waterway shall be ensured at night by lighting them with fixed directional white lights, operating uninterruptedly and positioned so that the light does not incommode the boatmasters.  

Article 3.18
If electric lighting cannot be used, the sign boards shall be covered with reflective material of a corresponding colour on which the symbol shall be clearly visible to vessels.

Article 3.19
Luminance and its regularity are also important from the point of view of the visibility of signs and signals. When boards are lighted, it should be ensured that the shade of their colour is unchanged. The luminance of the sign or signal perceived, like that of any object, depends not only on the lighting but also on the capacity of the surface of the sign to reflect the light waves falling on it. This shall be taken into consideration when the signs are painted; this shall be done in such a way that the surface of the sign is smooth and reflects the light properly and is not dull and covered with an uneven coat of paint.

**Conditions for the visibility of lights**

Article 3.20
The visibility of lights is determined by their strength and by weather conditions.

Article 3.21
The equation set out in Annex 5 to the Navigation Rules on the Sava River Basin may be used to establish the minimum luminous intensity required to obtain the desired visibility.

Article 3.22
Since intensity of lights should be bigger for the colour lights produced by application of filters, the stronger source of light is needed. Table 2 shows intensity of source of light calculated for conditions of atmosphere under light haze:

\[^2\] The competent authorities may waive these requirements.
Article 3.23
As already pointed out in the first part - General - the colours of the lights shall, in principle, conform to the recommendations of the International Commission on Illumination (“Colours of light signals”, in ICI publication No. 22 (T.C. 1.6) 1975).

Article 3.24
Marking lights are fixed or flashing lights. The luminous range of flashing lights is less than that of fixed lights with the same luminous intensity. Flashing lights can nevertheless be seen more easily and attract the boatmaster’s attention more readily, especially when surrounded by lights of neighbouring localities.

Article 3.25
The duration of the flash of a signal light shall not be less than 0.5 seconds. Shorter flashes, even if they are frequent, are tiring the boatmaster’s eyes and hinder orientation. Long and infrequent flashes on the other hand also hinder orientation, since, while waiting for the next flash, the boatmaster cannot be sure that he is still proceeding in the desired direction.

Article 3.26
Details of the characteristics of signal lights used can be found in Annex 8 to the Navigation Rules on the Sava River Basin.

**Obligation not to hinder road and rail traffic**

Article 3.27
Signs and marking shall be installed in such a way that their lights do not hinder the movements of other modes of transport if the road runs close to the river.

Article 3.28
In a sector in which a road or a railway runs close to a river, the installation of all the above-mentioned signs and signals shall be carried out in consultation with the respective competent authorities.
Chapter 4

INSTALLATION OF SIGNS AND MARKING
IN CHARACTERISTIC SECTIONS OF THE RIVER

General

Article 4.1
Signs have two possible orientations, namely:

(a) parallel to the axis of the fairway;
(b) perpendicular to the axis of the fairway.

Article 4.2
Signs of type (a) are predominantly prohibitory or indicative signs, and are placed on the side of the fairway to which the prohibition or the indication applies.

Article 4.3
Most signs are positioned as described under (b), and generally do not apply to one side of the fairway only. These signs are erected at right angles to the axis of the fairway so that they are visible to a user when underway.

Article 4.4
The use of a particular sign or signal on the water or bank mark and how it is installed depends, on the one hand, on the local features of the river (speed of current, variation in levels, meanders, width of the bed, existence of sills, branches, islands, etc.), and, on the other hand, on the density of traffic in a given sector and the form and size of convoys.

Article 4.5
The position of each sign or signal on the water indicating the side of the fairway shall be determined on the basis of the marking installation plan based on the results of measurements. Depths within the limits of the width of the marked fairway shall under no circumstances be less than the minimum depth reported for the sector in question.

Article 4.6
When signs and signals are installed on the water, it is essential to take the direction of the current into account. If the current flows in the direction of an obstacle, the sign or signal shall always be placed a long way from the navigational hazard (obstacle); if, on the other hand, it flows in the opposite direction, the sign or signal shall be placed nearer.
Article 4.7
Bank marks, which are used in two-way navigation, should be oriented in parallel to the axis of the fairway. In some cases (better visibility) angle between the mark and the axis of the fairway can be 10° or less. (Figure 1, a signs ).

Article 4.8
Bank marks, which are used in one-way navigation, should be oriented perpendicular to the axis of the fairway. In some cases (better visibility) angle between mark and the axis of the fairway can not be less then 60° (Figure 1, sign c).

Article 4.9
Obstacles on the sides of the fairway are always marked with signs or signals on the water. When the obstacle is indicated by a single sign, it shall be placed on the downstream extremity of the obstacle, on the channel side (Figure 1, sign b).

Figure 1

Article 4.10
As a rule, lighted buoys or unlighted buoys shall be used to mark the upstream and downstream extremities of sills, banks that narrow the fairway, alluvial channels, banks protruding into the fairway, piles of stones, reefs, water supply engineering structures, and underwater hazards or obstacles (sunken vessels, anchors, etc.).

Article 4.11
Marker posts and spars shall be used as additional signs supplementing the buoys in order to give a clearer indication of the limits of the fairway over difficult sills and in order to mark the underwater obstacles. In some cases and in some sectors, buoys may be replaced by marker posts or spars.
Article 4.12
In order to avoid damage to buoys during the period when ice is carried down, they should be replaced by spars or marker posts.

Article 4.13
On the river sections with day and night navigation, forks, junctions and the centreline of the fairway, along with obstacles to navigation lying within the fairway, shall be marked by light buoys or bank lights. Signs and signals on the water shall be installed at such a depth and at such a distance from the obstacle that the safety and ease of movement of vessels shall be guaranteed at night and in poor visibility.

Article 4.14
On sections where the fairway is narrow, the preference shall be given to marks on the banks.

Article 4.15
Each sign or signal on the bank shall be established following the reconnaissance of the area and selection of the most appropriate site. The need to ensure the visibility of the sign whatever the level of the water should be taken into consideration.

Article 4.16
Where it is necessary to ensure the good visibility of the symbol on the sign over a long distance, both for vessels proceeding upstream and vessels proceeding downstream, two boards may be installed on the sign pole at an angle to each other, one pointing upstream and the other downstream.

Article 4.17
In selecting the site of a sign or signal on the bank, account shall be taken of the need to ensure the easy maintenance and to protect it against ice and flooding.

Article 4.18
Before a bank sign or signal is installed, the depth in the area in front of it and in the direction it indicates shall always be measured.

Article 4.19
As a general rule, the objective is that only the network of signs and signals on the bank shall provide an uninterrupted indication of the position of the fairway as a whole, while the signs and signals on the water shall help the boatmasters to determine the limits of the channel.

Marking of alluvial channels
Installation of cross-channel fairway signs and bank lights

Article 4.20
Cross-channel fairway signs and bank lights may be used in alluvial channels in order to indicate that the fairway crosses over from one bank to the other (signs featured in B.1, B.2, B.3, B.4 in Annex 8 to the Navigation Rules on the Sava River Basin).
Article 4.21
Alluvial channels are marked by bank lights and cross-channel fairway signs when the fairway is sufficiently broad, its safety is ensured, and when the direction only requires to be indicated approximately.

Article 4.22
Bank lights and cross-channel fairway signs shall be selected in such a way as to differentiate cross-channel fairways in terms of their length, in other words in terms of the distance between two neighbouring signs. The length of the cross-over is relative, since it depends on the width of the fairway.

Article 4.23
The cross-channel fairway signs and bank lights have best results on distances up-to 3km. On such sections cross-channel fairway signs and bank lights (without signs on the water) can be placed under conditions when the disposable width is more than two times bigger than the width of the fairway.

Article 4.24
If disposable width is less than double width of the fairway, cross-channel fairway signs and bank lights (without signs on the water) cannot be placed on distance larger than 1–1.5 km.

Article 4.25
If distance between two neighbouring cross-channel fairway signs is larger than calculated visibility, and when navigation line is passing nearby the bank, the bank lighted sign, which additionally marks the position of the navigation line, is placed between those two neighbouring cross-channel fairway signs (Figure 2, sign a).

Article 4.26
The bank lighted sign is also being placed when the fairway is passing nearby the bank (Figure 2, sign b).

Figure 2
Article 4.27
In case when the direction of the current makes the angle with fairway, when strong side winds or something alike occur, fairway can be additionally marked by navigation marks according to the local conditions (Figure 3).

![Figure 3](image1)

Article 4.28
If the fairway at longer transitions goes through the river centre or stingingly crosses from one to another bank, then cross-channel fairway signs (B.5, B.6), which better mark the transition, can be placed.

Article 4.29
The advantage is given to cross-channel fairway signs (B.5, B.6) in case of straight-line sections longer than 5 km, where disposable width is less than double width of the fairway. In that case and when the bank configuration allows so, the cross-channel fairway signs are placed on both margins of transition (Figure 4).

![Figure 4](image2)
Article 4.30
Cross-channel fairway signs (B.5, B.6) are also placed when certain obstacles to navigation or other hazards narrowing the fairway occur.

Article 4.31
On section where the navigation line re-crosses to the opposite bank immediately after transition to the opposite bank, three cross-channel fairway signs (the front should have two boards) are mandatory placed (Figure 5). In that case, lights of the back cross-channel fairway signs should be strictly directed to the fairway axis: one to upstream and other one to downstream.

Figure 5

Article 4.32
Due to accurate estimate of position of three cross-channel fairway signs longer than 4 km, special formula is applied.
Article 4.33

Interrelation of the front and back signs at hidden routes shorter than 4 km is presented in Table 3.

Table 3:

<table>
<thead>
<tr>
<th>L(m)</th>
<th>d(m)</th>
<th>h_o(m)</th>
<th>a(m)</th>
<th>2a(m)</th>
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<td>52.0</td>
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<tr>
<td>&gt; 4000</td>
<td>760</td>
<td>14.20</td>
<td>25.0</td>
<td>50.0</td>
</tr>
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</table>

L (m) – maximal distance when cross-channel fairway signs can be used;
d (m) – distance between front and back signs (is approximately \( \frac{1}{12} L \));
h_o (m) – height between lights of front and back sign;
a (m) – distance necessary for vessel to adjust the course if doesn’t go along the cross-channel fairway;
\( \alpha (\text{‘}) \) – viewing angle.

Table 3 is made under assumption that the observer’s sight is 5m above the water level, and light of the lower (front) sign is 8m above the water level.
Article 4.34
Value “a” describes accuracy of the route and it’s of significance while navigating through a narrow fairway. Accuracy is, in principle, increased by approaching the cross-channel fairway signs.

Article 4.35
Due to good recognition of cross-channel fairway signs and their lights by night, the viewing angle α (°) cannot be less than 4°.

Installation of signs and signals on the water

Article 4.36
In sectors of alluvial channels, where the channel passes along the middle of the river bed, or along the bank or passes slowly from one bank to the other, signs and signals on water are used to mark formations in the river bed or obstacles, both natural and artificial, on the sides of the channel (banks, shores, islands, stones, sunken vessels, wrecks of bridges, etc.), when these obstacles protrude into the fairway and reduce its width (Figure 6).

Figure 6
Article 4.37
These underwater obstacles are marked in sectors of alluvial channels by signs and signals on the water if, within the limits of width indicated above, the depth of water over such obstacles does not exceed the minimum depth reported for the sector. If the obstacle is not very wide a light signal shall be installed on the water on its upstream section. A marker post or a spar may be installed on its downstream section, depending on its length.

Article 4.38
The signs and signals on the water marking the underwater obstacles of considerable length are installed in such a way that the parts situated closest to the channel are marked by light signals between which unlighted signs are placed, thus enabling a given obstacle to be marked completely (Figure 7).

Figure 7

Article 4.39
In parts of the river bed where the shore opposite of the other one followed by the channel is bordered by an inshore bank, which favours upstream navigation in calm water, the bank is marked by signs and signals on the water independently of the width of the bed.

Article 4.40
In sectors of alluvial channels, the bank marking system in periods of high water generally remains the same as in periods of lowest water level, except in sectors where, when water levels are high, it is advisable to find another channel with better navigational features. In this case, the selected channel shall be marked appropriately.

Shallow water marking

Article 4.41
Same principle, as to other sections, according to which set of marks must ensure continuous marking of the fairway, shall apply to shallow water.
Article 4.42
Fairway in shallow water can be marked by cross-channel fairway signs, bank marks and signs and signals on the water.

Article 4.43
Alternately placed shallow water may also be marked by cross-channel fairway signs, with sufficient disposable width in which vessels are passing in straight-line (Figure 8).

**Figure 8**

![Diagram of waterway marking](image)

Article 4.44
Fairway passing over the shallow water is usually marked by signs and signals on the water (Figures 8 and 9).

**Figure 9**

![Diagram of waterway marking](image)
Article 4.45
If the fairway is passing between sandbars, which get deeply into the riverbed, in straight-line, it’s necessary to place at least two signs on the water on the entry and exit of such section: one on the top of the upstream and other one on the top of the downstream sandbar (Figure 10).

Figure 10

Article 4.46
If the fairway is curved in the section between sandbars, it’s necessary to place additional signs on the water (Figure 11).

Figure 11

Article 4.47
The additional signs on the water shall be placed on the entry and exit of rugged sections with sandbars, which also characterize the side streams.
Article 4.48
In case when application of cross-channel fairway signs is impossible, the fairway may be marked by signs or signals on the water, on one or both sides, depending on width of the fairway and hydrological conditions.

Marking of the vicinity of bridges and passages through bridges

Article 4.49
The navigation of vessels and towed or pushed convoys in the vicinity of bridges and through bridge passages requires particular attention and precautions on the part of boatmasters because of the narrow fairway. These sections must, therefore, be marked with the greatest care.

Article 4.50
The basic condition to be met to ensure safe passage through bridges is the marking of the direction of the fairway and also its sides, where necessary. Signs and signals on the water and on the banks may be used in addition to boards and lights for marking the navigable passage through bridges.

Article 4.51
The choice and positioning of the signs depends in each case on local conditions in the bridge section.

Article 4.52
The installation of marking signs in the vicinity of bridges and the buoys of navigable passages shall comply with the following conditions:
(a) In order to indicate permission to use the navigable passage of a bridge, only signs A.10, D.1 or D.2 in Annex 7 to the Navigation Rules on the Sava River Basin shall be used;
(b) The installation of marking signs shall be based on depth and current direction measurements, both in the immediate vicinity of the bridge and in the approach sections;
(c) The positioning of the signs installed in the vicinity of a bridge shall be modified in due course, as conditions of navigation change;
(d) If, when approaching the bridge or the navigable passage, the direction of the current forms an angle with the bridge, giving rise to eddies around the pillars of the bridge, the signs on the water shall be installed so as to indicate the direction of the eddies.

Article 4.53
Signs and signals may be installed on the water at the approach to the navigable passage to give an exact indication of the position of the channel.

Article 4.54
Examples of placement of the mentioned signs on the water or bank marks marking the section nearby the bridges:
(a) If bridge is in inflexion, the direction of vessels passing through the bridge passages may be marked by signs on the water (B.1, B.2 Annex 8 to the Navigation Rules on the Sava River Basin) (Figure 12).

**Figure 12**

(b) If, due to larger curvature of the fairway or some other reasons, marking by the afore-mentioned signs is not possible, signs and signals on the water (buoys, etc.), placed in order to follow the current, may be used (Figure 13).

**Figure 13**

(c) If the bridge is positioned on section where the current makes angle with fairway, marking may be done by two pairs of buoys upstream of the bridge. Pair of buoys closer to the bridge is placed on 100m - 200m distance upstream of bridge, and second pair on 400m - 700m upstream of bridge. Buoys more distant from the bridge are placed in order to follow the river flow jointly with the closer pair of buoys. Another pair of buoys may be placed downstream of bridge on 100m distance from the bridge (Figure 14).
Article 4.55
Where there is increased intensity of vessels’ traffic and the substantial accumulation of vessels in inner harbour basins of ports, not only signs and signals on the banks should be used in order to restrict the berthing places, but also signs and signals on the water.

Reference numbers on buoys and markers

Article 4.56
The use of alphanumeric characters and capital letters on buoys and markers is recommended. Where both letters and figures are used, their heights should be the same. Where two such combinations occur, as on junction markers, a hyphen should be used.

Article 4.57
Characters should not be less than 200 mm high, white on red or green buoys, or black on yellow buoys.

Article 4.58
The characters on a lighted buoy can be black on a white background. Signs are usually affixed to special nameplates. It is recommended that the characters are displayed on both sides of buoys.

Marking the dangerous places

Article 4.59
Different signs and signals on the water and bank marks, as well as the C.1, C.2 and C.3 bank marks, shall be used for marking the dangerous places (Annex 8 to the Navigation Rules on the Sava River Basin).

Article 4.60
Mark C.3 shall be placed on upstream and downstream part of the river island, which separates the riverbed into two navigable branches, as well as on the river-mouth of canals and navigable tributaries.
Chapter 5

INSTALLATION OF RADAR REFLECTORS
ON MARKING SIGNS AND SIGNALS

Article 5.1
Signs on the water and on the banks shall be equipped with radar reflectors to ensure their visibility.

Article 5.2
When marking signs equipped with radar reflectors are installed, account must be taken of the furthest distance between the vessel and the sign in terms of the perception of the sign on the radar screen.

Article 5.3
In order to ensure danger-free passage through bridges, buoys equipped with radar reflectors shall be placed on both sides of the passage, not less than 15-20 metres upstream and downstream from the bridge, or passages through bridges shall be marked with radar reflectors installed on the bridge itself. Every effort should be made to install them by means of supports on the framework of bridges to mark the navigable passage through the bridge.

Article 5.4
Navigational hazards and water supply engineering structures (sunken vessels, groynes, cross-beams, etc.) located in the river bed should also be marked by signs equipped with radar reflectors. If the groynes or cross-beams marked by radar reflector signals are located along one of the banks while the fairway follows the opposite bank, which is low and flat, the radar reflector signals may also be placed on that bank so as to facilitate the orientation of vessels navigating by radar.

Article 5.5
In general, when radar reflectors are used on marking signs and signals, the rule that these reflectors shall not modify the form or size of the sign or signal should be observed. Their colour shall also correspond to the colour of the sign or signal in question.

Article 5.6
Practical experience has shown that there is a need for, at least, two standard sizes of reflectors on buoys and markers. Recommended dimensions are as follows.

- type 1: tip to tip height 420 mm
- type 2: tip to tip height 800 mm

Article 5.7
The square plate referred to above has a hypotenuse of 300 or 565 mm respectively and sides of 210 or 400 mm respectively. The reflector should be placed in the lying position to maximize its reflectivity.
Chapter 6

IMAGE DISPLAY TECHNIQUES

General recommendations

Article 6.1

New image display techniques may be used subject to the following conditions:
(a) The technique must comply with the provisions of the Navigation Rules on the Sava River Basin;
(b) Deviation from the original colours is possible for some signs when implementing a new technique. This is dealt within the descriptions of the relevant signs;
(c) Because new display techniques sometimes make use of images composed of many pixels, special consideration needs to be given to image design;
(d) A general characteristic of the new display techniques is that the text and images can be controlled remotely; variable images are possible within a single display. Phantom effects, i.e. reflective effects and illusions caused by the incidence of sunlight, can be controlled.

Examples of the new Image Display Techniques are given in the Annex 2.
ANNEX 1

Measurements of boards for signs (example)

In principle, boards may be surrounded with a white strip 2.5 to 4.5 cm broad or a black strip 1.0 cm broad in order to improve the visibility of the symbols appearing on special bank signs.

In special cases, where the field conditions allow or demand it, the dimensions of the marking signs can be increased for max. 50% or decreased for max. 50% (locking aspect ratio).

Table 1 Dealing with the examples of marking signs showing their size and codes of the marking signs with the same size and complying with the provisions of the Navigation Rules on the Sava River Basin.

<table>
<thead>
<tr>
<th>Codes of the marking signs with the same size (120x100 cm)</th>
<th>A.1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>white strip 2.5cm:</td>
<td>A.1.</td>
</tr>
<tr>
<td></td>
<td>C.5.</td>
</tr>
<tr>
<td></td>
<td>E.1.</td>
</tr>
</tbody>
</table>

![Diagram of a marking sign example]
Codes of the marking signs with the same size (100x100cm)  

white strip 2.5cm:
white strip 4.5cm:  
E.2. E.5. E.5.1. E.5.3.  
E.5.4. E.5.5. E.5.6. E.5.7.  
E.5.8. E.5.9. E.5.10. E.5.11.  
no strip:  
B.1.  
white strip (only above and under) 3.0cm:  
B.3.  
B.5. (80x80cm and 100x100cm)  

Codes of the marking signs with the same size (100x100cm)  

white strip 2.5cm:
A.10.  
white strip 2.5cm and black strip 1.0cm:  
no strip:  
B.2. B.4.  
B.6. (80x80cm and 100x100cm)
# Codes of the marking signs with the same size (100x150cm and 150x100cm)

|-------|------|------|------|--------|

**white strip 4.5cm:**

|-------|------|------|--------|--------|

# Codes of the marking signs with the same size (200x100cm)

**white strip 4.5cm:**

<table>
<thead>
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<th></th>
<th>E.5.2.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rules for Waterway Marking on the Sava River Basin

Codes of the marking signs with the same size (axaxa=100x100x100cm)  

C.1.

No strip:

Diagram of a triangular marking sign with dimensions and angles as specified.
<table>
<thead>
<tr>
<th>Codes of the marking signs with the same size (100x35, 150x35 and 100x100x100cm)</th>
<th>Auxiliary Signs – Additional Panels</th>
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<td>![Black strip 1.5cm]</td>
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<td>black strip 1.5cm</td>
<td>![Black strip 1.5cm]</td>
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<tr>
<td>black strip 1.5cm</td>
<td>![Black strip 1.5cm]</td>
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<tr>
<td>Code</td>
<td>Examples of buoys for buoyage of channel limits in the waterway</td>
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<td>A.3.</td>
<td><img src="image3.jpg" alt="Bouy A.3 Diagram" /></td>
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Light guide technology

Light guide technology is mostly familiar from the matrix signalling devices positioned above roads. The images are displayed on lens arrays, linked by means of fibre optics (glass or plastic cable) to an optical device with, usually, a main and a back-up light. Every image is controlled from one or more optical devices. By switching the different optical devices on and off, different images, and therefore variable information, can be displayed.

Advantages:
- no mechanical/moving parts;
- low maintenance;
- high luminous intensity (adjustable);
- high-fidelity imaging;
- all-weather;
- socket can be located accessibly.

Disadvantages:
- relatively costly;
- limited number of images.

Light emitting diode (LED)

A LED is a small low voltage light source. Its visibility is limited by its angular aperture and the luminance of the LEDs. Images are made up of a large number of LEDs, each controlled separately. In other respects its properties are very similar to those of light guide technology.

Advantages:
- no mechanical/moving parts;
- low maintenance;
- simple control;
- high-fidelity imaging.

Disadvantages:
- limited range of display colours;
- light output affected by ambient temperature.

Electromagnetic segmented display

Any desired image can be displayed by reversing electromagnetic segments, one side of which is light and the other dark in colour. The angular aperture on these displays is wide, both horizontally and vertically.
Advantages:
- presentational flexibility;
- displays in all colours;
- easy to read;
- low energy usage;
- continues to display last image if power fails.

Disadvantages:
- displays must normally be kept in a conditioned cabinet because of moving parts;
- lighting required when dark.

Rotary drum display

Rotary drum displays are suitable for displaying regularly changing configurations.

Advantages:
- IWPR configuration can be accurately reproduced;
- displays in all colours;
- good visibility.

Disadvantages:
- mechanical parts, so maintenance facilities are necessary;
- number of images limited;
- lighting required when dark.

Moving screens

Moving screens can consist of a display with a large number of light dots (LED or bipolar segments), switched so as to form the arbitrary texts or diagrams. The text can also move, allowing a message of virtually unlimited length to be displayed.

Advantages:
- flexible, unlimited displays;
- no moving parts;
- all-weather.

Disadvantages:
- monochrome;
- relatively expensive.

Application: information on waiting times, operating times, etc.
DETAILED PARAMETERS FOR WATERWAY CLASSIFICATION ON THE SAVA RIVER
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,
Having regard to the European Agreement on Main Inland Waterways of International Importance (AGN), and in particular annex III thereof,
Believing that public authorities can contribute significantly to the development of the waterway of the Sava river through their engagement to the provision and maintenance of an appropriate waterway based on internationally agreed classifications and parameters,
In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin, Article 2 and 9 of the Protocol on the Navigation Regime to the Framework Agreement of the Sava River Basin, the International Sava River Basin Commission has adopted the following

**DECISION - 26/06**

on adoption of

**DETAILED PARAMETERS FOR WATERWAY CLASSIFICATION ON THE SAVA RIVER**

1. Text of the Detailed Parameters for Waterway Classification on the Sava River is attached to this decision as its integral part.
2. This Decision shall apply as of June 30, 2007.
3. Parties shall adopt the measures necessary to implement this Decision and notify the Commission.
4. This Decision shall be binding for the Parties 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 State.
5. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on December 15, 2006.
6. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
7. The Secretariat shall notify the Parties of the entry into force of the Decision.

Ref. No: 1R-2-D-06-20/1-3

*Zagreb, November 15, 2006*

[Signature]
Mr. Kemal Karkin
Chairman of the Sava Commission
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</tbody>
</table>

**Safety Clearances**

- Between vessel and bridge/powers lines
- Pushed convoys and barges

**Main Class Parameters**

- Pushed area
- Motor vessels and barges

**Sketched Classes**

- Importance according to UN/ECE (Geneva 1996)

**Detailed Parameters for Inland Waterway Classification - Sava Initiative**
DETAILED PARAMETERS FOR WATERWAY CLASSIFICATION ON THE SAVA RIVER

Annex 1: Classification enclosures

Figure 1. Cross-section and plan view of river bed and fairway in a curve for the appropriate case of passing by

- VPV – high navigable water level
- NPV – low navigable water level
- $B_{zav}$ – fairway width in a curve
- $B_L, B_D$ – lane width
- $S_L, S_B, S_D$ – additional width
- $\Delta b_1, \Delta b_2, \Delta b_1^1, \Delta b_2^1$ – vessel side-slip
- $b$ – vessel width
- $T_v$ – fairway depth
- $t$ – maximum draught
- $\Delta t$ – vessel skew
- $S_z$ – velocity submersion
- $\Delta$ – absolute reserve
- $H_{max}$ – vertical clearance under the bridge
- $B_{min}$ – horizontal clearance under the bridge
- $\beta_1, \beta_2$ – horizontal angle of vessel side-slip
Definitions:

Low navigable water level:
Low navigable water level of freeflow river at some water gauge corresponds to water level of 95% duration: \( \text{NPV} = V_{95\%} \) [cm or m.a.s.l.] and in any point of freeflow river it corresponds to level of water surface with discharge of 95% duration in a year. It is defined from statistical analysis of water level duration taking into account 25 years of observation. Traditionally it is used to define flow profile with low water level when navigation at small rivers is performed with reduced draught of proper vessel.

High navigable water level:
High navigable water level of freeflow river at some water gauge corresponds to water level of 1% duration: \( \text{NPV} = V_{1\%} \) [cm or m.a.s.l.] and in any point of freeflow river it corresponds to level of water surface with discharge of 1% duration in a year. It is defined from statistical analysis of water level duration taking into account 25 years of observation. Traditionally it is used to define vertical clearance under the bridges or power line/cables.

Water level with 65% duration: \( V_{65\%} \)
According to AGN [7, Annex IIIb] for every waterway class safety navigation should be guaranteed 240 days during the year for proper cargo vessel with maximum draught. This corresponds to 65% duration and could be presented with water level of 65% duration: \( V_{65\%} \).

Reduced draught
It is common to navigate when water level is lower than NPV. According to AGN [7, Annex IIIb] navigation at international E waterways (IV. to VII. class) principally should be provided during whole year except ice period. This means it should be provided during the water levels lower than NPV but reduced draught of 1.2m is permitted.

\( \Delta t \) – vessel skew is statical submersion of bow or rudder (it is disregarded at longway axis of vessel) and adopted value is 0.1m.

\( S_z \) – velocity submersion is consequence of wave system of bow or rudder, vessel streaming velocity, size and form of vessel or convoy, wet area of vessel or convoy, or restricted of waterway and adopted value is 0.2m.

\( \Delta \) – absolute reserve is always free water between hulk and river bed where navigation has never been performed or never been used in some other way and adopted values are: for classes I–IV = 0.4m, for class V = 0.4m, for classes VIa and VIb = 0.5m and for classes VIc and VII = 0.6m.

Small radius categories:
- \( R_{\text{min}} \) [m] - minimal radius of river bed axis in curve and
- \( R_{\text{izn}} \) [m] – special radius of river bed axis in curve.

Minimal radius of river bed curve is the smallest radius of river bed axis that allows undisturbed two-way navigation on low navigable water level.

Special radius of river bed curve is 25-30% [9] smaller than minimal. It is not defined generally but in practice it is still used at river sectors when it is not possible to apply minimal due to some terrain and urban problems. In that case it is applied bigger width of river bed than minimal one calculated for minimal radius.
Navigation lane
It is part of fairway at which navigation of vessel or convoy is performed permanently i.e. a part of water surface that vessel or convoy can achieve during the navigation concerning its width, side-slip in curve or wriggle at stream.

Fairway
Fairway is imagined rectangle in a river cross-section in which navigation is permanently performed i.e. a part of a river cross-section that vessels or convoys could achieved during the navigation concerning width and depth. Horizontally it is defined with fairway lane and security widths. At one direction fairway consists of one fairway lane and security widths. Vertically it is defined with vessel draught, vessel skew and velocity submersion of vessel or convoy that occur during navigation.

Clearance under the bridge is free space between fairway and bridge (Figure 1.). Vertically it is space between water surface and bottom edge of bridge construction and horizontally it is space between inner side of river pier fundament. Here will be defined clearance under the bridge as imagined rectangle defined with width $B_{\text{most}}$ [m] and height $H_{\text{most}}$ [m] as minimal clearance under the bridge for every class of waterway. It contains extra space that vessel can not achieve neither concerning the width nor height. During two-way navigation under the bridge it is reduced at one direction due to security of bridge construction but river bed width is not reduced.
CLASSIFICATION OF THE SAVA RIVER WATERWAY
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,
Having regard to the European Agreement on Main Inland Waterways of International Importance (AGN), and in particular Annex III thereof,
Believing that public authorities can contribute significantly to the development of the waterway of the Sava river through their engagement to the provision and maintenance of an appropriate waterway based on internationally agreed classifications and parameters,
In accordance with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement on the Sava River Basin and Article 9 Paragraph 2 of the Protocol on the Navigation Regime to the Framework Agreement on the Sava River Basin, the International Sava River Basin Commission (hereinafter: Sava Commission) on its IX Special Session held on April 07-08, 2008, has adopted the following

DECISION – 19/08
on adoption of
CLASSIFICATION OF THE SAVA RIVER WATERWAY

1. By this Decision, the classes of the Sava River Waterway shall be defined in accordance with the Decision 26/06 on Detailed Parameters for Waterway Classification on the Sava River of the Sava Commission adopted on its II. Regular Session held on November 15, 2006.
2. The classes of the Sava River Waterway shall be established as given in Annex I to this Decision presenting its integral part.
3. Considering the international status of the Sava River waterway, the Parties to the Framework Agreement on the Sava River Basin shall pursue, within their possibilities, to undertake measures in order to reach the waterway class IV minimally on the Sava River waterway.
4. Parties shall adopt the measures necessary to implement this Decision and notify the Sava Commission.
5. This Decision shall be binding for the Parties 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 State.
If 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 State, the Sava Commission Secretariat shall, thereof, inform all other Sava Commission members.
6. If no member withdraws his vote nor informs the Sava Commission that the Decision is subject to the approval of the relevant authority of his State, the Decision shall enter into force on May 8th, 2008.
7. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
8. The Sava Commission Secretariat shall notify the Parties of the entry into force of the Decision.

Ref. No: 1S-9-D-08-5/1-3
Zagreb, April 8th 2008

Mr. Kemal Karkin
Chairman of the Sava Commission
## Annex I

Table 1. Classification of the Sava River Waterway:

<table>
<thead>
<tr>
<th>Section of the Sava River</th>
<th>Length (km)</th>
<th>Waterway Class</th>
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</tr>
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</tr>
<tr>
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<td></td>
</tr>
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</tr>
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<tr>
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<td>Kalovica</td>
<td>III</td>
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</tr>
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</table>

* Difference of 4km of the marked and the actual mileage is a result of two doubled kilometre signs (kilometres 206 and 207 on the river are twice marked) and the newly designed waterway.

Remarks:

1. The river mileage in the table is referent and names of settlements are used illustratively.
2. The river mileage from 0,0 – 209,5 is defined based on the newly designed waterway and there are discrepancies from the kilometre signs in the field.