WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

JOINT WMO/IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM)
EXPERT TEAM ON MARITIME SAFETY SERVICES

THIRD SESSION

ST PETERSBURG, RUSSIAN FEDERATION
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ITEM

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MARINE METEOROLOGICAL SERVICES MONITORING PROGRAMME QUESTIONNAIRE

MSI Self Assessment METAREA XX and XXI

September 2010

(Submitted by the Russian Federal Service for Hydrometeorology and Environmental Monitoring)

SUMMARY

Roshydromet is the Preparation Service for METAREA XX and METAREA XXI. The Hydrographic Enterprise of the Russian Federal Agency of Marine and River Transport is the designated Preparation Service for associated NAVAREAs XX and XXI and the Issuing Service both for METAREAs and NAVAREAs XX and XXI. Since 2001 the Arctic and Antarctic Research Institute (AARI) of Roshydromet is leading and coordinating the preparation of weather and ice Marine Safety Information (MSI) for the SafetyNET network for the Northern Sea Route areas (west region and east region) which are a part of the METAREA XX and XXI defined in 2007.

Activity for 2010 is in accordance with the June 2010 IMO/IHO declaration of an International SafetyNET service to METAREA XX and XXI to be in "Initial Operational Capability" and includes routine delivery of MSI (meteorological and ice) from the beginning of July 2010. SafetyNET broadcast service consists of two broadcasts per day at 0600 UTC and 1800 UTC. Sea-ice information is prepared and issued three times a week (Monday, Wednesday and Friday) at 1800UTC. Simultaneously, an update to the national mandatory documentation for GMDSS services including new schemes of services for METAREAs, is under preparation in accordance with the latest WMO/IHO/IMO decisions.

Roshydromet expects to transition to a "Full Operational Capability" service to METAREA XX and XXI by June 2011 in accordance with the June 2010 IMO/IHO announcement regarding the expansion of the IMO/IHO World-Wide Navigational Warning Service (WWNWS) into the Arctic waters.

1. Background

METAREA XX boundary: 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 co-ordinate (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.

METAREA XXI boundary: From a 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; then west to a position on the Russian Federation Coastline along the 67°00'. 00N parallel.

Sub-Area for Preparation Services: Through the 2010 the Russian Federation Sub-Area for Preparation Services within the METAREA XX and METAREA XXI consist of waters within the Northern Sea Route area with prime differentiation into the west Northern Sea Route (67N44E/80N44E/67N125E/80N125E) and east Northern Sea Route (63N125E/80N125E/63N165W/80N165W) and further differentiation into 16 sub-areas.

SafetyNET Satellite broadcast for METAREA XX and METAREA south of 76N is over the Indian Ocean Region (IOR) and Pacific Ocean Region (POR) Inmarsat satellite. SafetyNET broadcast service consists of two broadcasts per day at 0600 UTC and 1800 UTC. Sea-ice information is prepared and issued 3 times a week (Monday, Wednesday and Friday) at 1800UTC.

The **GMDSS SafetyNET service provider** for broadcast over Inmarsat-C SafetyNET to METAREA XX and METAREA XXI south of 76N is the Hydrographic Enterprise of the Russian Federal Agency of Marine and River Transport.

The **GMDSS service provider** for broadcast via radio to METAREA XX and METAREA XXI north of 76N is currently under negotiation.

GTS WMO telecommunication headers: For the Sub-Areas within METAREA XX and METAREA the following WMO headers of the marine weather forecast bulletins are used by the Preparation Service: FQRS01 RUSP for service west of 125E, and FQRA01 RUSP for service east of 125E. As of 2010 both weather and sea-ice information is issued using the same header.

2. Comments

For the Russian Federation-assigned Sub-Areas for Preparation Services within the METAREA XX and METAREA XXI, the MSI marine forecast bulletins state a) hydrometeorological marine warnings (winds speed 17 -25m/s and 25 m/s or more, waves height 6 m or more, visibility 100 m or less, ice accretion) in effect, b) synopsis for the weather and sea-state (for open water – wind waves and swell, for sea ice – brief description of sea-ice conditions in accordance with the JCOMM ETSI-IV (March 2010) recommendations), and c) forecast of weather conditions for one day.

3. NAVTEX Coverage

Coastal areas of the Barents Sea and the White Sea - on regular scale; east of the Kara Gate Strait - under development.

4. Operational Issues

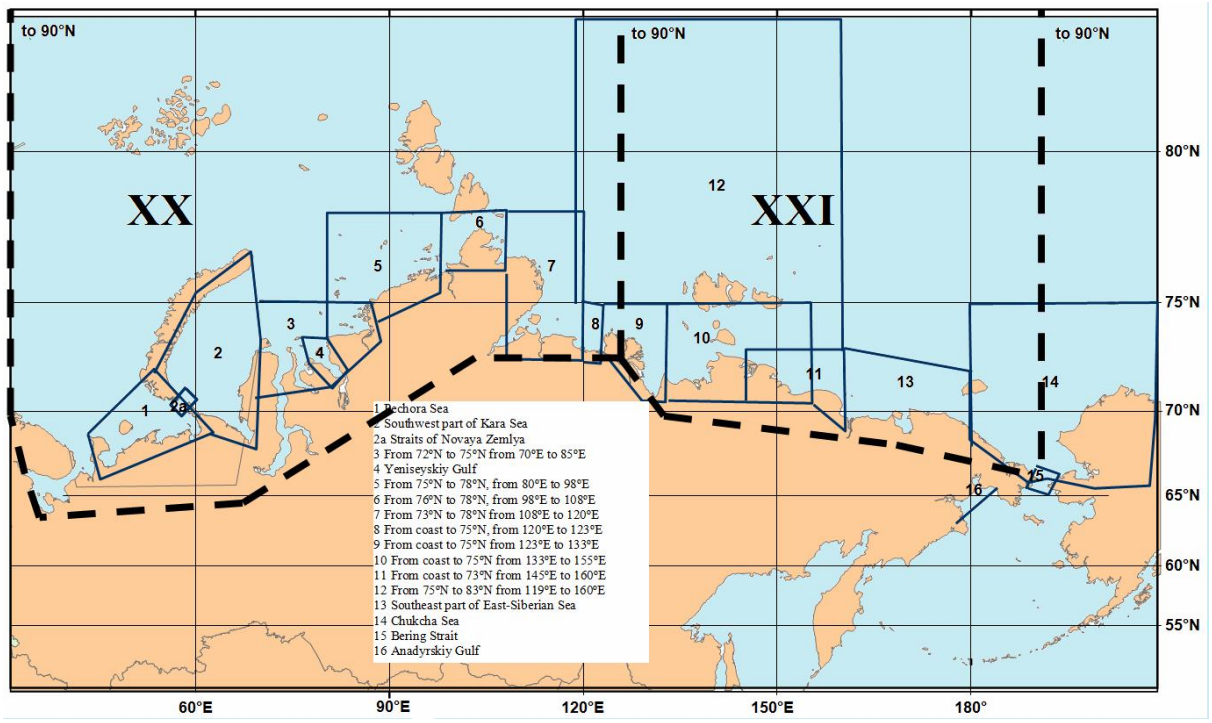
Final METAREA sub-areas and SafetyNET/NAVTEX coverage diagrams as well as updates to internal national standards and procedures in accordance with the latest WMO/IHO/IMO decisions are under development during the transition period. Implementation of

these issues is proceeding on schedule with initial testing initiated in summer 2010. Final results of the testing will be provided to the WMO/IHO/IMO for inclusion into relevant documents.

5. Quality Management Survey

METAREA	ISO 9001 - 2008	Warnings for 8 Beaufort and above	Promulgate at least two scheduled broadcasts per day	Include wind and sea state in scheduled	Visibility in descriptive terms	24/7 watch	Monitor Broadcast in almost real time
XX	N/A	Yes	Yes	Yes	Yes	Yes	Under considerations
XXI	N/A	Yes	Yes	Yes	Yes	Yes during shipping period	Under considerations

Russian Federation SafetyNET Northern Sea Route forecast sub-areas
within the METAREA XX and METAREA XXI in effect for 2010



6. Capacity Building

Training for the ice observers/ ice analysts is maintained 1-2 per year. System of the sea-ice monitoring in the Arctic undergoes permanent development.

7. Other Activities

Roshydromet through its bodies is actively participating in the WMO/IOC JCOMM and WMO CBS groups, RA-II & VI activities, IHO ENC activities.

8. METAREA Website

http://weather.gmdss.org/XX.html
http://weather.gmdss.org/XXI.html

http://www.aari.ru/gmdss
http://www.aari.ru/gmdss/bulletin/index.php

9. METAREA GMDSS focal point contact

National Coordinator for the METAREA XX & XXI

Contact:	Mr Valery Martyschenko Deputy head of department
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National Contact Point for the WMO GMDSS Marine Broadcast System for METAREA XX & XXI

Contact:	Mr Sergey Brestkin Head, Center for Sea-Ice and Meteorological information
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10. Actions or suggestions proposed

Implement the outcomes of JCOMM ETSI-IV session (March 2010) throughout the METAREAs XVII-XXI regarding consistency of content (definitions and abbreviations) and continuity of information (ice edge) throughout of all 5 METAREAs.

11. Synopsis

Roshydromet is the Preparation Service for METAREA XX and METAREA XXI. The Hydrographic Enterprise of the Russian Federal Agency of Marine and River Transport is the designated Preparation Service for associated NAVAREAs XX and XXI and the Issuing service both for METAREAs and NAVAREAs XX and XXI. Since 2001 the Arctic and Antarctic Research Institute (AARI) of Roshydromet is leading and coordinating the preparation of weather and ice Marine Safety Information (MSI) for the SafetyNET network for the Northern Sea Route areas (west region and east region) which are a part of the METAREA XX and XXI defined in 2007.

Activity for 2010 is in accordance with the June 201 IMO/IHO declaration of an International SafetyNET service to METAREA XX and XXI to be in "Initial Operational Capability" and includes routine delivery of MSI (meteorological and ice) from the beginning of July 2010. The plain text MSI marine forecast bulletins state a) hydrometeorological marine warnings in effect, b) synopsis for the weather and sea-state (for open water – wind waves and swell, for sea ice – brief description of sea-ice conditions in accordance with the JCOMM ETSI recommendations), and c) forecast of weather conditions for one day. SafetyNET broadcast service consists of two broadcasts per day at 0600 UTC and 1800 UTC. Sea-ice information is prepared and issued 3

times a week (Monday, Wednesday and Friday) at 1800UTC. Simultaneously, an update to the national mandatory documentation for GMDSS services including new schemes of services for METAREAs, is under preparation in accordance with the latest WMO/IHO/IMO decisions.

One of the other critital problems being currently resolved, is the restriction of the broadcast of METAREAs XX and XXI information north of 76N. At the moment INMARSAT-C is used to transmit the information on the safety of navigation to the ships in the NSR western and eastern zones with negotiations for extending radio services underway. The Arctic METAREAs are characterized by the ice cover occurrence during the whole year which is the serious obstacle for navigation and a factor of risk. The Russian approach is that the sufficient safety level can be reached only with individual (customer-oriented) support with provision of detailed ice information, but the goal of the GMDSS ice information circular transmission is to warn on the ice with definite characteristics in a certain area to prevent incidental entry of vessels into this area. In case of absence of icebreaker support, the minimum ice information issued under the GMDSS does not assure the safety of ship navigating through ice. In this case for the ship entering ice-covered areas, special information is provided, including satellite images, detailed ice charts and forecasts. This additional ice information may be superimposed on the navigation chart in the Electronic Navigation Chart (ENC) system or used stand-alone.

Roshydromet expects to transition to a “Full Operational Capability” service to METAREA XX and XXI by June 2011 in accordance with the June 2010 IMO/IHO announcement regarding the expansion of the IMO/IHO World-Wide Navigational Warning Service (WWNWS) into the Arctic waters.

Annex 1 - Weather Bulletin for east (METAREA XXI) Northern Sea Route, 2010-08-02 1800UTC

SECURITY
WEATHER BULLETIN FOR EAST NORTHERN SEA ROUTE
63N125E/80N125E/63N165W/80N165W
ISSUED BY THE ARCTIC AND ANTARCTIC RESEARCH INSTITUTE ST PETERSBURG
ON THE 02 AUGUST 2010 AT 1800UTC

PART 1
AT 021800UTC

GALE WARNING

FROM COAST TO 74N FROM 150E TO 159E
WINDS N/E GUSTS 17 TO 20 MS

FROM COAST TO 71N FROM 178W TO 168W
WINDS S/E GUSTS 17 TO 22 MS

ANADYRSKIY GULF
WINDS S GUSTS 17 TO 22 MS

PART 2
SINOPSIS AT 021800UTC

LOW 995 HPA 76N 125E MOVING S/E 30 TO 40 KMH
HIGH 1010 HPA 73N 155E STATIONARY
LOW 990 HPA 64N 159E MOVING N/E 10 KMH
HIGH 1020 HPA 55N 170W STATIONARY

ICE

KHATANGSKIY GULF
OPEN WATER,7-10 TENTHS OF DRIFT ICE AND FAST ICE

FROM COAST TO 75N FROM 113E TO 119E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 75N FROM 119E TO 128E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 74N FROM 128E TO 133E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 74N FROM 133E TO 141E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 75N FROM 141E TO 150E
OPEN WATER,1-6, 7-10 AND FAST ICE

FROM COAST TO 74N FROM 150E TO 159E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 73N FROM 159E TO 171E
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 72N FROM 171E TO 178W
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

FROM COAST TO 71N FROM 178W TO 168W
OPEN WATER,1-6, 7-10 TENTHS OF DRIFT ICE

BERING STRAIT
OPEN WATER

ANADYRSKIY GULF
OPEN WATER

PART 3
FORECAST FROM 021800UTC TO 031800UTC

KHATANGSKIY GULF
WINDS W S/W 10 TO 15 MS
VIS 10 KM LOCALLY 2 TO 4 KM RAIN HAZE
TEMP PLUS 10 TO PLUS 15 DEGREES

FROM 73N TO 78N FROM 113E TO 119E
WINDS S/E E 9 TO 14 MS
VIS 10 KM LOCALLY 1 TO 2 KM RAIN HAZE
TEMP PLUS 5 TO PLUS 10 DEGREES

FROM COAST TO 75N FROM 119E TO 128E
WINDS S S/W 11 TO 16 MS AFTER 030600UTC S/E 9 TO 14 MS
VIS 4 TO 6 KM LOCALLY RAIN
TEMP PLUS 10 TO PLUS 15 DEGREES

FROM COAST TO 74N FROM 128E TO 133E
WINDS S S/E 9 TO 14 MS
VIS 6 TO 10 KM
TEMP PLUS 7 TO PLUS 12 DEGREES
SEAS 1.2 TO 2.2 M

FROM COAST TO 74N FROM 133E TO 141E
WINDS S S/W 10 TO 15 MS AFTER 030600UTC S S/E 9 TO 14 MS
VIS 6 TO 10 KM
TEMP PLUS 5 TO PLUS 10 DEGREES

FROM COAST TO 75N FROM 141E TO 150E
WINDS E 6 TO 11 MS AFTER 030900UTC E 11 TO 16 MS
VIS 4 TO 6 KM LOCALLY 0.6 TO 0.8 KM FOG
TEMP PLUS 4 TO PLUS 9 DEGREES

FROM COAST TO 74N FROM 150E TO 159E
WINDS N/E 10 TO 15 MS GUSTS 17 TO 20 MS
VIS 4 TO 6 KM LOCALLY 0.6 TO 0.8 KM FOG LOCALLY RAIN
TEMP PLUS 6 TO PLUS 11 DEGREES

FROM COAST TO 73N FROM 159E TO 171E
WINDS N/E 8 TO 13 MS
VIS 6 TO 10 KM RAIN LOCALLY 0.5 TO 1.0 KM FOG
TEMP PLUS 3 TO PLUS 8 DEGREES
SEAS 0.3 TO 0.8 M

FROM COAST TO 72N FROM 171E TO 178W
WINDS E 6 TO 11 MS GUSTS 16 MS
VIS 6 TO 10 KM RAIN LOCALLY 0.5 TO 1.0 KM FOG
TEMP PLUS 8 TO PLUS 13 DEGREES
SEAS 0.3 TO 0.8 M

FROM COAST TO 71N FROM 178W TO 168W
WINDS S/E 9 TO 14 MS GUSTS 17 TO 22 MS
VIS 6 TO 10 KM RAIN
TEMP PLUS 9 TO PLUS 14 DEGREES
SEAS 1.0 TO 1.5 M

ANADYRSKIY GULF
WINDS S 9 TO 14 MS GUSTS 17 TO 22 MS
VIS 6 TO 10 KM RAIN LOCALLY 0.5 TO 1.0 KM FOG
TEMP PLUS 17 TO PLUS 22 DEGREES
SEAS 1.0 TO 1.5 M

DISCLAIMER: FOR DETAILED LOCAL ICE AND OTHER MARINE
METEOROLOGICAL INFORMATION DURING AUTONOMOUS ICE
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