

Safely navigating the rivers “IJssel” and “Zwarte Water”

Dear Dorestad 2024 participants,

During the upcoming Dorestad Raid we will sail on the rivers “IJssel” and “Zwarte Water”. On these rivers we will encounter commercial vessels such as inland waterway barges and ferries and possibly also fast going motorboats. By means of this letter, the organization wants to provide more information to ensure the safety of all.

First some numbers: in 2020 there were 11,000 commercial shipping passages at Kampen on the river “IJssel” (total commercial traffic in both directions). The numbers will not be very different at Deventer: there are 2 larger canals having a connection to the “IJssel”: at Zwolle (ending in “Zwarte Water”) and Zutphen (“Twentekanaal”). “Twentekanaal” is quite busy with commercial traffic and half of the shipping traffic on the upper part of the “IJssel” goes in the direction of “Twentekanaal”. Shipping traffic coming onto the “IJssel” at Zutphen mainly turns upstream again in the direction of the “Rhine” (which makes sense for transport to Rotterdam or Germany).

This means approximately 35 inland waterway barges per day on the stretch of the river “IJssel” where we will be sailing. Not huge numbers, but we need to consider commercial shipping during the sailing as to safely negotiate the river. On “Zwarte Water” the number of commercial vessels is much lower, but there may be some fast going motorboats.

Lastly kindly note that the river “IJssel” is quite narrow between Deventer and Zwolle, a lot narrower in comparison to the stretch of river between Zwolle and Kampen. So it will be more difficult to tack upwind and there is more current (on average 4 km/h at Deventer and 3 km/h at Zwolle – the actual current will depend on the actual water level).

What do we expect from the participants:

1. Look far ahead and behind you! Be constantly aware of all traffic on the water in both directions. Think ahead how other traffic moves on the water and take this into account as you plan your manoeuvring.
2. Please note the following regarding inland waterway barges:
 - They go faster than you think, about 20 km/hour when there is no current. With the current, such a ship may sail at 25 km/hour!
 - The view forward from the bridge of a barge is often limited (if you sail close to the bow of a barge, you are not visible to him).
 - An inland waterway barge cannot stop and manoeuvre quickly.
 - Keeping sufficient distance from a barge is important because of the considerable suction effect that can occur when the barge passes you.

Always give commercial shipping way (they have priority) and keep sufficient distance! Take the type of ship into account: a ferry will cross the waterway while a barge may want to take the inside bend of the river.

This document mainly discusses the situation of a small ship sailing downstream, which is the situation we will encounter on the “IJssel” and “Zwarte Water” as we sail on these rivers.

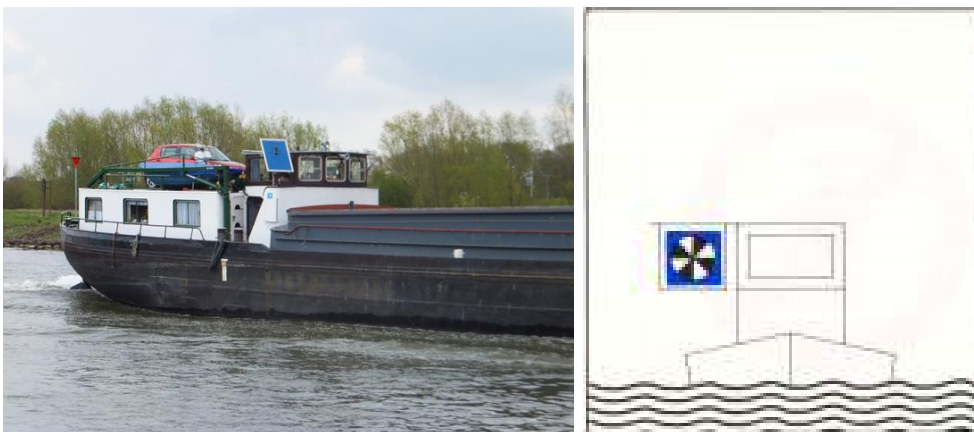
Small ship = a ship having a length < 20 meters, our sail & oar boats!
Large ship = any ship not being a small ship

The basic rule is that oncoming ships on a river keep to starboard and pass each other port-to-port (the same of course applies to every channel and every canal).

However, this can be problematic for a barge going upstream on a flowing river in a left bend because it would then have to take the outer bend of the river where the current is strongest (which costs speed and extra fuel). In turn, a barge going downstream often wants to take the outer bend of the river when turning to the right to take advantage of the stronger current (in addition, the outer bend of the river is often deeper than an inner bend).

In such case, a barge can indicate that it wants to keep to port, which a ship coming from the other direction must also do. In that case the ships pass each other starboard-starboard, i.e. on the "wrong side"!).

The barge sailing upstream indicates its wish to take the inside bend of the river by showing the "blue sign" with a white flashing light (see the illustrations below regarding the placement of the sign). The barge sailing downstream must follow by leaving sufficient space in the bend and showing that it has understood by also placing the blue sign. The barge sailing upstream must leave sufficient space (on starboard) for the barge sailing downstream as to safely pass each other keeping the other barge to starboard.



Sailing downstream in a small ship with a downstream sailing barge overtaking you

If an inland vessel approaches you from behind, you have the following options:

- It is safest to sail outside the channel, as inland vessels do not enter there. There is often more space outside the channel in the inner bend of the river: the current makes it deeper in the outer bend and that is where the channel will run.
- Keep as much as possible to starboard in the channel (if possible, preferably outside the channel, see the point above).
- If there is little space, shoot between the breakwaters and use the reverse current between the breakwaters (see point 8 below) to sail briefly upstream so that the barge can pass quickly and safely.

Sailing downstream in a small ship with an oncoming barge sailing upstream – refer to illustrations 1 and 2 below

An upstream sailing barge must leave a enough space for the downstream sailing traffic on the river. Such suitable space may be either on port or starboard of the upstream sailing barge.

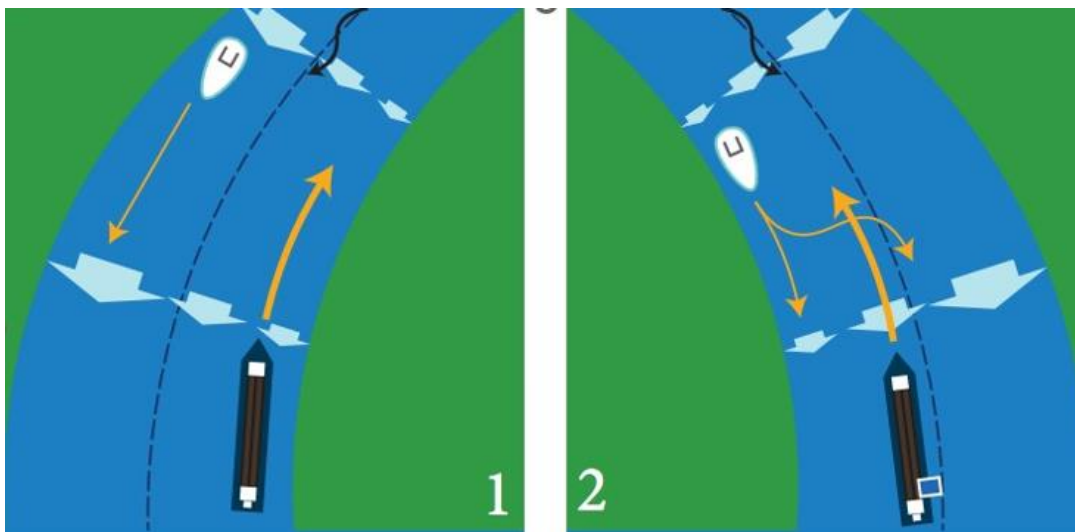
As a small ship, in most cases it is best to change course to port with an approaching oncoming barge showing a blue sign and meet it "starboard-starboard" (you will be meeting the request from the oncoming barge and as such it is a predictable course of action). Pay close attention to ships however that may approach you from behind with more speed. If the barge does not show a blue sign, pass the barge on the portside of it.

Sometimes the approach leaves sufficient space on both sides for a small ship sailing downstream. Then you can choose to pass the barge "port-port".

Sailing at a third of the total channel width measured from the starboard edge of the channel is recommended, because from that position you can make the right decision most quickly: move to starboard or to port.

Should the sailing large ship:

- give one short blast on its horn, then passing must be done port side to port side.
- give two short blasts on its horn, then passing must be done starboard to starboard.



3. Leave sufficient space to manoeuvre. Otherwise, changing direction will become impossible at some point...
4. Make sure that the oars/paddles are ready for use. When there is little wind, this is sometimes the only option to get to a safe spot on the water quickly.
5. Timely put in a reef in strong winds. Righting a boat after a capsize and getting it ready for sailing again is a lot more difficult on a river because of the current and because the available space is limited (narrow waterway).

6. Make sure that barrels, bags, oars, paddles, the rudder, etc. are duly secured to the boat! Anything not tied to the boat will float away in the event of a capsize.
7. Take the current into account: it will be stronger in the outer bend of the river.

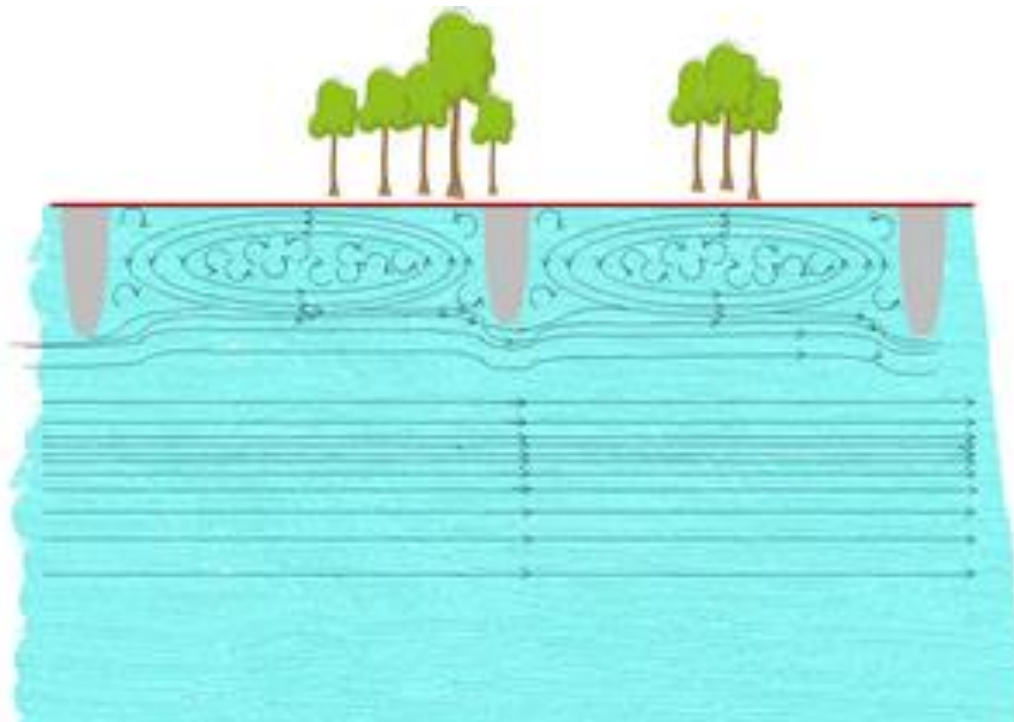
With little wind it is often difficult to manoeuvre: you are floating down the river due to the current but it may be difficult to steer not having sufficient waterflow over your rudder.

Furthermore, pay close attention to the current when you enter a side water so that you are not put on the bank (often lined with boulders)!

8. A counter current is a vortex or eddy located downstream of a breakwater in a river.

At the end of a breakwater, vortices are formed again and again, which detach and are carried along with the current. You can use such a counter current, for example if you have to swerve to let an inland vessel pass.

Remember that it will be shallower between the breakwaters than in the channel! At high tide, a breakwater may be (partially) submerged.



9. When tacking up river (this of course also applies to canals) you must take even more account of traffic on the water. Indicate to other traffic in a timely manner what you plan to do through your actions (so your sailing movements should be predictable). You can do this by, for example, not sailing all the way to the other side of the waterway, but rather tacking early so that other traffic knows that they can continue on their way because you leave room for them.
10. You are of course safest outside the channel where you have right of way as a sailing vessel.

11. Obviously observe all (other) applicable rules and regulations.

12. Show good seamanship where required: do anything required as to avoid dangerous situations, also when you do have right of way.

Kindly contact the organising committee of the Dorestad Raid if you have any questions or talk a raid boat skipper who has experience sailing on rivers.

Yours sincerely,

Stichting Natuurlijk Varen