2nd Meeting Arctic Regional Hydrographic Commission
Copenhagen Denmark
September 28-29, 2011

ARHC2-02B
National report
Russian Federation

NATIONAL REPORT

OF HYDROGRAPHIC SERVICE

OF THE RUSSIAN FEDERATION

NAVY

to the 2-nd ARCTIC REGIONAL HYDROGRAPHIC

COMMISSION MEETING

St Petersburg

2011

THE HYDROGRAPHIC SERVICE OF THE RUSSIAN FEDERATION NAVY

The Hydrographic Service is one of the important national bodies responsible for the safety of navigation.

Although the Hydrographic Service forms a part of the Navy, it also meets the requirement of merchant and fishing fleets and vessels of other ministries and agencies. The Hydrographic Service is under the direction of the Department of Navigation and Oceanography of the RF MD (DNO of the RF MD), which is traditionally located in St Petersburg.

The principle functions of DNO of the RF MD are:

— to carry out hydrographic works and geophysical and oceanographical investigations
of the World Ocean

— to compile and produce Nautical Charts, Publications and Guides to Navigation

— to develop and produce Guides, Instructions, Regulations and Methodical Directions on carrying out the World Ocean investigations and processing of its results

— to equip the coast of the Russian Federation by aids to navigation

— to organize mariner notification about changes in navigational conditions and regime

— to develop navigational instruments and complexes.

To carry out oceanographic surveys some special units have been created as a part of the Hydrographic Service of the Navy, such as expeditions and parties. The investigations are effected by (oceanographic and hydrographic) ships of up to 9000 tons displacement equipped with modern navigational and oceanographic facilities.

The results of the oceanographic surveys are submitted to the Navy Charts Division where they are used for compilation and updating of Nautical Charts and Sailing Directions.

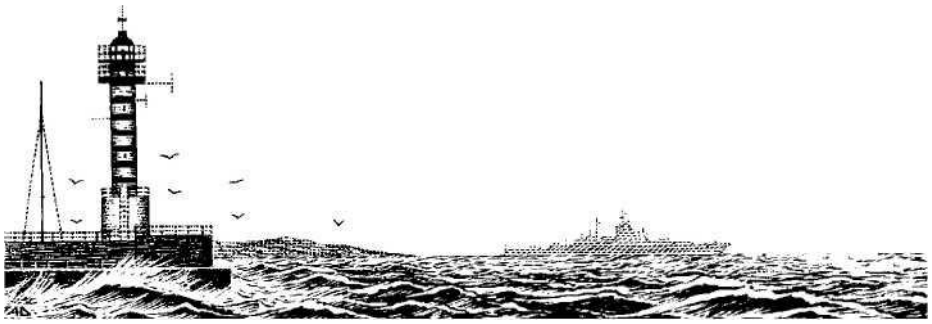
The Hydrographic Service of the Navy provides the operation of over 5000 aids to navigation objects.

The DNO of the RF MD guides the development of navigational and oceanographic facilities and fitting out with them the naval ships and vessels of other departments, arranges their operation and maintenance as well.

In special aspect the DNO of the RF MD has in its subordination the Hydrographic services of the Fleets. It has in direct subordination:

Lighthouse service of the RF, Navy Charts Division, Navy Centre for Automatic Acquisition and Processing of Operational Hydro meteorological Information, Long-Range Radio-navigation Centre and other units.

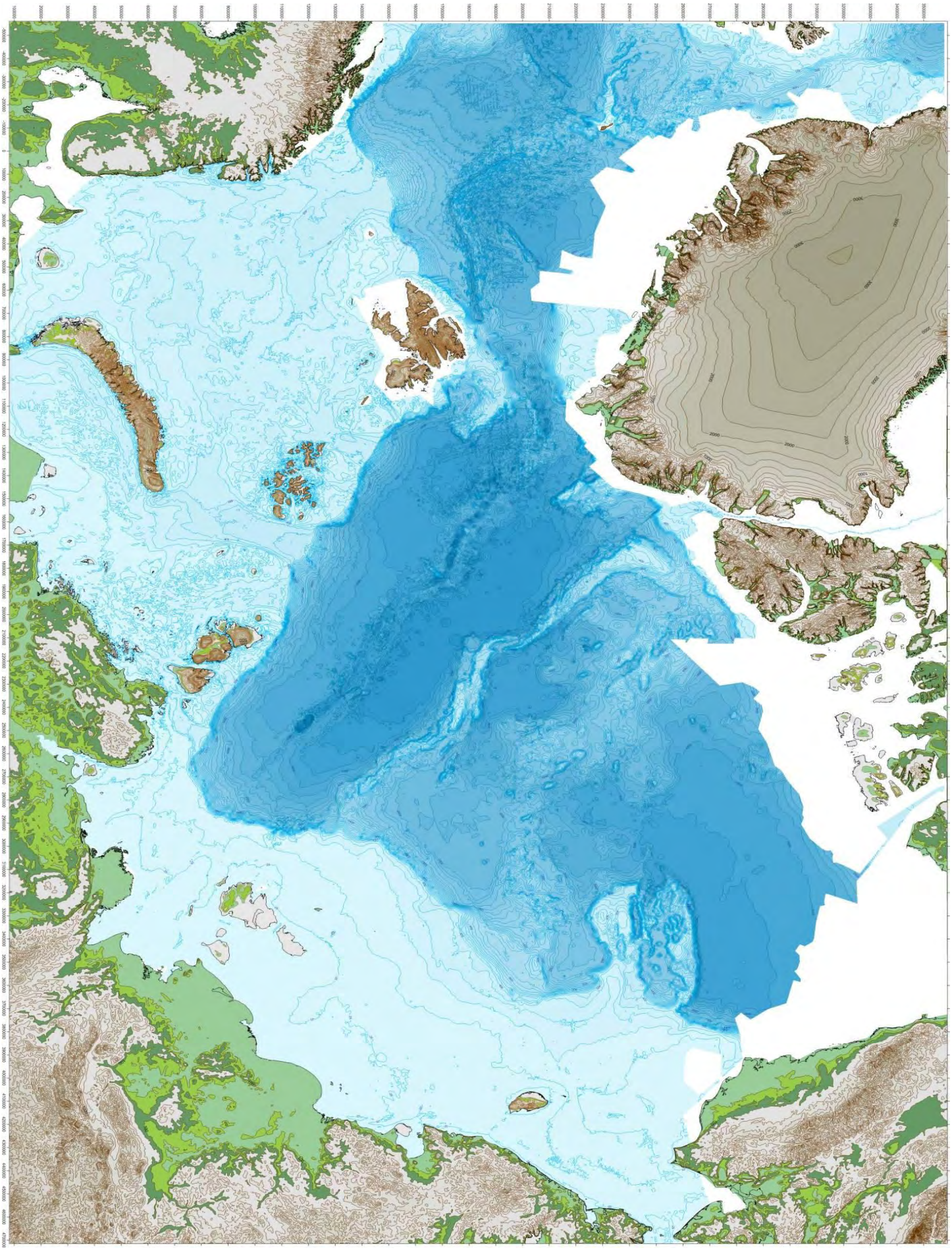
The DNO of the RF MD participates in realization of a series of regional projects of IOC UNESCO on charting of oceans. It is due to participation in these projects the DNO of the RF MD obtains new bathymetric data for the World Ocean and uses them for compilation of nautical charts and also takes into account advanced technologies and methods of charting used by leading countries in its work.



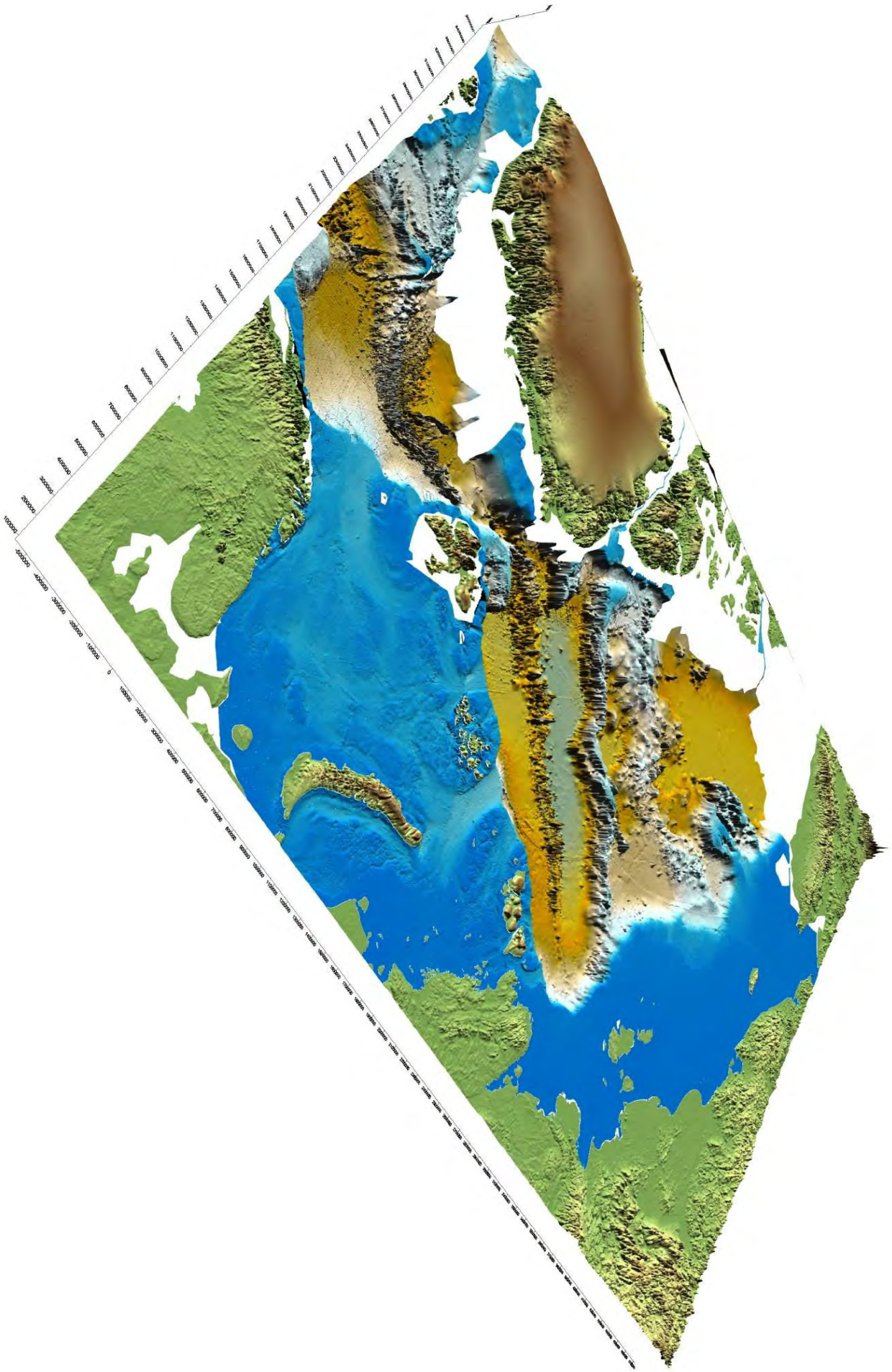
SURVEY COVERAGE OF THE ARCTIC OCEAN

Area of Activity	Kind of Activity	Scale	Year of Activity
Barents Sea			
Approaches to Ostrov Novyy Kil'din Bukhta Mogil'naya	Sounding and topographic survey	1:2000	1998
Varandeyskaya Guba Entrance to Bukhta Ozerko	Sounding and topographic survey	1:10 000	1999
Guba Motka	Sounding and topographic survey	1:3000	2000
Southern Part of the sea (area L–4)	Sounding	1:5000	2000
Kol'skiy Zaliv. Bukhta Vayenga	Sounding	1:2000	2001
Water Area of Murmanskiy Commercial Port	Sounding and topographic survey	1:2000	2002
S Reach of Kol'skiy Zaliv	Sounding and topographic survey	1:2000	2002
Middle Reach of Kol'skiy Zaliv	Navitronic sounder survey	1:5000	2003
Proliv Kuvshinskaya Salma	Sounding and topographic survey	1:2000	2003
Middle Reach of Kol'skiy Zaliv S Reach of Kol'skiy Zaliv	Area survey	1:5000	2003
Teriberskaya Guba, Guba Lodeynaya Iokan'gskiy Zaliv	Sounding and topographic survey	1:2000	2006
Svyatonosskiy Zaliv	Sounding and topographic survey	1:10 000	2005
Svyatonosskiy Zaliv, patches	Navitronic sounder survey		
Pomorskiy Proliv	Sounding	1:25 000	2005
Murmanskiy Maritime Fishing Port	Sounding Area survey	1:2000	2006
Southern Part of the sea	Sounding	1:25 000	2006
Water Area of Port Murmansk	Area survey	1:2000	2007
Kol'skiy Zaliv. Bukhta Varlamova	Sounding	1:5000	2007
Severomorsk Concrete Product Plant	Area survey		
Southern Part of the sea	Sounding	1:50 000	2007
Water Area of Murmanskiy Commercial Port	Area survey	1:1000	2007
N Reach of Kol'skiy Zaliv	Sounding with instrumental estimate	1:5000	2007
Southern Part of the sea	Sounding	1:25 000	2007
White Sea			
Severodvinskiy Channel Approach Channel to Port Vitino	Navitronic sounder survey	1:2000	1999
Dvinskiy Zaliv The area of Ostrov Mud'yugskiy	Sounding	1:2000	2000
Central Port of the sea	Sounding	1:100 000	2004
Kandalakshskiy Zaliv The area of Maritime Specialized Port Vitino	Sounding with instrumental estimate	1:2000	2004
Kandalakshskiy Zaliv Approach Channel to Port Vitino	Area survey	1:2000	2005

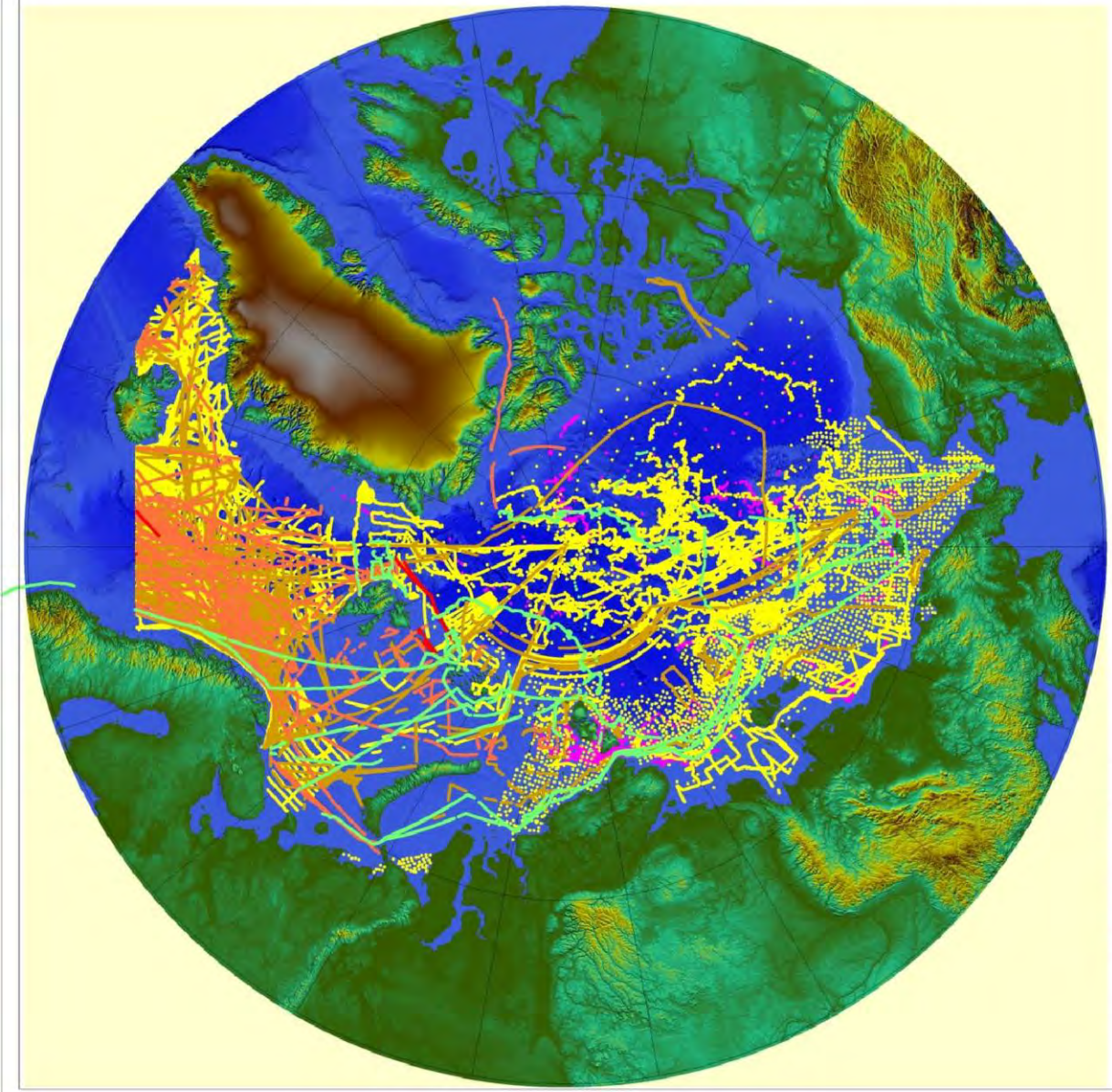
Bathymetric model of the Arctic Ocean



3 D bathymetric model of the Arctic Southern Ocean



SURVEY COVERAGE OF THE ARCTIC OCEAN BASED ON THE PASSAGE SOUNDING DATA



SYMBOLS:

- sounding converted to digital form by means of numeralization of paper copies:

- sounding performed before 1954

- sounding performed from 1954 to 1976

- sounding performed from 1977 to 1983

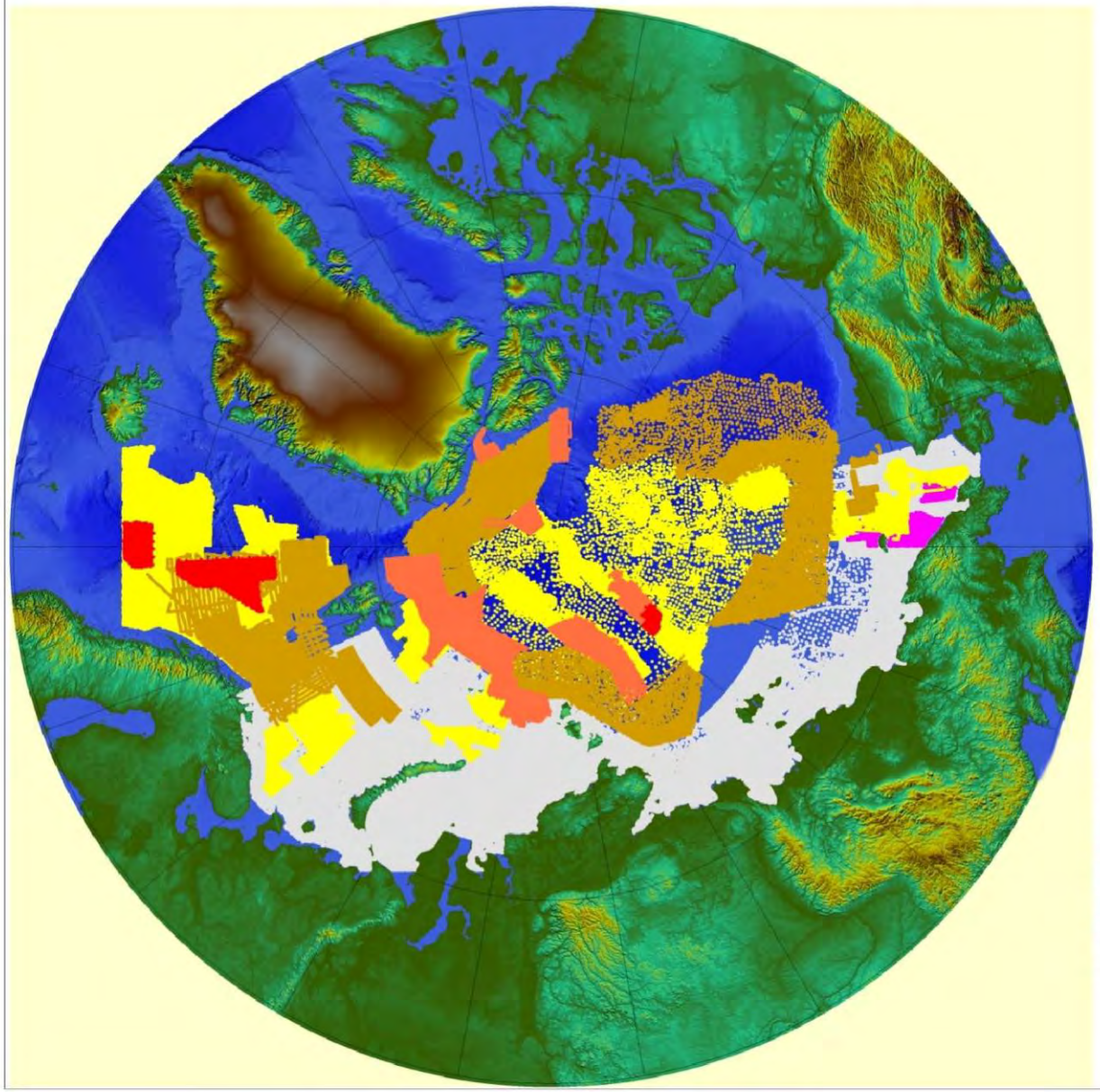
- sounding performed from 1984 to 1990

- sounding performed after 1991

- sounding ut various stages of computer data processing

- sounding received as XYZ text files in electronic form

SURVEY COVERAGE OF THE ARCTIC OCEAN BASED ON THE SYSTEMATIC SOUNDING DATA

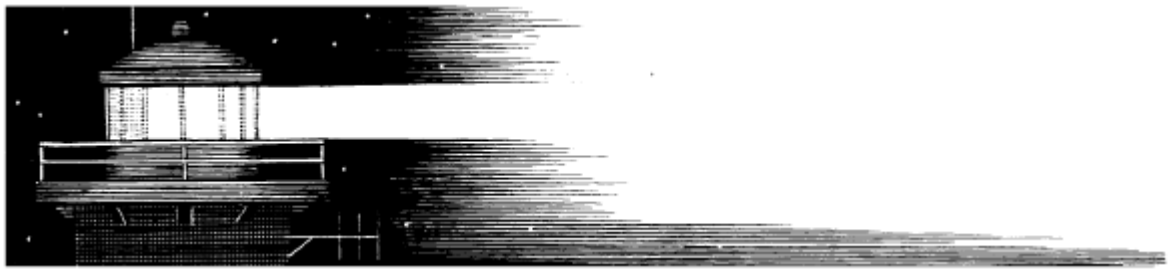


SYMBOLS:

- sounding converted to digital form by means of numeratization of paper copies:

- *sounding performed before 1954*
- *sounding performed from 1954 to 1976*
- *sounding performed from 1977 to 1983*
- *sounding performed from 1984 to 1990*
- *sounding performed after 1991*

- charted depths based on the systematic sounding data



ENCs of the Arctic Ocean

Nowadays, the cell collection for the seas of Arctic Ocean includes 256 of which:

14	cells on a scale of	700 000
91	cell on a scale of	180 000
19	cell on a scale of	90 000
74	cell on a scale of	45 000
28	cell on a scale of	22 000
13	cell on a scale of	12 000
12	cell on a scale of	8 000
4	cell on a scale of	4 000
4	cell on a scale of	2 000
1	cell on a scale of	1 000

NATIONAL PAPER CHARTS

For waters under jurisdiction of Russia in the Arctic Ocean, the DNO of the MD has a collection of National paper charts, which includes 986 units.

With account of scales it is shown by the following way:

Central Arctic Basin	1:2 500 000	1
National charts	1:2 000 000	7
National charts	1:500 000	39
National charts	1:100 000	216
National charts	Scale 1:100 000 and larger scales	724

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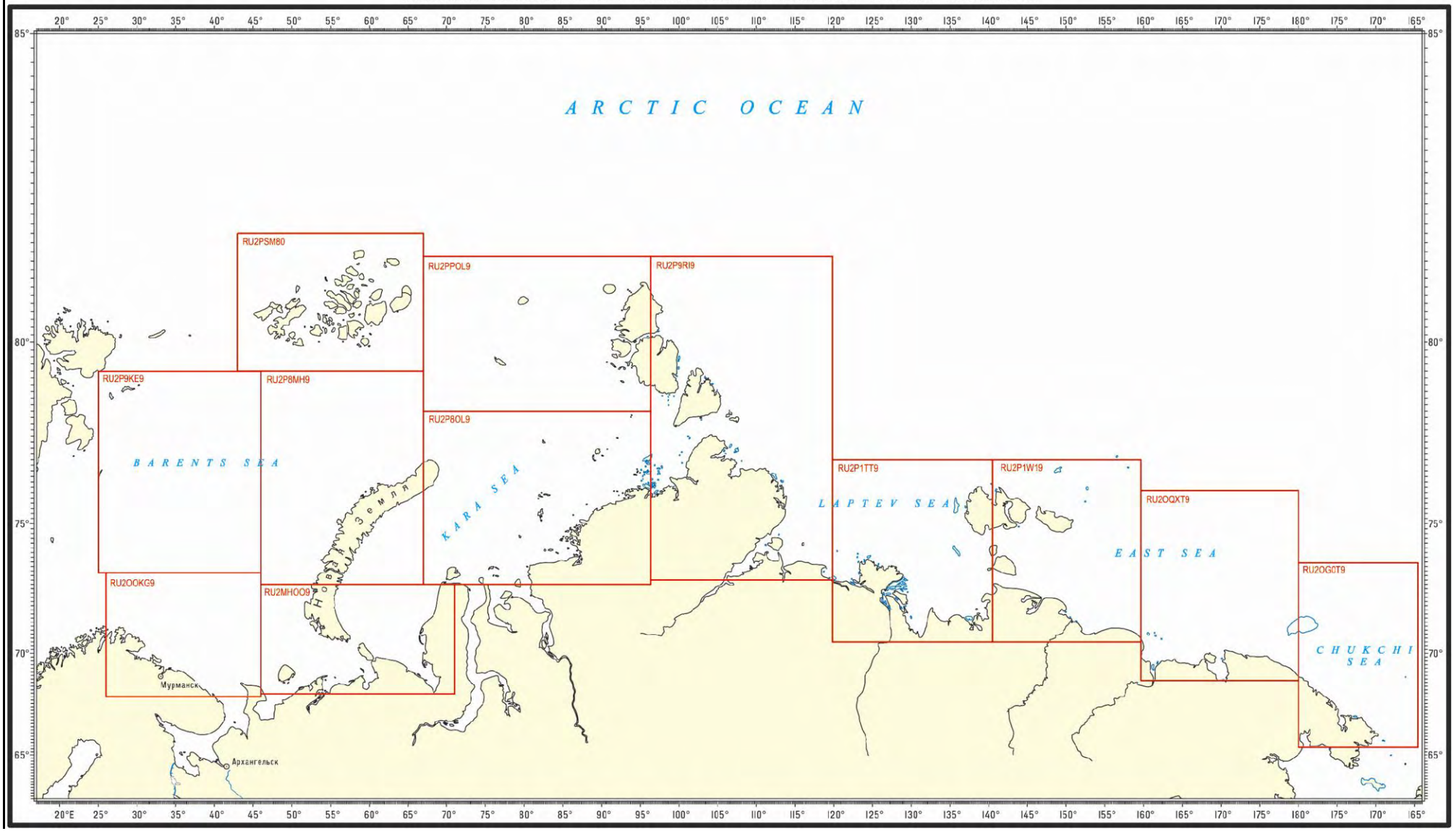
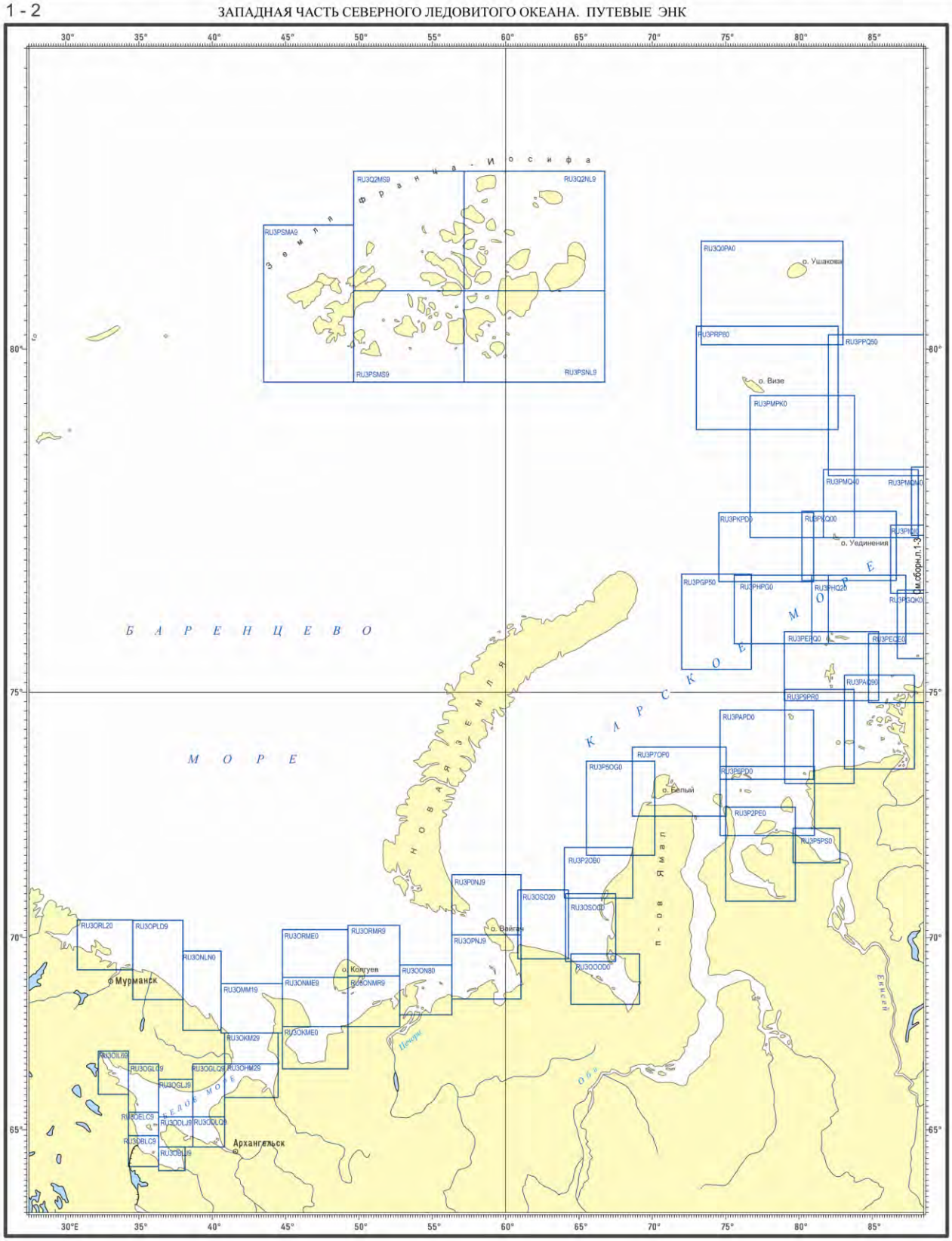
RUSSIAN NAVIGATIONAL CHART SCHEME FOR THE ARCTIC TERRITORY



ЗАПАДНАЯ ЧАСТЬ СЕВЕРНОГО ЛЕДОВИТОГО ОКЕАНА. ПУТЕВЫЕ ЭНК



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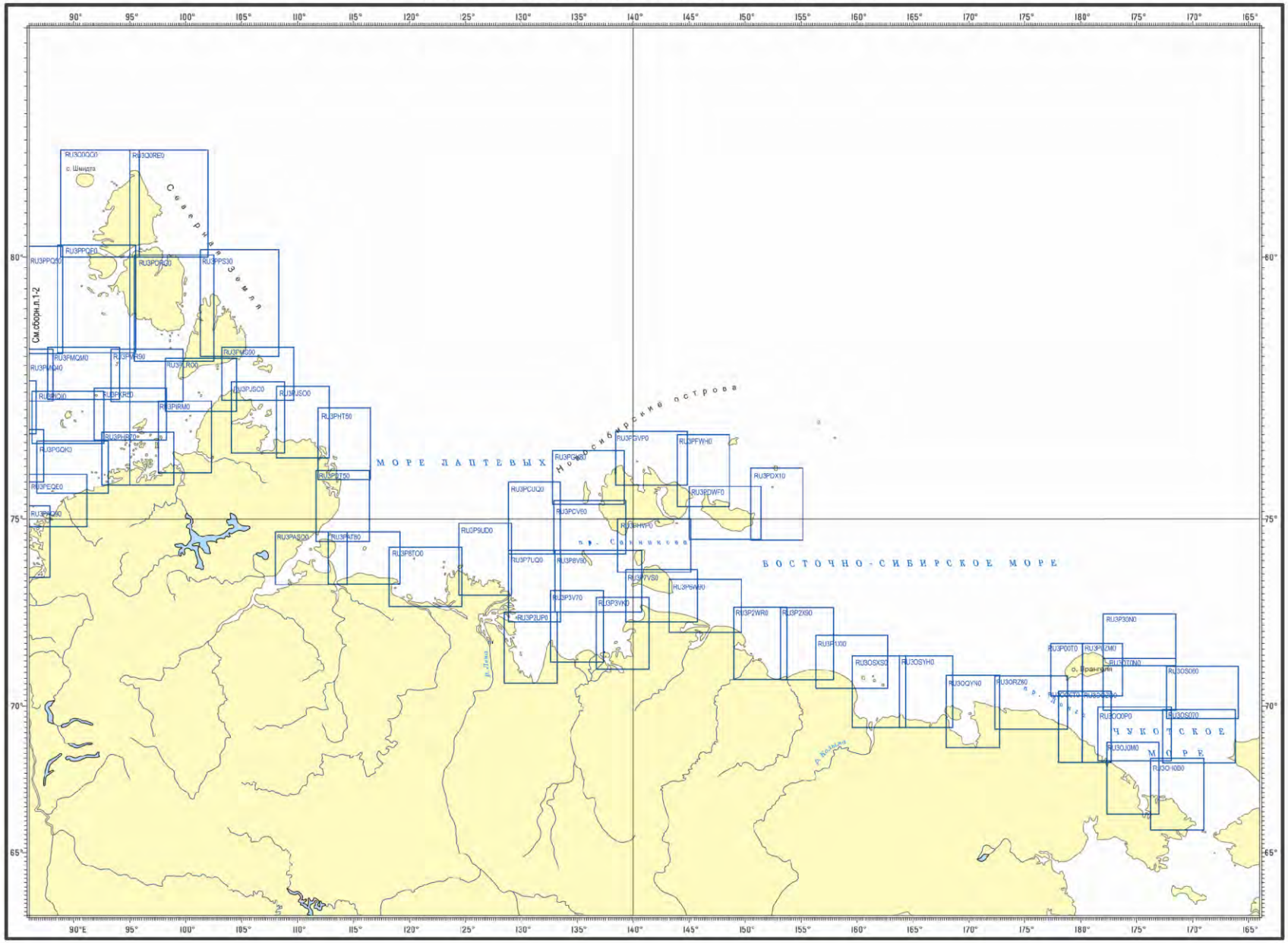
ВОСТОЧНАЯ ЧАСТЬ СЕВЕРНОГО ЛЕДОВИТОГО ОКЕАНА. ПУТЕВЫЕ ЭНК



REFERENCE ON

THE OPERATIVE NAVIGATIONAL INFORMATION SYSTEM

IN THE ARCTIC OCEAN

MSI transmission for Arctic Regions is realized:

- S of latitude 76°

— within international frame of safety SafetyNet from INMARSAT satellites;
— within NAVTEX-system from available NAVTEX-stations;

- N of latitude 76° (out of INMARSAT zone of action)

— radio stations working on international frequencies are planned to use.

The Russian Federation has at its disposal three NAVTEX-stations in Arctic Seas: Barents Sea (Murmansk), White Sea (Arkhangel'sk), Laptev Sea (Tiksi).

Ministry of Transport (Mintrans) plans for the future to put 8 additional NAVTEX-stations into operation along Northern Sea Route.

In order to perform functions of area and nation co-ordination in bringing of navigational information to mariners in Arctic Regions, the following zones of responsibility are defined for:

- Hydrographic Service of Northern Fleet

— Murmansk PRIP Region (Barents Sea) —
Information is transmitted by Murmansk NAVTEX-station
— Arkhangel'sk PRIP Region (White Sea).
Information is transmitted by Arkhangel'sk NAVTEX-station.

- FSUE (Federal State Unitary Enterprise) «Hydrographic Enterprise»

— ZAPAD PRIP Region (Western Part of Northern Sea Route)
Information is transmitted by Tiksi NAVTEX-station and INMARSAT technical means.
— VOSTOK PRIP Region (Eastern Part of Northern Sea Route)
Information is transmitted by Tiksi NAVTEX-station and INMARSAT technical means.
— WWNWS NAVAREA XX and NAVAREA XXI Regions (beginning on 1 January, 2001)
Information is transmitted by INMARSAT technical means. Besides the Ministry of transport considers possibility to transmit information on international frequencies.

Hydrographic Enterprise of Ministry of Transport on behalf of the Russian Federation is entrusted with co-ordinator function for NAVAREA XX and NAVAREA XXI Regions. In November, 2007, changes were made in the Charter of FSUE HE by the order of Federal Agency of Marine and River Transport (No DD-148-r of 26 November 2007, namely the enterprise is entrusted with national coordinator function of collection, preparation and transmission of maritime safety information for WWNWS NAVAREA XX and NAVAREA XXI Regions.

Beginning on 1 July, 2010, MSI service of FSUE HE has started to transmit real NAVAREA warnings for NAVAREA XX and NAVAREA XXI Regions (in mode of «Initial Operational Capability» (IOC)).

Arctic NAVAREA/METAREA Boundary limits:

NAVAREA/METAREA XX bound by:
From the border between Norway and Russia (Inland) to:
69° 47′.68N 030° 49′.16E, 69° 58′.48N 031° 06′.24E,
70° 22′.00N 031° 43′.00E, 71° 00′.00N 030° 00′.00E,
From this geographical position (71° 00′.00N . 030°00′.00E)
further north along the 030°00′.00E meridian to: 90° 00′.00N 030° 00′.00E, 90° 00′.00N 125° 00′.00E,
then south to the Russian Federation coastline along the 125° 00′.00E meridian;

NAVAREA/METAREA XXI bound by:
From a geographical position on the Russian Federation coastline at
the 125°00′. 00E meridian to: 90° 00′.00N 125° 00′.00E,
90° 00′.00N 168° 58′.00W, 67° 00′.00N 168° 58′.00W,
west to a geographical position on the Russian Federation coastline along the 67° 00′.00N parallel

Arctic NAVAREA Broadcast Schedules:
NAVAREA XX (IOR) at 0530UTC and1730UTC
NAVAREA XXI (POR) at 0630UTC and 1830UC

Telephone: +7 812 323 75 48
fax: +7 812 323 70 29
E-Mail: main@gunio.ru
navarea13@gunio.ru
8, 11 Liniya, B-34
St.Petersburg, 199034