

**OCEANOGRAPHIC DATA HOLDINGS  
IN THE MHI NASU  
ON THE NORTH-EAST TROPICAL  
AND SUBTROPICAL ATLANTIC**

**A.M. Suvorov, A.Kh. Khaliulin,  
E.A. Godin, E.G. Andryushchenko**  
Marine Hydrophysical Institute

of Ukrainian National Academy of Sciences  
2 Kapitanskaya St., Sevastopol, 99011,  
e-mail: suvorov@alpha.mhi.iuf.net

A considerable volume of oceanographic information on the North-East Tropical and Subtropical Atlantic is accumulated in the Marine Hydrophysical Institute (MHI) of the Ukrainian National Academy of Sciences. These data were obtained in MHI research vessels cruises and in the Center of Scientific Research of Conakry-Rogbane (CERESCOR) (Fig. 1).



Fig. 1. Stations accomplished by MHI research vessels in the North-East Tropical and Subtropical Atlantic

In accordance with the Intergovernmental Agreement between the USSR and the Republic of Guinea from 1973 in the capital of the Republic of Guinea, the city of Conakry, the joint Research Scientific Centre in Oceanography, Geliophysics and Testing of constructional materials and products under the tropical climate conditions was created. The Ukrainian National Academy of Sciences through the Marine Hydrophysical Institute, was determined to be the head organization for the creation and exploitation of this Centre. In 1988, the Centre was donated to the Republic of Guinea. Ukrainian specialists worked in cooperation with Guinean specialists till 1993 and conducted active work in training national scientific staff and personnel of the highest qualification.

For almost vicennial period the Ukrainian specialists and scientists from the Marine Hydrophysical Institute, Institute of Biology of Southern Seas, Institute of Geological Sciences of the Ukrainian National Academy of Sciences and Guinean specialists and scientists on the base of CERESCOR conducted investigations of hydrophysical, hydrochemical, hydrobiological and geological characteristics in the coastal zone of the Republic of Guinea and the Guinean Sector of the Atlantic Ocean in the framework of both international and national marine programs and projects. The work was accomplished on board of both large research vessels ("Mikhail Lomonosov", "Akademik Vernadsky", "Professor Kolesnikov") and small ones ("Ustritsa") (Fig. 2). In total, since the last fifties MHI research vessels accomplished about 5000 stations in 62 cruises in in Guinean Sector of the Atlantic Ocean (Fig.3).

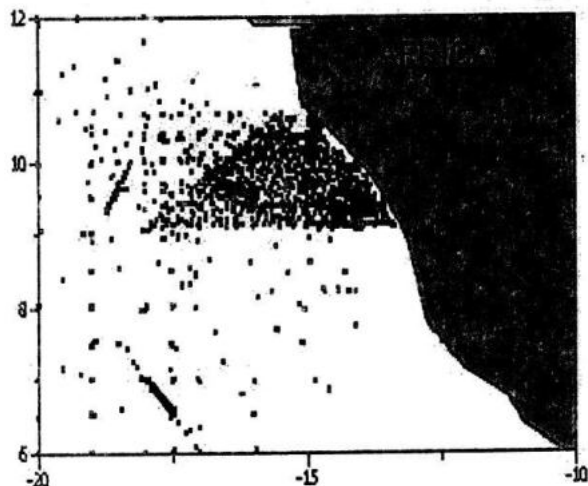


Fig.2. Stations accomplished in Guinean Sector of the Atlantic Ocean

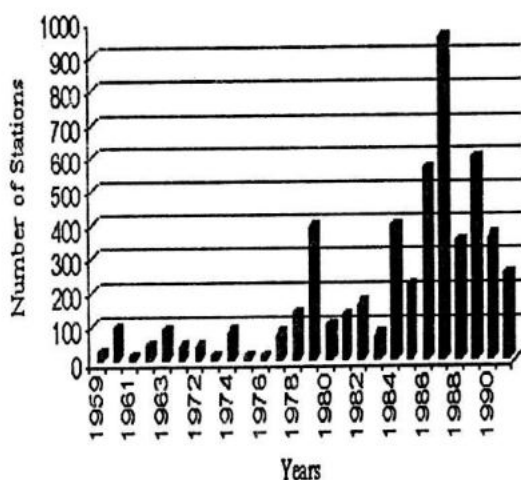


Fig.3. Distribution of the oceanographic stations on years

Brief information about cruises is shown in the Table.

TABLE. Cruises of the MHI's Research Vessels

R/V	Cruise	Cruise Time	Number of Stations
M.L.*	5	06.1959	4
M.L.	6	10-11.1959	21
M.L.	8	09.1960	8
M.L.	10	03-04.1960	82
M.L.	11	11.1961	11

M.L.	12	11.1962	45
M.L.	13	03,05.1963	30
M.L.	14	09.1963	47
M.L.	15	07.1963	8
M.L.	24	12.69/01-03.1970	23
M.L.	25	08-09.1970	19
M.L.	26-1	04.1972	32
M.L.	27	12.72/01.1973	19
A.V.**	8	02-03.1974	15
M.L.	28	02-04.1974	40
M.L.	29	06,08-09.1974	16
A.V.	9	10-11.1974	11
A.V.	10	12.74/01.1975	12
M.L.	30	05,07-08.1976	10
A.V.	15	04-05.1977	63
M.L.	32	06,08-09.1977	11
A.V.	18-2	10.1978	2
M.L.	36	09-10.1978	138
M.L.	37	01-03.1979	385
A.V.	20	05.1979	3
M.L.	38	01-02.1980	47
M.L.	40	11-12.1980	50
A.V.	23	03-04.1981	51
M.L.	41	02-04.1981	71
M.L.	42	08.1981	9
A.V.	25	04.1982	76
A.V.	26	09-11.1982	87
A.V.	27	01.1983	66
P.K.***	6-1	05.1983	2
A.V.	28	01-04.1984	70
P.K.	8	03-04.1984	184
A.V.	29	11.1984	51
P.K.	10	12.1984	86
M.L.	43	01,04.1985	36
A.V.	30	01.1985	2
P.K.	11	04-05.1985	139
A.V.	32	09.1985	5
M.L.	45	12.85/01.1986	85
M.L.	46	03.1986	1
A.V.	33	02-05.1986	260
P.K.	13	05-06.1987	243
M.L.	47	07-09.1986	168
P.K.	14-2	09-10.1986	90
A.V.	35	02-04.1987	199
P.K.	15	02-04.1987	307
M.L.	48	07-09.1987	141
A.V.	36	07-08.1987	5
M.L.	49	12.1987	58
M.L.	50	05-07.1988	147
A.V.	37	07.1988	16

A.V.	38	12.88/02.1989	130
P.K.	20	12.88/01.1989	293
A.V.	39	04.07.1989	69
A.V.	40	10-12.1989	250
P.K.	24	12.89/02.1990	114
M.L.	52	01-03.1990	190
A.V.	43	06-08.1991	141
"Ustritsa"		05.90/05.91	215

\* M.L. - "Mikhail Lomonosov"

\*\* A.V. - "Akademik Vernadsky"

\*\*\* P.K. - "Professor Kolesnikov"

Furthermore, a series of scientific expeditions in the region mentioned above were done by research vessels of other institutions, e.g. R/V "Professor Vodyanitsky" (Institute of Biology of Southern Seas of the Ukrainian National Academy of Sciences), R/V "Yakov Gakkel" (Odessa Branch of State Oceanographic Institution), etc.

The measurements were conducted for different seasons. A considerable part of stations was located in the Guinean Sector of the Atlantic Ocean.

The following parameters were measured:

- temperature and salinity;
- currents;
- meteorological data;
- chemical parameters;
- hydrooptical parameters;
- geological data;
- biological data.

Biological data were obtained by scientists of the Institute of Biology of Southern Seas. Geological data were obtained by scientists of the Institute of Geological Sciences of the Ukrainian National Academy of Sciences.

Creation of the oceanographic database on the North-East Tropical and Subtropical At-

lantic with the use of modern information technologies is considered to be a very important task. The data accumulated in MHI are of particular interest for scientists and specialists of the Republic of Guinea as well as of other coastal countries of the Western Africa.

Regretfully, only a part of the data collected by the MHI research vessels and in CERESCOR is stored in a computer readable form. The data from the previous years are still kept in the form of tables, punched cards, reports, etc. For the present moment, only about 20% of the data have been transferred onto modern data carriers. Thus the work can include the following main stages:

- creation of a digital inventory of oceanographic measurements on the marine environment condition;
- oceanographic data transfer onto computer carriers in the unified format;
- data quality control;
- data loading into the oceanographic database.

The joint work over including data of the CERESCOR and MHI and other Ukrainian marine organisations into the oceanographic database will be very useful not only for the coastal Africa countries of this region but for specialists of other countries as well. This work will facilitate ecological and oceanographic investigations of the marine environment and resources, providing, for specialists, the access to archival oceanographic data and use of these data for studies and exploitation of biological and mineral marine resources and for navigational safety.