

GERMANY

Germany

Germany lies at the heart of Europe. It is bordered on the north by Denmark, on the west by The Netherlands, Belgium, Luxembourg and France, on the south by Switzerland and Austria, and by the Czech Republic and Poland on its eastern border. Only in the north there is a comparatively short coastline (including islands) of 1 838 km, and a maritime area of 57,000 km² in the North Sea and Baltic Sea. This can be compared with a land area of 357,000 km² and a population of 79 million.

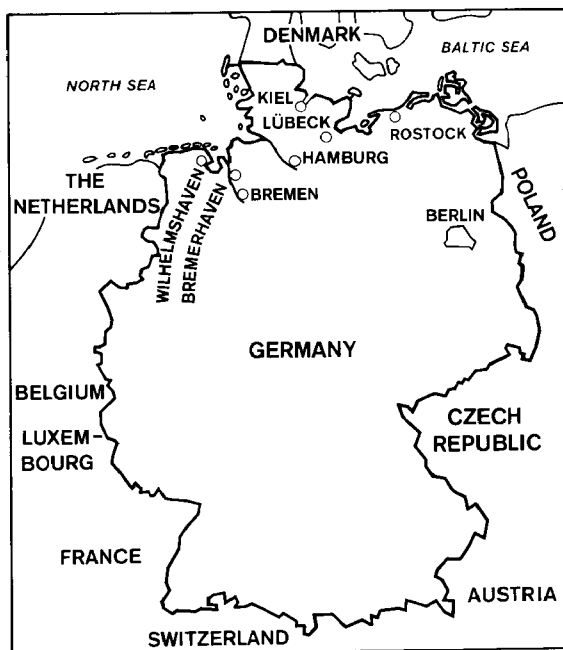


FIG. 1.- Germany.

Germany claims a territorial sea of up to 12 miles in the different parts of the North Sea and the western Baltic Sea. The biggest German ports are Hamburg, Bremen/Bremerhaven, and Wilhelmshaven on the North Sea side; Lübeck, Rostock and Kiel on the Baltic Sea coast.

The geography varies from the flat coastal marshlands in the north, typically below sea level on the North Sea coast, over hilly central areas to the Alps in the south. Approximately one third of the land area is used for agriculture which mainly supplies the home market. The main mineral resources are coal and iron ore. German industry is highly diversified and about half of its production is exported. The merchant marine, including the fishing fleet, consists of about 900 vessels with a total tonnage of 5.4 million GRT. The growing fleet of pleasure craft is now estimated at more than 100,000 boats.



FIG. 2.- Hydrographic Survey, Wreck Search and Research Vessel DENE B.

After World War II Germany was divided into two States for more than 40 years: the German Democratic Republic (GDR) in the east and the Federal Republic of Germany (FRG) in the west. This division came to an end on 3 October 1990 when the GDR acceded to the Federal Republic. This day is now a national holiday.

Germany is a parliamentary democracy and consists of 16 "Länder" (States). The President of the Federal republic is the Head of State and the Chancellor heads the Government. The capital of Germany is Berlin; by the year 2000, the Government will be moving there from Bonn where it has been situated since 1949.

The Hydrographic Service

Official hydrography in Germany is a relatively young science. Its history dates back to 1861 when the Hydrographic Bureau was established in the Prussian Ministry of Naval Affairs in Berlin. It was responsible for hydrographic surveying and the production of nautical charts and books.

In 1874, the Naval Observatory was founded in Wilhelmshaven. Among its duties were the Tide and Storm Surge Warning Service and the Time Service. It was also in charge of the Geomagnetic Observatory. In 1868, the "Norddeutsche

Seewarte" (North German Marine Observatory) was founded in Hamburg as a private institute, which became part of the "Deutsche Seewarte" (German Marine Observatory), established as a government authority in 1875. It was part of the Imperial Admiralty and was responsible for oceanographic and marine meteorological research mainly in support of shipping and rapidly became a centre of German maritime research.

With the exception of marine meteorology, the duties of these three precursors were allocated to the Deutsches Hydrographisches Institut (DHI), which was formed in Hamburg in December 1945. It became an authority under the responsibility of the Ministry of Transport in 1950. Almost at the same time in 1950, the Seehydrographischer Dienst (SHD) of the GDR was set up in Rostock. This authority, with somewhat different responsibilities, was a part of the Ministry of National Defence.

In July 1990, the Federal Board of Tonnage Measurement, already located in the same building in Hamburg, merged with the DHI. Since then the authority is called the "Bundesamt für Seeschifffahrt und Hydrographie" (BSH) - Federal Maritime and Hydrographic Agency. Upon the unification of Germany on 3 October 1990, the BSH became responsible for eastern Germany and opened a new Rostock branch in the premises of the former SHD. Since 1994, Rostock is the other official seat of BSH, in addition to Hamburg. The BSH is the central maritime authority in Germany with a broad scope of responsibilities, covering general shipping matters, aspects on safety of navigation, the nautical-hydrographic service, marine environmental protection and marine scientific activities.

German waters are among the busiest shipping areas in the world. Shallow depths and a rapidly changing bottom topography make hydrographic surveying a very demanding task despite the relatively small sea area. An additional risk is posed by 1,500 or so wrecks and other underwater obstacles, many of which are found along the fairways.

The BSH operates 6 ships: the R/V GAUSS (1,684 GRT, built in 1980); the survey and research vessel KOMET (1,319 GRT, 1969); the three survey, wreck search and research vessels ATAIR, (950 GRT, 1987), WEGA and DENEK (969 GRT, 1990 and 1994, respectively); and the survey launch vessel BESSEL. The newer vessels use latest hydrographic technology. WEGA and DENEK are fitted with the new "Hydrosweep MD" multi-beam echosounding system which provides depth coverage in shallow waters.

The BSH issues about 700 nautical charts, Sailing Directions (21 volumes), Light Lists (3 volumes), the List of Radio Signals (3 volumes) and other associated publications covering most of the waters of interest to the German merchant and fishing fleets. For pleasure craft, 12 atlases with 154 small size charts of German waters are published. The BSH takes an active part in the development of the INT chart system and is the producer of INT 1. It is also much involved in the international development and maintenance of specifications and standards for ECDIS. It is developing a hydrographic information system to be used in the production of nautical paper charts, electronic navigational chart data and nautical books. At present, preparations are under way to enter into the ECDIS data service

currently being established by the RENC Northern Europe under the WEND framework.

Considerable public attention in Germany is focused on the problem of pollution in the North Sea and Baltic Sea. The BSH participates in national and international monitoring programmes for both seas and maintains a highly efficient marine chemistry laboratory to measure all kinds of polluting substances. Oceanographic research is carried out to investigate the physical and chemical characteristics of seawater and sediments, the study of fronts and circulation systems, the distribution of water masses and any long-term changes in water levels. Numerical models are developed to forecast currents and water levels and to assist in forecasting transport of chemical pollutants e.g. oil, when accidents occur at sea.

A network of automatic stations is operated in the German Bight and the western Baltic Sea to monitor physical and chemical parameters and radioactivity of seawater. The BSH manages the German Environmental Data Bank comprising all German oceanographic, chemical and geological data from the marine environment and acts as the German Oceanographic Data Centre. The Tide and Storm Surge warning Service and the Ice Service of the BSH provide operational forecasts for shipping.

The BSH is also responsible for:

- the type approval and type testing of nautical instruments and equipment;
- tonnage measurement,
- the national flag register of Germany,
- subsidies to shipping.

The BSH has a staff of approximately 1,000 of whom about 170 work in Rostock.

The BSH is aware of the increasingly pressing need to provide hydrographic aid to developing countries. It co-operates with fund-giving agencies in Germany, such as the Agency for Technical Cooperation, and consulting agencies, in training and development projects.