Chapter 15

A Regional Vessel Traffic Service for the North Sea

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This chapter is concerned with the role which Vessel Traffic Services (VTS) may have in minimizing ship-source pollution and, in particular, how VTS support to the cause of environmental protection of the North Sea could be enhanced through the provision of a regional traffic service.

A VTS basically functions as an information exchange and management system. It involves, to a greater or lesser extent, communication between the ship and the shore-based traffic monitoring station, thus enabling the latter to provide navigational assistance and to organize vessel movements to the benefit of safety and/or smoother traffic flows in the VTS area. A useful analogy to draw upon is the (more elaborate) system offered by Air Traffic Control (ATC). Essentially this consists of the following two elements: (i) permanent radio contact between the aircraft whilst en route and the ground traffic control centre; (ii) radar coverage from the ground of a clearly defined area, that is the airspace above the airport and the approaches to it.

More developed VTS schemes may operate with shore-based radar to ensure continuous monitoring of, for instance, traffic with noxious or dangerous cargoes or ship movements in navigationally difficult areas such as high-density traffic zones, narrow channels, tidal waters, environmentally sensitive seas, etc. However, this is not to say that radar-assisted surveillance of the VTS area is essential. A VTS can work effectively on the basis of communication and ship reporting alone, which can be done through VHF radiotelephone and telex, provided there is full co-operation of the vessels within the area of coverage.

In North-West Europe alone there are well over sixty VTS schemes most of which are operated by port authorities. Some of these schemes reach well beyond the immediate port area, including, for instance, the approaches to a seaport. The Port of Rotterdam’s VTS system thus covers the Eurochannel, a deepwater access route to Europort, extending some 50 nautical miles out to sea. Another example of VTS operations reaching into the open sea concerns the German Bight area, which is monitored by the river port VTSs of Bremerhaven (Weser), Wilhelms- haven (Jade) and Cuxhaven (Elbe).
In the case of a river port, the VTS may cover the narrow upper reaches of the river towards the port's docks as well as the estuarial (downstream) area. Examples of this comprehensive type of river port VTS system are the recently upgraded Antwerp (River Scheldt) and Bremerhaven traffic control systems, following completion of an additional chain of inland radar sites along the river banks.

Designated coastal VTS systems are relatively rare. The most well known one worldwide is the joint Anglo-French scheme giving radar coverage of the Dover Strait and, on the French side, also the English Channel. Another VTS specifically covering coastal, as opposed to port, waters is the scheme with radar coverage operated at Aarhus, Denmark which monitors the entrance to the Baltic Sea.

The concept of a regional VTS system is based on the principle that upon entering a particular maritime region, a ship in transit through that region and which does not intend to make a port call, needs to communicate its particulars only once, that is to the nearest VTS station. It then is the latter's responsibility to relay this information to VTS centres located further along that ship's route. Thus, a regional VTS operates primarily on the basis of a shore-to-shore, as opposed to ship-to-shore, reporting system. It has the dual advantage of minimizing interference with the ship whilst permitting the ports and coastal states concerned to have an overall picture of ship movements in areas of interest to them. Should the transiting ship decide to visit a port in the region, it would of course need to inform that port accordingly upon entering its approach but if the regional VTS operates effectively and efficiently, this report could be kept to the minimum. Similarly, upon exiting the region the ship should only have to worry about supplying basic information to the nearest reporting point.

The North Sea constitutes a particularly sensitive area in terms of its vulnerability to ship-generated pollution. This has led environmental pressure groups such as the Netherlands North Sea Working Group and the Friends of the Earth International, through their consultative status at the International Maritime Organization (IMO), to advocate the establishment of a regional VTS system. Such a system could be operated on the basis of harmonized procedures for ship-shore communication, complemented by systematic data exchange between individual VTS centres. In special circumstances such as those involving larger ships or vessels carrying dangerous cargoes, and where required for the safety of traffic, the introduction of certain mandatory VTS measures such as compulsory ship reporting requirements may be contemplated, subject to such action being in accordance with international law and taking account of financial feasibility (e.g. policing costs).

However, other interest groups, particularly shipowners, have maintained that the need for regional VTS has not been established. In their view, the results of the Europe-wide COST-301 studies on shore-based aids to maritime navigation have

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1 COST stands for European Co-operation in the Field of Scientific and Technical Research. The COST-301 project concerned an action research programme on Shore-based Maritime Navigation Aid Systems which was carried out over a period of three and a half years (1983–1986). Conducted with the approval of the European Community's Council of Transport Ministers, it involved fourteen European countries (i.e. all maritime states of the EC except Portugal, plus Finland, Norway, and Sweden). The final COST-301 report was formally approved by the participating maritime authorities in spring 1987.