



SUMMARY OF 2016 MARINE METEOROLOGICAL MONITORING SURVEY

1. BACKGROUND

The Marine Meteorological Monitoring Survey (MMMS) was conducted during the 4-month period from 1 March 2016 to 31 July 2016.

The survey results contribute to the following outcomes:

- To monitor the effectiveness of the weather and sea bulletins produced and transmitted by Meteorological Services;
- To understand the perception of mariners regarding whether Maritime Safety Information (MSI) services provided on GMDSS by Member States meet user requirements.

The results of the MMMS provide useful insight for review by METAREA coordinators and the JCOMM Expert Team on Maritime Safety Services (ETMSS). Some results may be analyzed against previous surveys conducted in 2013, 2011 and 2007.

The MMMS was conducted both online and in hardcopy forms in order to enable mariners to respond. The online survey was conducted using Survey Monkey. The data from online and hardcopy forms were combined to prepare the analysis of results. Vessels were recruited directly through VOS coordinators, METAREA and NAVAREA coordinators, and advertisement on WMO and relevant national websites.

A total of 476 mariners responded (534 in 2014; 445 in 2011) to the survey – 416 through the online form and 120 via the hardcopy form. 442 of the respondents represented SOLAS vessels while 34 represented non-SOLAS vessels. In some cases, respondents provided only a partial response to the survey.

Appendix 2 contains a full list of the questions of the survey while Appendix 1 contains the full text of written responses to those questions permitting text input.

2. SUMMARY OF MMMS

2.1 Overall Satisfaction

Overall, of the 340 respondents to the question on overall satisfaction (Q38) with MSI services, 67% identified as fully satisfied and 33% as somewhat satisfied. Only 1 ship reported as unsatisfied. The unsatisfied ship was a non-SOLAS vessel (ferry) operating in METAREA XI. They reported being somewhat satisfied with the most recent MSC forecast for wind speed, sea state and the warnings and provided no further comment regarding their overall satisfaction.

Many respondents provided commentary to Q38 with regards to their overall satisfaction. Generally, their comments reflected their rating of overall satisfaction as fully or somewhat satisfied. It was common for respondents to note the value of the MSI in planning their voyages to assure safety of vessel, cargo and crew. Some respondents noted particular issues with MSI information whether the quality of the forecast or the quality of the reception etc.

2.2. Overall Satisfaction by METAREA

Overall satisfaction is reported for METAREA's that received more than 10 responses. (This was determined by combining responses from Q32 and Q38.)

METAREA	% Fully satisfied	Count
I	83%	47
II	64%	11
III	70%	40
IV	84%	25
V	73%	64
VI	76%	17
VII	93%	15
VIII N	64%	22
X	65%	26
XI	76%	176
XII	81%	31
XIV	96%	23
XV	35%	121

Very occasionally the written responses to Q38 provide feedback on specific METAREAs; these comments provide both positive reviews as well as specific requests for improvement (e.g improved service in the Indian Ocean.)

2.3. Overall Satisfaction by Receiving System

Overall satisfaction by receiving system was determined by combining responses to Q32 and Q38. In many cases, respondents reported receiving the MSI from multiple systems leading to the large number of responses for this question.

Receiving system	% Fully satisfied	Count
Inmarsat (SafetyNet)	70	262
NAVTEX	65	110
HF	56	68
VHF	64	97
HF NBDP	79	14
Satellite Internet	69	81
E-Navigation	91	22

The written responses to Q38 provide only a couple specific comments on satisfaction by receiving system – noting the weatherfax service requires improvement and that it can take a long time to consult weather forecasts via Inmarsat-C.

2.4. Content of MSI Forecasts and Warnings

Forecasts

Q35: Would you say that the information you received about this element met your requirements?

	Fully met	Somewhat met	Count Not met	Total Count
Wind speed	67%	33%	0	338
Sea state	65%	34%	3	338
Reduced visibility	59%	39%	5	325
Sea-ice	59%	32%	9	94

The 17 vessels reporting that their requirements were not met were from 8 different METAREAS with METAREA XI being reporting most frequently – from 6 vessels. One vessel provided the comment that visibility was significantly reduced relative to the forecast as the reason it did not meet requirements; other vessels provided no explanations.

Twelve of the 17 vessels reporting a requirement for a forecast parameter was not met still identified as overall fully satisfied with the MSI forecast.

A number of respondents provided textual comments with this question. While these comments are overwhelmingly positive, some of the comments reflecting a need for changes include:

- Change formatting to make the information more easily accessible.
- Poor reception or availability of graphical forecast information in some places.
- Absence of observed conditions in MSI broadcasts in some places.
- For vessels of certain dimensions, swell information inside ports is important.

Warnings

Q36: Would you say that the information you received from warnings met your requirements?

No ships reported the warning information did not meet their requirements.

	Fully met	Somewhat met	Count Not met	Total Count
Warnings	68%	32%	0	336

A number of respondents provided textual comments with this question. The comments generally reflect the high degree of satisfaction (fully and somewhat met) with some suggestions for change including:

- Formatting the warnings to be more organized.
- Broadcasting weather conditions and warnings every one to two hours with frontal passages.
- Sometimes too many warnings are received (e.g. Vietnam coastal information.)

Report prepared under contract for the Marine Meteorology and Oceanography Programme of the World Meteorological Organization by Tim Goos (tim.goos@gmail.com).

2.5. Graphical Broadcast Information

Approximately 52% of vessels reported that they had access to MSI in graphical format(Q28). Based on comments, it is clear that the majority of these products are provided by private consultants or accessed directly from the internet.

Of the 52% of respondents that had access to graphical information;

- 60% reported that the graphical information fully met their needs, while 33% were somewhat met.
- 74% reported that the graphical information was very useful, while 20% reported it was somewhat useful.

A question was asked to the 48% of respondents that did not have access to graphical MSI about whether they would find weather overlays on navigation systems useful or not.

- 80% reported that they would find it useful, while 20% felt it would not be useful.

This result indicates that there is unrealized demand for graphical weather information, and that efforts to develop graphical products will be well received by mariners.

Commentary on graphical information generally reflect that graphical products are received from private sector providers.

3. PRODUCT AVAILABILITY AND SYSTEM PERFORMANCE

3.1 Percentage of Time That Each Receiving System Is Available to Access MSI

The following table highlights that text based sources of information (Inmarsat and NAVTEX) are the most available systems to vessels. Radio based systems are somewhat less available to vessels.

Substantially more than half of respondents indicated that satellite internet and e-navigation systems were available on their vessel; these systems are reported as being slightly more available than radio based systems in this survey.

	Continuously	Short periods	Once a day	Count
Inmarsat (SafetyNet)	86%	8%	6%	373
NAVTEX	80%	14%	5%	355
VHF	69%	22%	9%	328
HF	70%	17%	14%	293
Satellite Internet	75%	17%	12%	255
HF NBDP	71%	17%	12%	170
E-Navigation	75%	15%	10%	105

3.2 Availability at the Scheduled Broadcast Time

For Meteorological MSI received using SafetyNet, 96% of respondents rated the availability of information at the scheduled broadcast time as All the time or Usually. The radio based *Report prepared under contract for the Marine Meteorology and Oceanography Programme of the World Meteorological Organization by Tim Goos (tim.goos@gmail.com).*

systems (VHF, HF and HF NBDP) had the lowest percentage of respondents rating the availability as All the time or Usually – just over 80% for each of them.

	All the time	Usually	Sometimes	Count
Inmarsat (SafetyNet)	66%	30%	4%	368
NAVTEX	51%	44%	5%	355
VHF	47%	34%	20%	300
HF	50%	34%	16%	251
Satellite Internet	60%	30%	10%	232
HF NBDP	54%	25%	21%	138
E-Navigation	60%	28%	12%	92

3.3 Reception Quality

For Meteorological MSI received using SafetyNet, 99% of respondents rated reception quality as Good or Average; a similar value of 100% was recorded in 2013.

For Meteorological MSI received using NAVTEX, 97% of respondents rated reception quality as Good or Average. In 2013, 100% of vessels rated the reception of Navtex as Good or Average.

The percentage of respondents rating reception quality as poor is similar across all systems with HF NBDP being higher than all others and Inmarsat (SafetyNet) lower than all others.

	Good	Average	Poor	Count
Inmarsat (SafetyNet)	86%	13%	1%	367
NAVTEX	71%	26%	3%	356
VHF	71%	27%	2%	321
HF	63%	33%	4%	269
Satellite Internet	74%	24%	2%	244
HF NBDP	56%	35%	9%	158
E-Navigation	67%	29%	4%	96

4. USER ACTIONS

4.1 What actions did the ship take using the most recent MSI they received?

Q37 asked what actions the ship took using the most recent MSI received. A large number of respondents provided textual input to this question – see Appendix 1 for the full transcript.

Some of the common themes that emerge from these responses include:

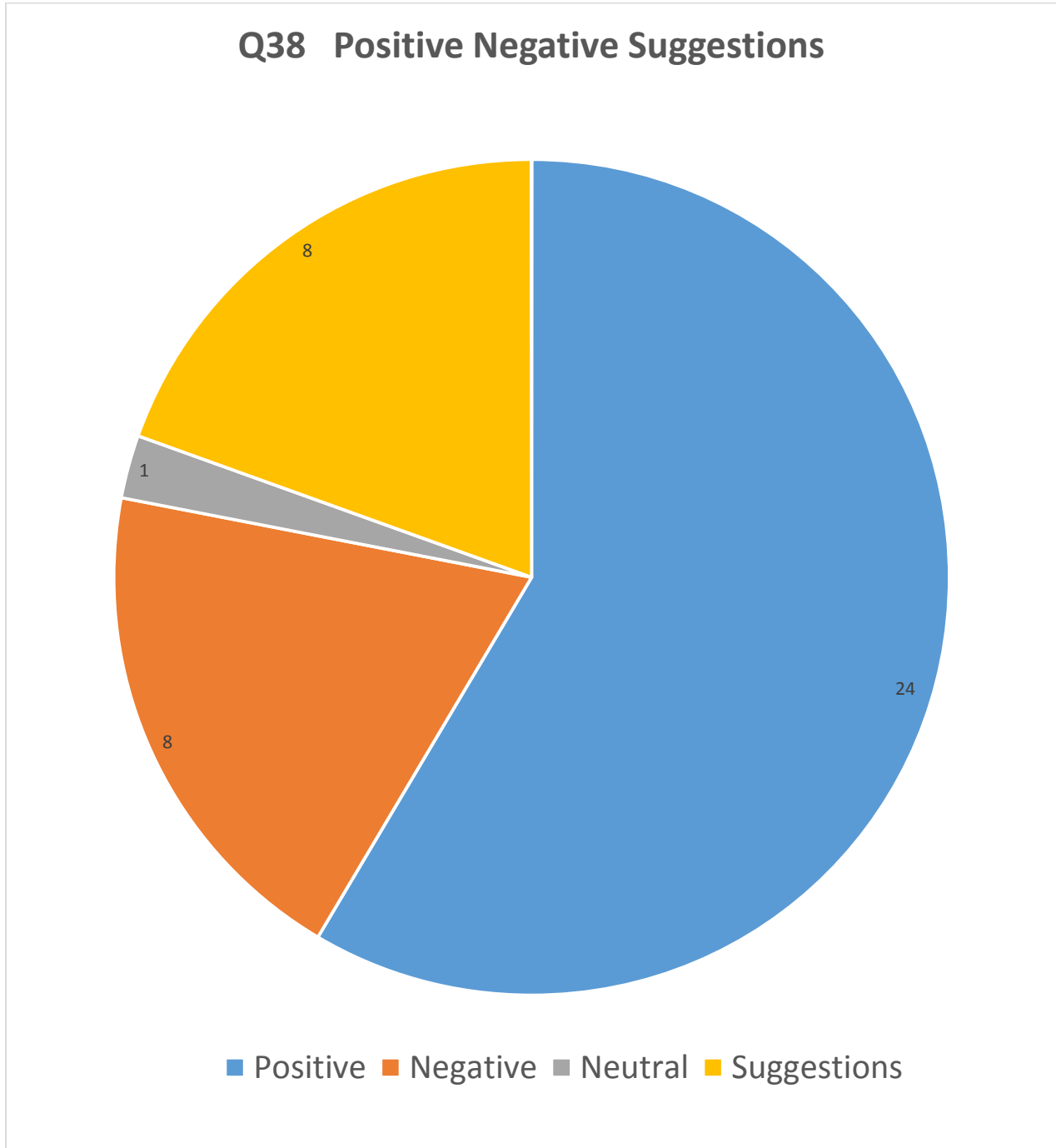
- Adjusting the ships planned route and speed – including avoidance of forecast poor weather, reduced visibility, etc..
- Plotting on ECDIS and redistributing the MSI information to other members of the crew.

- Enhanced monitoring of the weather and on board ship conditions as well as updated MSI information.
- Prepare the ship and cargo for the forecast weather.e.g. close open decks for strong wind, reefed early based on forecast of severe gusts.
- Plot the position of Low pressure areas on chart relative to own vessel; continuously monitor via MSI messages.

Appendix 1

Q38: PLEASE COMMENT ON THE OVERALL LEVEL OF SATISFACTION REGARDING THE MSI RECEIVED MOST RECENTLY

ADDITIONAL SENTIMENT ANALYSIS



POSITIVE RESPONSES

- 1 Very satisfied and helpful**
- 2 MSI is useful for passage planning to avoid navigating in areas with adverse weather**
- 3 Information received has been very helpful in planning our voyage**
- 4 Useful when we have tropical depressions/storms. Provides sufficient detail.**
- 5 It met the requirements we need for safety to navigation.**
- 6 MSI are very useful tool for safety of navigation. So far, area coverage is good and vessel is satisfied with the MSI received.**
- 7 Vessel could well plan the route with anticipation basis on weather forecast ahead.**
- 10 MSI provides valuable information for vessel routing.**
- 15 Most recent forecasts received accurately reflected the experienced conditions.**
- 17 Through MSI, all ships navigating in a certain area are being informed of all available navigational and meteorological warnings/forecasts as well as any distress alerts and other urgent safety related information which are very useful for the safety of navigation.**
- 20 Maritime safety information is vital concern to all ships.**
- 21 Fully satisfied and very useful to all vessels navigating around the world.**
- 22 Helpful in navigation**
- 24 The MSI that vessel receiving are very timely, informative and it is really a great help for the "SAFETY" of navigation, vessel, its cargo and her crew.**
- 26 Generally, MSI received are very helpful in navigation. Recent MSI received (Metarea XII) are reliable since this is a US-based station.**
- 28 It's very useful info for considering nav. plan because of timely update and accurate.**
- 33 Servicio Meteorologica de la Armada de Chile entrega informacion adecuada y acertada, lo que permite una ayuda a la planificacion y la navegacion.**
- 34 As a master, it is my main concern to keep safe navigation while maintaining vessel's schedules. Various weather information and advance warnings help me to plan ahead and act accordingly.**
- 35 Complimented and validated information from other sources.**
- 36 It will improve sea safety**

- 37 As expected and observed weather wise. Safety information corresponds with the various sources.
- 38 All received MSI are satisfactory it provides vital information and weather precautions all the time.
- 39 Received MSI in General were very satisfactory. It provides vital information for all ships operating in a particular METAREA.
- 40 Since the vessel trades only across the Bass Straits, the MSI information helps us to carry our cargo safely across the Straits. By obtaining information on the wind and sea state, the vessel can accordingly choose her route thereby avoiding damage to cargo. Also the vessel carries cattle across the straits on a daily basis and the weather information received helps us to decide whether to accept cattle for carriage thereby avoiding loss and damage to cattle.

NEGATIVE RESPONSES

- 8 Wide area, not accurate
- 9 Navtex is poor; others are alright.
- 16 It takes a long time to consult INM-C messages.
- 18 Sometime we receive same messages many times.
- 19 Poor visibility forecast incorrect. Visibility was significantly reduced compared to forecast.
- 27 Mostly weather predicts turns good however sometime fog warnings / sea conditions are not accurate and reliable.
- 29 Some time, actual wave height is different from forecast one.
- 32 We receive same information several time. It's a waste of time.

SUGGESTIONS

- 11 for vessels of our dimensions (LOA 300 m BOA 42 m), swell information inside ports is important too
- 12 good accuracy and timely weather information, need to improve power on image broadcasting and more frequently bulletins issues, requested to display forecast conditions on electronic navigation charts
- 13 no images reception between Los Vilos to Coquimbo, more frequently broadcasting needed
- 23 Plotting on the chart
- 14 Want more weather charts of all ocean regions.
- 25 METAREA X, WESTERN area should be divided by two as NORTH WESTERN and SOUTH WESTERN same as East Coast of Australia.

- 30 The MSI need to be improved in Indian Oceans, the weather Fax service is poor, we have to wait WNI to send fax/ wx message .
- 41 MSI info as supplied by AMSA does not include weather and the user must consult two (or more) sources to get weather and nav warning for Area X

NEUTRAL

- 31 Este Navio passa curto tempo no mar, porisso pouco se usou o recebimento por satélite.

CONCLUSION

The most relevant responses are (colour linked to graph):

■ POSITIVE

1. MSI are very useful tool for safety of navigation. So far, area coverage is good and vessel is satisfied with the MSI received.
2. MSI provides valuable information for vessel routing.
3. Since the vessel trades only across the Bass Straits, the MSI information helps us to carry our cargo safely across the Straits. By obtaining information on the wind and sea state, the vessel can accordingly choose her route thereby avoiding damage to cargo. Also the vessel carries cattle across the straits on a daily basis and the weather information received helps us to decide whether to accept cattle for carriage thereby avoiding loss and damage to cattle.

■ NEGATIVE

4. Want more weather charts of all ocean regions.
5. Poor visibility forecast incorrect. Visibility was significantly reduced compared to forecast.
6. Mostly weather predicts turns good however sometime fog warnings / sea conditions are not accurate and reliable
7. Some time, actual wave height is different from forecast one.

■ SUGGESTIONS

1. METAREA X, WESTERN area should be divided by two as NORTH WESTERN and SOUTH WESTERN same as East Coast of Australia.
2. The MSI need to be improved in Indian Oceans, the weather Fax service is poor, we have to wait WNI to send fax/ wx message .
3. MSI info as supplied by AMSA does not include weather and the user must consult two (or more) sources to get weather and nav warning for Area X

4. no images reception between Los Vilos to Coquimbo, more frequently broadcasting needed

Appendix 2

MMMS Text Input

This Appendix contains the full responses from questions enabling text input in the survey. The simplest text responses (i.e. single word responses like "good" or "none" etc.) have been omitted.

Question 13

- Magallanes Radio out of service ceased transmissions
- Also receive MSI on Inmarsat C
- HF and HF NBDP is rarely used but satellite is regularly used
- CHARTCO
- We get the weather forecast through WNI
- Satellite Internet onboard should be available continuously for accessing MSI.
- Using SAT C
- No other available source except for above.
- Weather Facsimile
- By Inmarsat-C & NAVTEX
- Other sources such DC operation is only available for little time.
- Facsimile receiver SPOS via e-mail continuously available
- FAX
- Monitoring
- EGC message
- Satellite internet - Receive MSI from company
- Whenever broadcast is made by Coastal Station.
- Radio Facsimile - Short Period of Time (Once a day)
- During coastal passage, MSI Available on VHF.
- Vessel can access MSI if provided by satellite internet
- DOSCA being used on the vessel. Data is sent via e-mail and the frequency and content can be set by user.
- DIGITRACE program (Marine Press of Canada)
- Vessel receives updates daily from chart co provider.
- MSI are received through SAT-C and NAVTEX
- MSI received on SAT-C and NAVTEX are continuously available.
- Spark internet when in range
- Vessel trades coastal bass trade. VHF available when coasting. HF is continuous. SAT internet on departure for about 2 hours.
- METAREA V website www.mar.mil.br
- redundant on North American coasts
- the service is good in availability.
- SPOS software in use
- use MNI forecast, bridge and DOSCA programs
- when satellite connection is good, we can access the MSI pretty well.
- HF, VHF, HFNBDP are not used frequently to access MSI.
- Vessel transiting non NAVTEX station area. Vessel satellite system is dial up system and receive only weather messages and weather monitoring.
- We have Bon Voyage by Applied Weather Technology.

Question 14

- broadcasts only when applicable.

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- Sometimes we receive them with a delay
- SPOS software available all of the time
- it is available two times per day
- NAVAREA warning available regularly to download via internet
- applied weather technology
- weather fax is also available at scheduled times
- Yes, through weather routing service, regular reception
- We get regular update from WNI
- Usually only if VHF is received.
- Using SAT C
- By Inmarsat-C & Navtex
- Facsimile receiver SPOS via e-mail continuously available
- Yes, they are available at the scheduled time.
- Radio Facsimile – Usually
- E-mail transmission always transmitted on time.
- HF, VHF & HF NBDP depends on range.
- MSI are received all of the time in SAT-C and NAVTEX
- MSI are received through SAT-C and NAVTEX

Question 15

- updated daily on time
- good in coastal waters
- the quality is average
- Good reception on SAT-C as well as NAVTEX
- different broadcast via marine radio coastal network
- VHF if in range
- Good on weather fax and Inmarsat C
- VHF channel is occupied by coastal port/pilot channel
- VHF has good reception quality.
- Using SAT C
- Sometimes reception may vary depending on the location and weather condition.
- Received by INMARSAT & NAVTEX
- Facsimile receiver SPOS via e-mail continuously available

Question 25

- Bon Voyage 6.0 can give an actual real time weather forecasts.
- very good quality
-

Question 26

- Bon Voyage 6.0 can give an actual real time weather forecasts.

Question 27

- Bon Voyage 6.0 can give an actual real time weather forecasts.

Question 30

- could be an improvement in the usage of a high quality graphic chart of weather.
The present one is pretty simple.

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- Vessel has weather facsimile for graphical information.
- Graphics supplied by Bon Voyage by applied Weather Technology
- We are downloading weather charts from JMA(Japan) and BOM(Australia)'s web site.
- There are some places where signals cannot be reached by the graphical MSI device.
- important issue for operation planning
- Vessels receives NAVAREA warnings from chart Co which are displayed graphically for ease of access. Also our NAVTEX feeds into the ECDIS so MSI can be viewed on an easy location basis.
- Prediction charts are very useful and user friendly.

Question 35

- helpful in voyage monitoring
- sometimes the wind direction is totally different from the real situation
- information is reliable
- information was accurate and comprehensive.
- The forecasts are relatively accurate. Sometimes the forecast doesn't correspond with reality.
- Could be laid out better so it easier to find
- The forecasts received are accurate and helpful.
- Weather we received coincided actuality
- good reception no mistakes
- vessel is not operating on iceberg concerned areas
- It takes a long time to consult INM-C messages
- Weather forecasts received are accurate and give allowable time to the master to address any concern regarding any weather warnings which can affect the voyage
- Summer season and Ice report not required in current area and current voyage.
- Forecast timely received as per schedule
- Forecast is good
- Satisfied with the forecast and almost 90% accuracy.
- We regularly call Dampier, Australia which is belong to WESTERN area in METAREA X. However WESTERN area is covered extensive area, thus most of information are not applicable for us.
- Forecasts received are somewhat exactly in the actual.
- The Forecast is met with information given by MSI.
- Sea-Ice not applicable in present area of navigation.
- We appreciate if we can prospect Rain fall on day to day job.
- complete weather forecasts received via Internet, however weather FAX in Indian Ocean is not sufficient (poor signal of coastal stations). No graphical information available via SafetyNet.
- The weather forecast normally have small different in the actual condition the vessel is experiencing.
- Sometimes forecasts information met our requirements
- UK based data - VHF forecasts are usually highly accurate.
- Received forecast information received are very satisfactory.
- Satisfactorily received all needed forecast.
- No mention of smoke due to bushfires in forecasts
- The predictions are pretty accurate with wind direction and speed and swell indication.
- Typical MSI from AMSA does not show weather info, only safety and nav warnings, weather info arrives via Inmarsat (BOM) or Sat internet

Question 36

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- the formatting could be a little more organized.
- Information is reliable.
- Yes. Warnings help a lot with the planning daily.
- The warnings help ensure safe navigation and care for cargo
- Received warnings very important for safe navigation
- broadcasting of severe weather conditions and warnings every one-two hours, during the frontal pass
- Graphical information's are easily consulted.
- Navigational warnings give us specific details of exercises being done in a certain area and updates regarding weather forecasts.
- Sometime we receive too many Nav. warning messages from Vishipel by EGC regarding Vietnam coastal information.
- Warnings often repeated, errors contained in messages
- Warnings were published as required
- Warnings for gale force winds in the Baltic on the 18th June was received and was very accurate.
- Navigational warnings are reliable information which may have a direct bearing on the safety of life at sea.
- Warnings are very useful for vessel safety precautions.
- Forecast warnings are sometimes not accurate to the actual condition.
- With the warnings we received, we can anticipate and make preparations accordingly.
- The forecasts warning met almost our requirements
- All received MSI are vital to the operation of vessel in a particular METAREA.
- Yes, warnings met our requirements.
- met regarding safety and nav warnings
-

Question 37

- Update correction/position updating. Plot in local charts.
- Monitoring/observation
- Filing/records keeping
- Continuous performing radio watch
- Inform the Master at all time Distress alert/urgencies/safety information.
- Record in the GMDSS logbook
- Considered for the remaining leg of the voyage
- Monitor and adjust route to escape warnings
- Secured cargo on ship due to high waves chart
- Check what is the coverage of the MSI received (charts, nautical publications, etc.) and update them or make the crew aware of.
- Ship prepared for fresh weather
- verified and confirmed if the ship is affected
- Read carefully by all deck officers and Master and apply for the specific sailing area
- Take some precautions if we read any bad weather/safety info.
- The vessel's passage plan can be changed for safer navigation according to the received MSI.
- Identified warning areas, logged MS warning
- Plotted on ECDIS
- Use met information for routine guidance
- Verified and plotted along ship program. Continuous monitoring while on passage.
- Applied all applicable MSI and keep all parties informed.
- Nothing because it doesn't affect our present voyage.

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- Proved invaluable in planning maintenance work was as work aloft and tank inspection
- Vessel took heavy weather precautions
- Compare to the actual observation on board
- Highlight relevant section and posted on the bridge
- Appropriate action to safeguard the ship and crew
- Great for route and speed planning
- Monitor weather carefully
- Check the weather ahead of the voyage.
- The vessel has carefully studied the weather and sea conditions with respect to the current route.
- Checked type of MSI, if necessary marked on chart.
- we have on board the vonboyage 6.0
- all ships should have radiofacsimile receptors
- ship sent her voluntary weather observations when the vessel is at high seas, no during coastal navigation
- good information to use on navigation
- Noted and distributed information in bridge team
- for vessels of our dimensions, swell information inside ports is important too
- We make a route plan.
- Continued on passage
- more iceberg than seasonal were detected
- Check and use it for safety navigation.
- Compared with information received from weather routing services
- Checked the coordinates in the navigational chart and confirm if the navigational warning can be encountered during the voyage.
- Checked and compared with present actual weather in current areas and monitored
- Check the location if it will affect the safe operation/navigation of the ship
- Vessel checked if MSI received is applicable to vessel's route, and detailed MSI report is used as an additional safety information for the duration of the voyage.
- Monitoring, routing by means INM-C, weather forecasting
- Monitoring routeing of every voyage. By means of Inmarsat C.
- We considered navigational route.
- Received buoy condition (unlit) information by NAVTEX and plotted it on ECDIS.
- Altered the course of the vessel more towards
- Plotted/noted on applicable voyage charts the coast
- Meteorological situation update, share between officers
- Ship read the Hong Kong Meteorological warning/information, and filed the printout in the daily folder.
- as per safety procedure close open decks for strong wind
- Kept into consideration and planned accordingly.
- Continuous monitoring of MSI.
- carried on sailing as normal
- Navigate to safe areas
- Forecast helps in identifying / adjusting the ship operations vessel can do in that particular period of the MSI.
- We save on the Navtex the MSI and each watch can check the weather information in every moment
- We secured the ship for expected heavy weather and strong winds across the deck.
- Checked information in relation to ship's location and route.
- Check information, if effective our voyage report to master
- Verified information and relevant data's plotted on chart
- Broadcast message / information applies necessary for the safe navigation.

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- When we had the most recent MSI Officer In-charge of the Navigational Watch metaphorically comprehend the data provided by the INMARSAT considering therewith the company's underlying norms. Currently our vessel is navigating eastbound in the East Coast of South Africa experiencing Force 6 NNE wind; rough seas with moderate swell no deviation from the vessel's original course and continuous monitoring of weather is initiated.
- Plot on the chart if it is in the vicinity of the vessel's present position.
- Heads to ship safety area
- Plotting the position broadcasts on voyage charts, as well as monitoring forecasts, once done, we filed it on binder and kept onboard.
- Forecast and compare with our weather service information.
- Monitoring weather, confirmation of urgent Safety-related information and note navigational warning to our passage plan.
- Taking into account. Deviate from initial way if required.
- Taking Sails Away en change course
- Weather monitoring
- Efficient voyage plan
- Keep monitoring of MSI received.
- Company policy / Safety way
- Sailing while in reference
- Master and Officer of the watch always monitor MSI for the area in which the vessel is navigating. Second officer maintain the file for tracking of navigation warning.
- Plotted on affected charts and copy filed onboard
- Depend on message, but we will consider MSI and then consult with office
- Monitoring
- Monitored applicable message on ship voyage and plot applicable information on charts
- We check it and compare it on actual weather, plot it on the chart affected as necessary and advise precautions to all crew as required.
- No actions were required.
- Preparation for heavy weather sailing.
- Take necessary actions to avoid bad weather warnings received in the forecasts.
- Compared information with our observation data.
- Weather predicted met the on scene weather therefore it helps in planning shipboard operations.
- We fully checked and determined if it is relevant to recent condition and after we make filling and take any substantial action in regards with meteorological information.
- Check the contents and compare with other weather forecast system.
- Nil action taken, as weather did not affect voyage
- No took action just information for our navigation.
- we are always read the MSI, give a signature and keep the file in our filling folder
- No action taken as the recent weather information is favorable to our ship.
- Monitor the Weather reports received closely and verify for the predictions and if require to take evasive action to avoid heavy weather.
- Vessel monitors the wx.
- Kept a close watch on the present and upcoming weather as per MSI.
- Analysis, planning & record keeping.
- Under stood weather pattern for the further voyage. All Conditions of weather pattern found favorable.
- Noted and checked with actual weather condition and found information received is accurate.
- Read, check, apply, record, and file

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- No actions taken as none were required.
- Checked message and if any warning for navigation, acted accordingly.
- Input chart
- Re- planning the course lines and ship's speed.
- Reefed early based on forecast of severe gusts.
- No action, good weather.
- Adjusting Voyage Plan as per receive information.
- nothing because the weather was fine and it wasn't necessary do something.
- Have read and noted.
- Check latest forecast and compare it with passage route
- Check weather or safety information
- Just received.
- Prepared vessel for navigation through Fog.
- Voyage plan reassessment
- Monitor weather.
- Plot the position, verify if it is relevant to the vessel. and brief all watch keepers.
- Plan & Discuss weather effect on vessel's route
- The position of Low pressure was plotted on chart relative to own vessel. The track of the LP is continuously monitored via MSI msgs.
- Passage planning
- Checked the weather forecast
- Not required any action.
- Reduced the speed / measures for safety of crew, vessel and cargo.
- CONCURRE A LA EMERGENCIA
- Foi consultado as informações e apresentado a bordo
- change the course
- Analysing weather charts/forecasts to evaluate weather condition.
- Change course or/and reduce RPM
- So far none. We are having a good weather and sea conditions so far.
- Share the information amongst OOW, and call attention.
- AYUDA LA PLANIFICACION DE LA NAVEGACION
- Checked information
- Avoid high sea area, Change ships schedule
- NAVTEX - Setting the appropriate station for the intended voyage.
- Nothing particular.
- We would avoid it if it will affect to our navigation.
- Trying to avoid bad weather areas.
- Adapt course and speed
- Cross check with other sources of information
- Read & apply
- Moored in sheltered quay.
- Keep the same way.
- Prepared vessel for incoming weather
- Monitoring of meteorology for planning the ship's course
- no action required
- The security for navigation
- received through the Inmarsat C
- Considerarlo para planificacion de zarpe y recalada.
- Warnings
- It depends from weather conditions.
- modify routes
- Continued on passage, no diversions required, weather favourable.
- We docked earlier because bad weather.

- Navigators read them, and checks them up against weather forecast from Hopen/Bjørnøya met.
- used to plan the voyage
- None vessel in good weather and coastal waters.
- Continued passage as forecast was within limits
- Evaluate and use it as important information for current and planned operations or when the vessel is underway.
- Adjusted berthing requirements to suit the prevailing conditions
- Became weatherbound
- Usual precautions subject to circumstances.
- All received MSI are checked thoroughly. all vital information's are checked twice and plotted on the ships ECDIS (Vessel is paperless).
- All received MSI are checked thoroughly. All vital information's are being checked twice. Any developing nearby weather disturbance are being plotted on the ships ECDIS (Vessel is paperless).
- Monitored
- Keep vessel in safe (safety first)
- - Check if the message interest our navigation area; - If interest our area, mark on the ECDIS and Paper charts, - Collect the message in the dedicated binder (if interest our navigation or not)
- None required
- Try to avoid areas of bad visibility due to bushfires
- Vessel used the information to decide whether to take the normal sailing route or used bad weather track. Vessel also uses to decide whether to accept cattle for shipping or not based on the MSI information received.
- Checked and signed
- We didn't leave from the port because the weather was bad.
- act accordingly
- Weather routing
- Adjust speed

Question 38

- Very satisfied and helpful
- MSI is useful for passage planning to avoid navigating in areas with adverse weather
- Information received has been very helpful in planning our voyage
- Useful when we have tropical depressions/storms. Provides sufficient detail.
- It met the requirements we need for safety to navigation.
- MSI are very useful tool for safety of navigation. So far, area coverage is good and vessel is satisfied with the MSI received.
- Vessel could well plan the route with anticipation basis on weather forecast ahead.
- Wide area, not accurate
- Navtex is poor; others are alright.
- MSI provides valuable information for vessel routing.
- for vessels of our dimensions (LOA 300 m BOA 42 m), swell information inside ports is important too
- good accuracy and timely weather information, need to improve power on image broadcasting and more frequently bulletins issues, requested to display forecast conditions on electronic navigation charts
- no images reception between Los Vilos to Coquimbo, more frequently broadcasting needed
- Want more weather charts of all ocean regions.
- Most recent forecasts received accurately reflected the experienced conditions.

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- It takes a long time to consult INM-C messages.
- Through MSI, all ships navigating in a certain area are being informed of all available navigational and meteorological warnings/forecasts as well as any distress alerts and other urgent safety related information which are very useful for the safety of navigation.
- Sometime we receive same messages many times.
- Poor visibility forecast incorrect. Visibility was significantly reduced compared to forecast.
- Maritime safety information is vital concern to all ships.
- Fully satisfied and very useful to all vessels navigating around the world.
- Helpful in navigation
- Plotting on the chart
- The MSI that vessel receiving are very timely, informative and it is really a great help for the "SAFETY" of navigation, vessel, its cargo and her crew.
- METAREA X, WESTERN area should be divided by two as NORTH WESTERN and SOUTH WESTERN same as East Coast of Australia.
- Generally, MSI received are very helpful in navigation. Recent MSI received (Metarea XII) are reliable since this is a US-based station.
- Mostly weather predicts turns good however sometime fog warnings / sea conditions are not accurate and reliable.
- It's very useful info for considering nav. plan because of timely update and accurate.
- Some time, actual wave height is different from forecast one.
- the MSI need to be improved in Indian Oceans, the weather Fax service is poor, we have to wait WNI to send fax/ wx message .
- Este Navio passa curto tempo no mar, porisso pouco se usou o recebimento por satélite.
- We receive same information several time. It's a waste of time.
- Servicio Meteorologica de la Armada de Chile entrega informacion adecuada y acertada, lo que permite una ayuda a la planificacion y la navegacion.
- As a master, it is my main concern to keep safe navigation while maintaining vessel's schedules. Various weather information and advance warnings help me to plan ahead and act accordingly.
- Complimented and validated information from other sources.
- It will improve sea safety
- As expected and observed weather wise. Safety information corresponds with the various sources.
- All received MSI are satisfactory it provides vital information and weather precautions all the time.
- Received MSI in General were very satisfactory. It provides vital information for all ships operating in a particular METAREA.
- Since the vessel trades only across the Bass Straits, the MSI information helps us to carry our cargo safely across the Straits. By obtaining information on the wind and sea state, the vessel can accordingly choose her route thereby avoiding damage to cargo. Also the vessel carries cattle across the straits on a daily basis and the weather information received helps us to decide whether to accept cattle for carriage thereby avoiding loss and damage to cattle.
- MSI info as supplied by AMSA does not include weather and the user must consult two (or more) sources to get weather and nav warning for Area X

Appendix 3

Survey Questions

This Appendix contains a list of the survey questions.

Q1: Basic Information: ship name, country of registry, departure/destination point, vessel size

Q2: Ship call sign

Q3: Type of activity: container, ferry, cruising, fishing, recreational, icebreaking, oil tanker, merchant, tug boat, other

Q4: Type of ship: SOLAS or non-SOLAS

Q5: SOLAS: Please specify all the METAREAS (from the given map) that your vessel operates within.

Q6: non-SOLAS: Please specify all the METAREAS (from the given map) that your vessel operates within.

SOLAS Section

Q7: To what extent of time is Inmarsat (SafetyNet) available to you to access Maritime Safety Information (MSI)?

Q8: Would you say that the MSI forecast you receive on Inmarsat (SafetyNet) is available at the scheduled broadcast time?

Q9: How would you rate the reception quality using Inmarsat (SafetyNet)?

Q10: To what extent of time is NAVTEX available to you to access Maritime Safety Information (MSI)?

Q11: Would you say that the MSI forecast you receive on NAVTEX is available at the scheduled broadcast time?

Q12: How would you rate the reception quality using NAVTEX?

Q13: What is the extent of available time to access MSI using other source types? (if any) (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)
Please comment on the extent of available time to access MSI using other source types.

Q14: Would you say that the MSI forecast you receive through other source types (if any) is available at the scheduled broadcast time? (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)
Please comment on whether the MSI forecast you receive through other source types is available at the scheduled broadcast time.

Q15: How would you rate the reception quality of the following other source types (if any)? (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)

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Please leave any comments regarding the quality of reception of other source types.

Non-SOLAS Section

Q16: To what extent of time is NAVTEX available to you to access Maritime Safety Information (MSI)?

Q17: Would you say that the MSI forecast you receive on NAVTEX is available at the scheduled broadcast time?

Q18: How would you rate the reception quality using NAVTEX?

Q19: To what extent of time is HF available to you to access Maritime Safety Information (MSI)?

Q 20: Would you say that the MSI forecast you receive on HF is available at the scheduled broadcast time?

Q 21: How would you rate the reception quality using HF?

Q 22: To what extent of time is VHF available to you to access Maritime Safety Information (MSI)?

Q 23: Would you say that the MSI forecast you receive on VHF is available at the scheduled broadcast time?

Q 24: How would you rate the reception quality using VHF?

Q 25: What is the extent of available time to access MSI using other source types? (if any) (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)

Please comment on the extent of available time to access MSI using other source types.

Q 26: Would you say that the MSI forecast you receive through other source types (if any) is available at the scheduled broadcast time? (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)

Please comment on whether the MSI forecast you receive through other source types is available at the scheduled broadcast time.

Q27: How would you rate the reception quality of the following other source types (if any)? (Choices: HF, VHF, HF NBDP, Satellite Internet, E-Navigation)

Please leave any comments regarding the quality of reception of other source types.

Common Section

Q28: Does your vessel have access to MSI in graphical format?

Q29: Would you say that the graphical information you received met your requirements?

Q30: Did you find this information to be useful?

Please leave comments or suggestions on how the service could be improved.

Q31: If you had weather (and/or ice where applicable) information overlays on ship navigation displays, would you find it as a useful tool?

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Q32: In which METAREA did you receive MSI most recently?

Q33: How did you receive the most recent MSI on your vessel?

Q34: On what date did you receive the most recent MSI?

Q35: Would you say that the information you received from these forecasts met your requirements?

Please leave any specific comments regarding the forecasts.

Q36: Would you say that the information you received from these warnings met your requirements?

Please leave any specific comments regarding the warnings.

Q37: What actions did the ship take using the most recent MSI you received?

Q38: Please comment on the overall level of satisfaction regarding the MSI received most recently.