

NOTE ABOUT THE USE OF FAIR SHEETS AT THE 'PORT AUTONOME' OF BORDEAUX

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1. — DATA COLLECTION AND PROCESSING; DISTRIBUTION OF FAIR SHEETS

The Gironde estuary is entirely covered by a radiopositioning system which allows precise positioning (Syledis system; seven shore beacons) and by a telemetric network of tide stations (eight tide stations and a central station for data acquisition and re-broadcasting).

Data are collected onboard hydrographic launches by the automatic acquisition and computer assisted navigation equipment commonly used nowadays. Once the sounding is completed, data which are stored on magnetic medium are transferred to the fair sheet plotting center.

Data are processed with the participation of the hydrographer in charge of the field survey operation. Having compared digitized data with the echogram (to eliminate false echoes and define the processing parameters), data are processed and the fair sheet is plotted.

The fair sheet is checked by the Head of the Hydrographic Service, then approved by the Director of Management or his deputy.

Immediately afterwards, the sheet is distributed to the services which are going to use it, i.e:

- piloting,
- Harbour master's office (in charge of the docking of ships and of the policing in the channel),
- dredging,
- hydrography and studies,
- aids to navigation.

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2. — CONSULTATION BETWEEN THE SERVICES USING THE FAIR SHEET

In order to obtain maximum benefit from the fair sheets and to ensure a good coordination, very frequent meetings of the concerned services take place, under the authority of the Director of Management or his deputy.

In addition to the services mentioned above, the maritime electronics service participates, if necessary, in these meetings.

Consideration of the fair sheets and discussions between services lead to the realization of the following objectives:

2.1 As regards navigation

Define the maximum draught of vessels allowed to navigate in the channel during the period taken into consideration.

2.2 As regards dredging

Define the sites to be dredged during the selected period. These sites are listed according to priority and taking into account shoals or critical areas detected by the survey, on the one hand, and the main evolution trends of the channel on the other hand; being known, these trends enable to plan in which area preventive dredgings may be necessary (example: studies have shown the relevance of work in the downstream part of the Gironde estuary at the end of autumn).

2.3 As regards aids to navigation

Decide which buoys have to be moved in order to follow the changes of the plotted channel if, after joint analysis, that solution for maintenance of the channel seems to be less expensive than a dredging operation. During these meetings the aids to navigation service may also coordinate with pilots about modifications to be made or about the maintenance of the maritime signalling, for example:

- pilots report on extinguished buoys or the reduced range of a light,
- the aids to navigation service proposes to pilots a change in the aids to navigation.

2.4 As regards hydrography

Define the schedule for deployment of hydrographic launches according to priorities:

- follow up of critical areas in the case of an unfavorable evolution (important for the safety of navigation),
- control of the dredging sites defined in 2.2. This control (usual with all dredging firms) is extremely important to optimize the action of the dredger on the site (to avoid useless over-dredging or, on the contrary, to miss the shoals),
- seasonal sounding programme related to the major natural changes, and general surveys (once a year).

2.5 As regards studies, hydrography and dredging

Check the fair sheets and organize joint discussions for a better understanding of natural phenomena, which is extremely important for:

- the improvement of dredging productivity (maximum use of natural phenomena; development of preventive dredgings),
- the annual survey programme.

At the end of each meeting the following points are decided for immediate future:

- the maximum draught of vessels allowed to navigate in the channel,
- the programme for the use of the dredging, sounding and aids to navigation equipment.

In addition to periodical meetings, the services have frequent bilateral contacts which take place when required. For example, if the head of the dredging service requests a survey on a dredging site, he will review the fair sheet jointly with the head of the hydrographic service as soon as it is plotted. Afterwards, he will instruct the master of the dredger how to continue with his work.

As a conclusion, the management and exploitation of the harbour approaches are highly multi-disciplinary activities; optimum use of available means can only be reached through close and frequent consultations of the various services concerned, using the most recent soundings.

In this respect, the example of the port of Bordeaux is interesting: in ten years, the draught of the larger vessels admitted upstream of the estuary increased by one metre while the dredged volume was reduced by 30%.