BICS or Electronic Declaration of Ship, Voyage and Cargo Data

BICS stands for Binnenvaart Informatie en Communicatie Systeem (inland shipping information and communication system). This electronic system was developed in 1996 by the Zeeland Directorate of Rijkswaterstaat (the Dutch ministry of public works). It is used to transmit data about transported cargoes and voyages of ships easily and rapidly by PC and GSM mobile telephone from the ship or the quay to the various inland waterway authorities (in the Netherlands these are Rijkswaterstaat and a number of provinces) and port authorities. These bodies need adequate information to ensure prompt and safe handling of inland shipping. Moreover, in emergency situations they must also be able to determine immediately whether, and if so what, dangerous cargo may be involved, such that prompt action can be taken to protect people and the environment.

Recently a newer version of BICS has been released, so we strongly advice users to install the newer version (this and older versions will be phased out). See "Requesting BICS [1]" for the procedure how to obtain the latest version of BICS.

In the Netherlands this information from BICS is usually transmitted to the inland waterways management system IVS90 [2] by VHF radio or telephone or fax.

BICS makes this exchange of information faster, more reliable and strictly confidential. No sensitive private or business information needs to be exchanged via open links; the VHF radio channels will soon return to being the province of purely nautical, work and social communications.

After an extensive trial, at the end of 2000 more than one thousand Dutch and foreign inland ships applied for and received the BICS software.

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More overall information about BICS classic is available in this [BICS folder][3].

**How does BICS (classic) work?**

When BICS is installed, the standard details of the ship (name, dimensions, type and official ship's number) are defined in the program.
BICS contains the names of all loading and unloading points, all cargo types and the precise names of, and indication of the risks associated with, each dangerous substance that is allowed to be transported over water. Misunderstandings due to writing errors, unintelligibility or language problems are thus excluded, making the system very user-friendly. It is therefore only necessary to enter the variable information for each voyage, e.g. port of departure and destination, type and amount of cargo, draught and number of persons on board. All that has to be done is select the appropriate entry from a list of standard options by clicking it with the mouse.

![Example of a BICS screen with dangerous cargo](image)

**International allure**

The latest version of the BICS software gives the user a choice of four languages on the displays and in the data files.

The languages are Dutch, German, French and English. After all, a wide variety of nationalities are represented in the crews of the ships that ply the Dutch inland waterways. The same applies in the other countries in the European network of inland waterways. The fact that the software comes in a four-language version makes it easier for these countries to adjust BICS or a similar program of their own to their own territory. And, of course, it facilitates international communication between the (waterway management) systems of each country.

In its short existence, BICS has already gained acceptance as the international standard for the exchange of electronic information between ships and waterway and port managers. Germany, France and Switzerland have taken over BICS in its totality from the Netherlands for the Rhine (where the MIB system is used), and Austria has done the same for the Danube. In late 2000,
Belgium was developing a system of its own that will make use of the internationally recognized protocols developed for BICS.

Also in late 2000 the national French waterway manager, Voies Navigables de France (VNF), decided to modify BICS for ships' declarations.

Above all, the VFN also wants to use BICS for billing the navigation rights, in view of the fact that the nature of the French waterway network and locks is such that there is no waterway management system requiring available as yet.

The ultimate aim is for the BICS standard to apply throughout Europe. For a voyage from Rotterdam to Giurgiu in Romania or from Hamburg to Sète on the Mediterranean Sea, the data would then only have to be declared once - on departure. During its voyage the ship would only have to identify itself briefly (usually by VHF radio) as it nears a traffic post, lock, bridge or port.

**What else can BICS do?**

The biggest change relative to the earlier versions is that BICS is linked to the Berichten Ontvang Service (BOS) [notice reception service]. Once the user has entered the voyage data and clicked the green button on the screen, this function is automatically activated as soon as contact is established between the ship and the central BICS mailbox. BOS then ensures that the onboard PC receives the shipping reports and the water levels of -optionally- the Rhine, Maas and Danube and presents them neatly on various screens. The Berichten Ontvang Service software can classify, sort and carry out other similar operations on simple reports. Various reports can also be selected and printed.

The **BOS-function** can also be used on its own to look up the water levels and shipping reports, for example when a ship is stationary during loading or unloading or on a free day when no voyage data have to be transmitted to the waterway manager. It is only necessary to click on the green button and to establish contact for a few seconds.

BICS can communicate easily with other nautical software packages marketed by independent software developers.

**A few examples:**

Users on container ships with BICS can enter the loading data provided by shippers. The onboard PC can process the data with commercially available stowage programs to prepare an optimal stowage plan for each voyage. And since Rijkswaterstaat's own BAS program (Berekening en Analyse van de Seinvoering) [calculation and analysis of signaling] is integrated, it is only necessary to press a button to determine whether it is permissible to transport the offered dangerous cargo by water and if so what signals have to be carried.

BICS can also exchange data fully automatically with PC Navigo, which is a commercially developed voyage planner for the inland shipping sector. The master no longer has to enter the type and quantity of cargo, the draught and the route to the unloading point into both BICS and the voyage planner. The voyage planner takes this information from BICS. It might make use of, for example, the draught in combination with the maximum height of the empty vessel from its own memory, and then automatically show whether the voyage by the planned route is feasible or, if not, which alternatives there might be. An improved ETA is sent back to BICS. The Tempomaat program also exchanges data with BICS in order to economize on fuel consumption and/or automatically control the ship's engines.

Discussions are being held about facilitating similar interfacing with specific programs used in the tanker sector. Depending on the sort of cargo and the permissible draught to the tanker's destination, these programs calculate the loading levels of each tank. If this could be done using data that is also needed for BICS, there would be no necessity to enter the information twice.
The latest BICS version includes a few new functions such as the resend button to enable a message to be sent again and a button to enable a number of intermediate points (VIA points) to be specified. It is also now possible to enter a billing address. At present these last two functions are only of relevance for ships that use BICS in France.

The BICS software enables the user to keep a simple voyage and cargo journal, build up a company archive and conveniently print out a complete transport document.

Each user thus has an e-mail address. This can be used for informing BICS users about changes, additions, etc. It can also be used to send messages to other BICS users or the Internet addresses of friends, acquaintances, relatives, etc.

A link from BICS to CBS automatically provides the returns for economic statistics, such that the master is relieved of this monthly duty.

BICS can also be used by on-shore groups (shipping companies, shippers and charterers). They can forward a ship's data to the waterway manager or to look up the position of a ship (provided the owner has given permission) in the IVS90. The latter is an aid to logistical planning, certainly for just-in-time transport, and can improve a ship's turnaround.

What does it cost?

Rijkswaterstaat supplies all BICS software (including the e-mail package and BOS) free of charge.

The transmission of the voyage data by GSM mobile telephone in the Netherlands to the 0800-number of the central BICS mailbox in Rotterdam is also free of charge. In other countries these costs depends on the provider in that country.

Telephone call charges are payable for messages to the MIB in Germany. This also applies to transmission using mobile Internet (GPRS/UMTS), costs depends on your provider.

The same applies to calls to the BICS help desk, which should be contacted when program problems or errors are encountered or simply when the user has any questions about the installation or functioning of the program. The BICS help desk registers all reported errors, so that improvements can be carried out as soon as possible.

This Web site also includes a number of FAQs and useful tips and tricks (see Doc section). They have been compiled partly on the basis of the contacts between the help desk and BICS users.

BOS or Shipping Reports and Water Levels via BICS

BICS classic users are given free software with which they can receive water level information and shipping reports on a daily basis with the help of the BICS communication module. The software from the Berichten Ontvangst Service [notice reception service] provides a nice new abbreviation -BOS - and, above all, makes valuable information accessible on board. At present the Berichten Ontvangst Service offers four options: shipping reports, and the water levels in the river basins and tributaries of the Rhine, Maas and Danube. After the software for the Berichten Ontvangst Service on the onboard computer has been activated and a period of time agreed with the help desk has elapsed, the chosen reports can be daily downloaded automatically or by pressing a button.
As well as (international) shipping reports, the user can look up the water levels in a number of European river basins. BOS was made possible by the cooperation of two Rijkswaterstaat services. The Infocentrum Binnenwateren [inland waterways information centre] of the RIZA [government institute for the purification of wastewater] collects and distributes the reports, while the owner/operator of BICS, makes the communications network available.

With the release of the new BICS version 5 [4] this BOS services will be stopped! Users can now lookup the information 'online' via the website: http://www.vaarweginformatie.nl [5].

Applying for BICS obtaining the latest version

The older (classic version 4.xx) of BICS is not available anymore. BICS users can apply for the newest BICS version [4] using the request forms on this website.

More information about the request procedure to obtain BICS, can be found in the section "Requesting BICS [1]" on this website.

BICS (classic) documentation

In this section you can find the (older) documentation, regarding the BICS classic versions (v4.xx and older).
White papers and other technical documents

BICS version 4.xx. and older:

- BICS installation instruction [21]
- Reporting a voyage using BICS [22]
- Electronic reporting duty and BICS [23]
- Reporting container cargoes [24]
- Checking voyage report submission by BICS [25]
Questions or want other information, please contact the BICS Helpdesk [26].

Do you have additions or other ideas? Please send us (BICS Helpdesk) an email [27] or use the complaint form in the section "BICS requests [1]".

Source URL: https://www.bics.nl/?q=en/node/100000091

Links
[1] https://www.bics.nl/?q=en/node/100000040
[14] https://www.bics.nl/sites/all/files/docum/Privacy%20regulations%20RWS.PDF
[26] https://www.bics.nl/?q=en/node/100000039
[27] mailto:helpdesk@bics.nl?subject=BICS%20Classic