QUALITY MANAGEMENT

3rd Session
EXPERT TEAM ON MARITIME SAFETY SERVICES

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Australian Bureau of Meteorology

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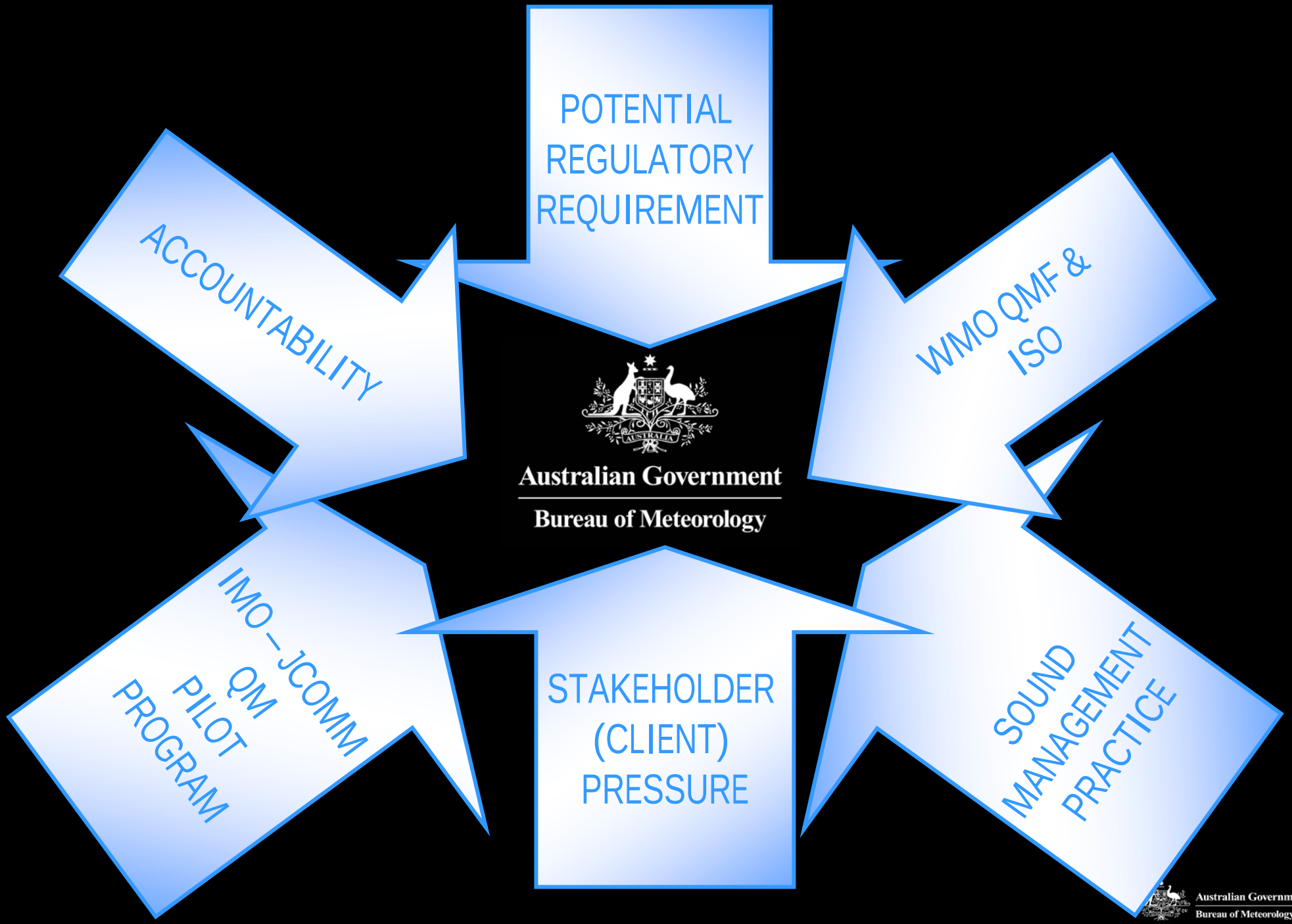
OVERVIEW

- The major drivers to adopt a quality management approach to the delivery of marine weather & ocean services
- Scope of the quality management system (QMS)
- Steps for implementation – a two phased approach
- Current status of the implementation
- The challenges

THE MAJOR DRIVERS


POTENTIAL REGULATORY REQUIREMENT
ACCOUNTABILITY
WMO QMF & ISO
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IMO – JCOMM QM PILOT PROGRAM
STAKEHOLDER (CLIENT) PRESSURE
SOUND MANAGEMENT PRACTICE

ACCOUNTABILITY

- **External reviews, internal & external audits provide greater credibility**

- **A QMS assists in meeting assessing the effectiveness of corporate governance requirements**

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SOUND MANAGEMENT PRACTICE

- A QMS presents a sound & credible management framework that:
  - can be audited by a 3rd party – ISO 9001
    - QM has the same corporate status as other fundamental management activities such OH&S
      - fundamental management tool in today's environment - a sound risk management strategy
        - provides a standard management framework for NMHSs

KEY STAKEHOLDER PRESSURE

Key stakeholders (in particular clients), are demanding greater financial accountability & QMS procedures & practices enhance this whilst providing greater transparency e.g. aviation industry, commercial weather service clients …

ECONOMY

+

Safety

QUALITY MARINE WEATHER & OCEAN SERVICES

WMO & ISO
~ WMO QUALITY MANAGEMENT FRAMEWORK ~

- WMO - ISO agreement: WMO now recognised as an International Standardization Organization
  - Strengthens the development of Standards & will avoid duplication of work on Standards related to meteorology, climatology, hydrology, observations
    - Appropriate WMO publications to be converted & approved by ISO as “joint” ISO-WMO Standards

WMO ICTT
QUALITY MANAGEMENT FRAMEWORK (QMF)

- **NMHSs encouraged to implement QMS … certification according to the ISO 9001 standard has an element of international credibility & recognition that must not be ignored”**

Abridged Final Report with Resolutions and Recommendations of the Fourteenth World Meteorological Congress (WMO-No. 972), Resolution 27

- **A Volume IV of the Technical Regulations on "Quality Management” has been developed – was ratified by EC in June 2010.**

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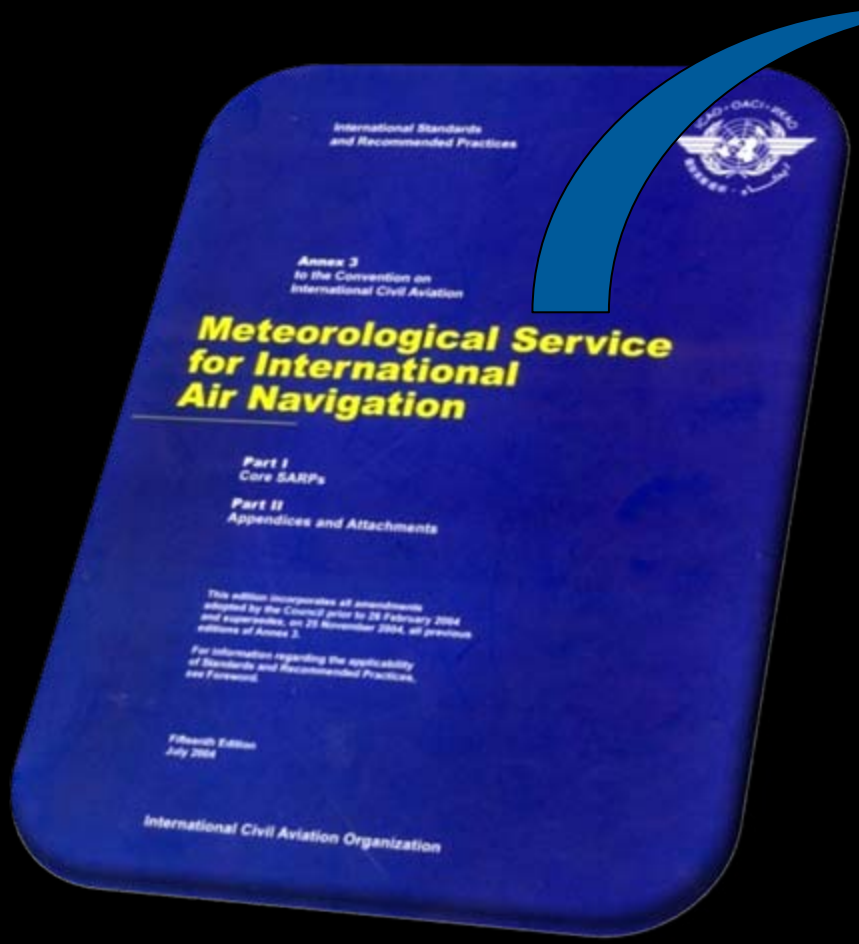
POTENTIAL REGULATORY REQUIREMENT



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“ 2012 - a Standard ”

2.2.3 ~~**Recommendation.—**~~ *The quality system established in accordance with 2.2.2* ~~*should be*~~ *shall be* in conformity with the International Organization for Standardization (ISO) 9000 series of quality assurance standards, and certified by an approved organization.

Annex 3 — Meteorological Service for International Air Navigation Chapter 2

World Meteorological Organization		Intergovernmental Oceanographic Commission (of UNESCO)	
JOINT WMO-IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM)			JCOMM-III/Doc. 11
		Submitted by:	WMO Secretary-General and UNESCO/IOC Executive Secretary
		Date:	3.VIII.2009
THIRD SESSION Marrakech, Morocco, 4 to 11 November 2009		Original Language:	English
		Agenda Item:	11.1 and 11.2

QUALITY MANAGEMENT

Appendix for information:
JCOMM-III/INF. 11: Report

DECISIONS/ACTIONS REQUIRED:

The Commission is requested to:

(a) Approve the draft text for inclusion in the general summary of JCOMM-III given in Appendix A;

(b) Adopt draft Recommendation 11/1 (JCOMM-III) - Implementation of Quality Management Systems for Met-ocean Data, Products and Services by Members/Member States given in Appendix B.

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11.1.2 The Commission agreed … on the establishment of an IMO/WMO World-Wide Met-ocean Information and Warning Service (WWMIWS), defines user/customer requirements for the provision of met-ocean services for international navigation (one of the eight quality management principles) … first step towards the establishment of standards/regulations for met-ocean services in accordance with ISO Quality Management Standards … adopted Recommendation 11/1 (JCOMM-III) – Implementation of Quality Management Systems for Met-ocean Data, Products and Services by Members/Members States.

DRAFT TEXT FOR INCLUSION IN THE GENERAL SUMMARY OF JCOMM-III

11. QUALITY MANAGEMENT *(agenda item 11)*

11.0.1 The Commission recalled with appreciation that JCOMM had for many years been engaged: (1) in the global coordination, standardization and regulation of the provision of marine meteorological services; and (2) in evaluating and setting recommended practices and standards for instruments, observations and data management. The Commission recognized that quality management issues related to instruments, observations and data management were discussed under the relevant agenda items. However, it agreed that the consideration of quality management aspects related to the delivery of met-ocean data, products and services would require a holistic approach and recommended that the JCOMM Management Committee develop a framework to address these issues in the overall context of developing standards and recommended practices on met-ocean data acquisition and delivery of services and products.

11.1 QUALITY MANAGEMENT SYSTEMS (QMS) FOR SERVICES AND THE WMO QUALITY MANAGEMENT FRAMEWORK (QMF) *(agenda item 11.1)*

11.1.1 The Commission recognized that the adoption of quality management principles,

11.1.3 The Commission decided that Quality Management (QM) principles and templates should be incorporated into the regulatory documents on met-ocean services as soon as possible, including in publication WMO-No. 558 (*Manual on Marine Meteorological Services*)

advances made in the relationship with ISO and the development of common best technical practices. The Commission also urged its members to become engaged with ISO national counterpart agencies for the development of standards of importance to Members/Member States.

11.1.5 The Commission noted with appreciation that the Australian Bureau of Meteorology had already commenced a quality management initiative and in doing so had achieved certification of

11.1.5 … Bureau of Meteorology had already commenced a quality management initiative ... achieved certification of compliance with the AS/NZS ISO 9001:2008 ... begun broadening the scope ... not only marine services but oceanographic services and the national tidal facility ... opportunity for a pilot study for the introduction of quality management into the oceanographic and marine meteorological service environment ...

… the results as a pilot, to assist other countries to implement their own quality management systems for met-ocean services.

POTENTIAL REGULATORY REQUIREMENT ...

11.1.3 ... Quality Management (QM) principles and templates should be incorporated into the regulatory documents on met-ocean services as soon as possible ...

SECTION C — M ETEOROLOGICAL SERVICES

[C.1] Chapter C.1 — Meteorological services for marine activities

[C.1.] 1 General

[C.1.] 2 Marine meteorological services for the high seas

[C.1.] 2.1 General responsibilities

[C.1.] 2.2 Provision of weather and sea bulletins

[C.1.] 2.3 Marine meteorological support to maritime search and rescue (SAR)

[C.1.] 2.4 Provision [illegible] ation b[illegible]adio-fac[illegible]ile

[C.1.] 2.5 Marine [illegible]matolog[illegible] Su[illegible]aries S[illegible]eme

[C.1.] 2.6 Special [illegible]arine clim[illegible]olog[illegible]a[illegible]nfo[illegible]a[illegible]on

[C.1.] 2.7 Provisio[illegible] of marine [illegible]eteo[illegible]olo[illegible] in[illegible]rmation and e[illegible]ert advice

QM ??

[C.1.] 3 Marine meteorological services for coastal and off-shore areas

[C.1.] 3.1 International responsibilities

[C.1.] 3.2 Regional cooperation

[C.1.] 3.3 National responsibilities

[C.1.] 4 Marine meteorological services for main ports and harbour areas

[C.1.] 4.1 International responsibilities

[C.1.] 4.2 General services 4

[C.1.] 4.3 Port Meteorological Officer (PMO) services

[C.1.] 5 Training in marine meteorology

[C.1.] 5.1 General

SECTION C — METEOROLOGICAL SERVICES

[C.1] Chapter C.1 — Meteorological services for marine activities

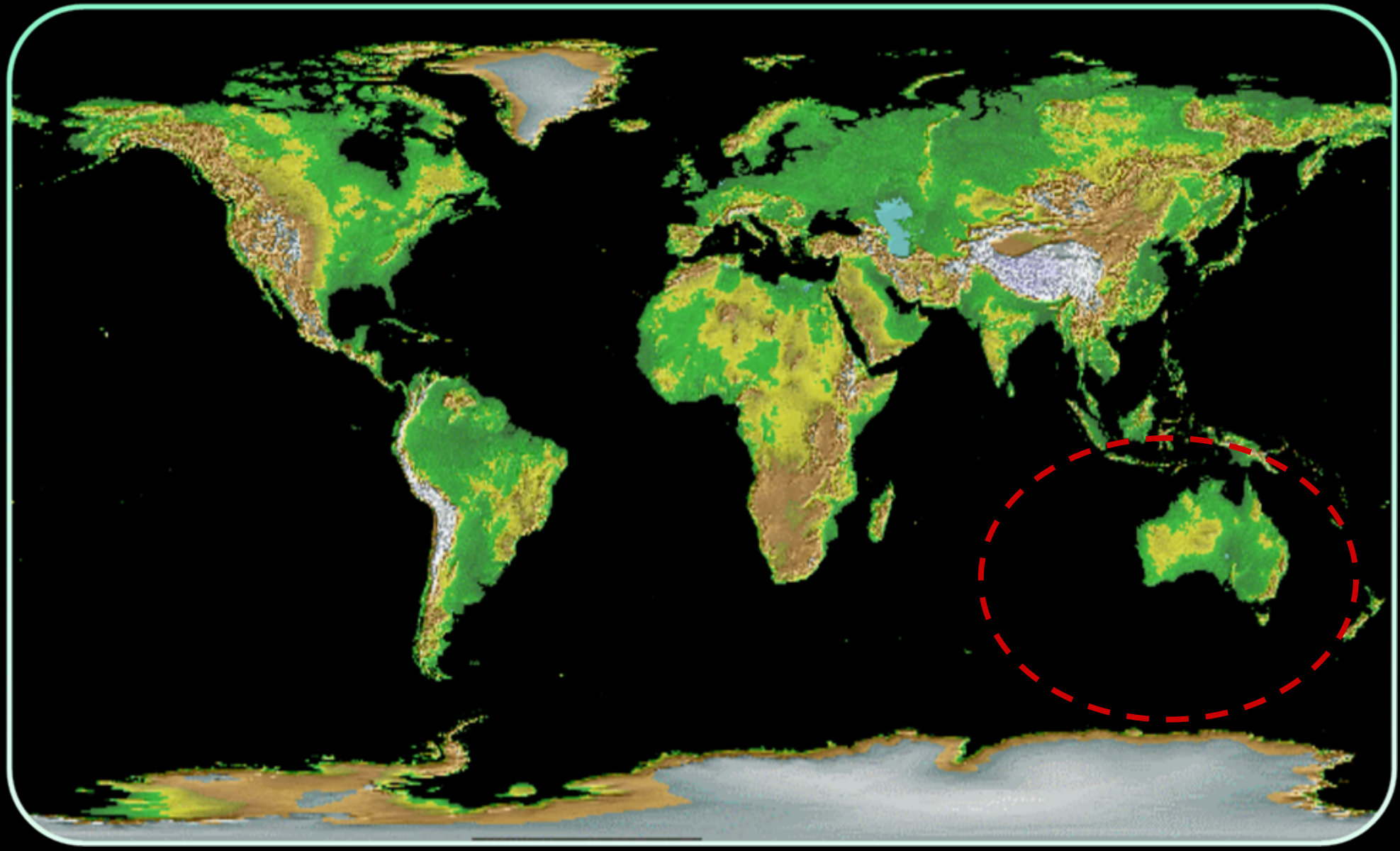
[C.1.] 1 General

PERHAPS .....

2.?.? *The quality system established in accordance with*

2.?.? ***shall be*** in conformity with the International Organization for Standardization (ISO) **9000** series of quality assurance standards, and certified by an approved organization.

SCOPE OF THE QMS



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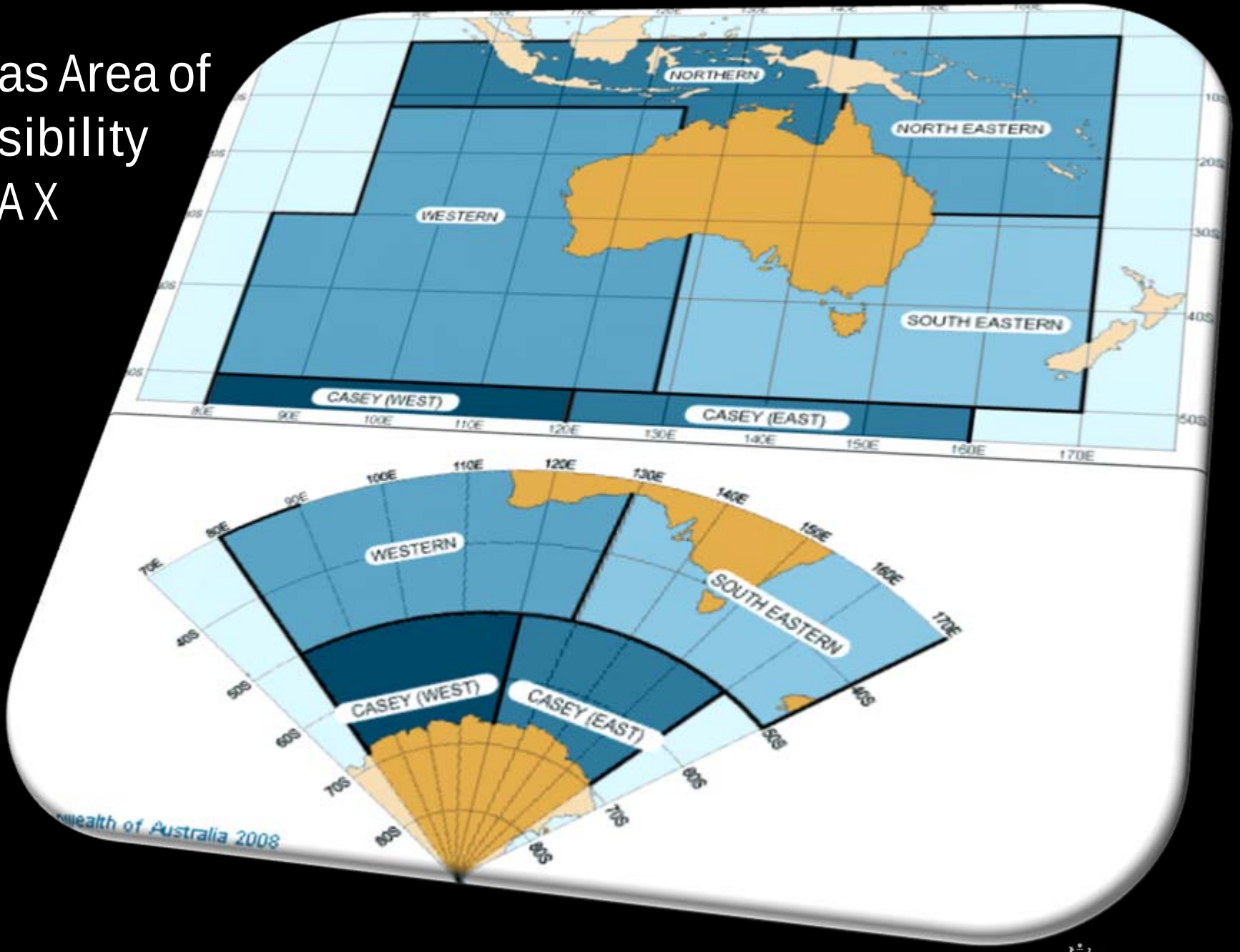
High Seas Area of Responsibility METAREA X



Coastal Waters Area of Responsibility

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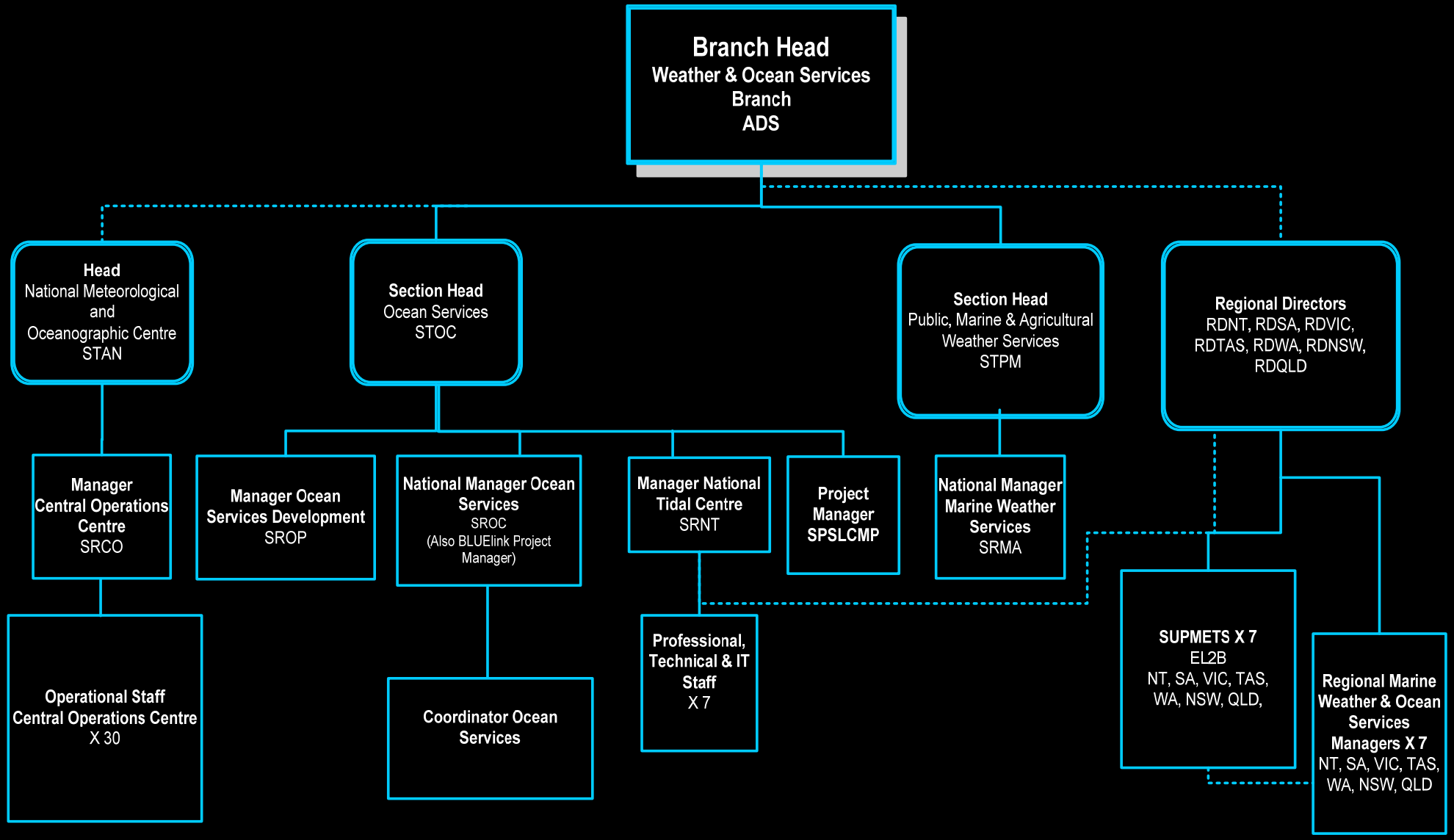
Implementation Philosophy

Achieve certification of the National Program Offices and Regional Executive & Program Managers to demonstrate leadership & commitment to the quality management approach to the delivery of marine weather & ocean services.

That is, lead by example!

Phase 1



Phase 1 Scope

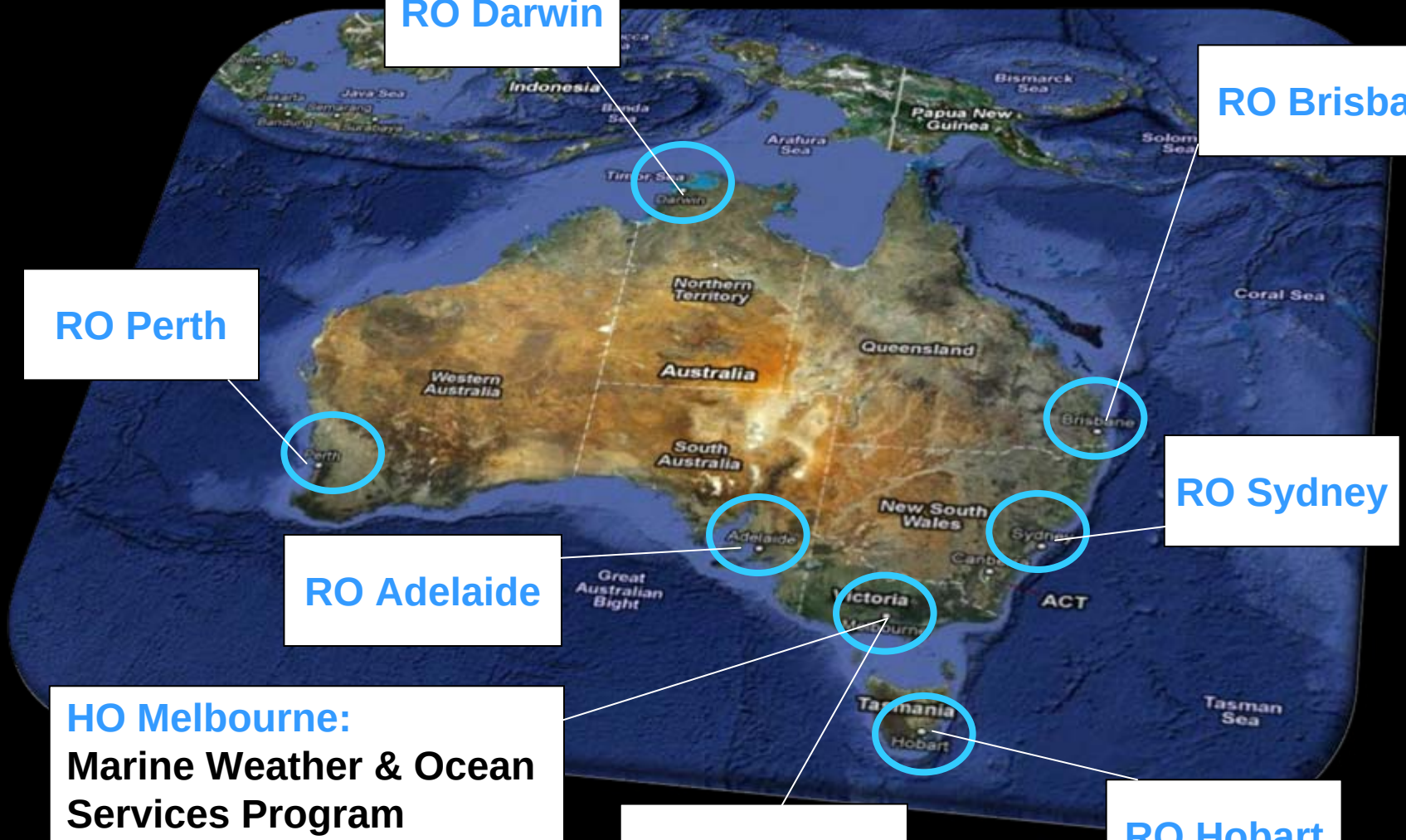
Head Office Melbourne

- Marine Weather Services Program Office
- Ocean Services Program Office
- National Meteorological & Oceanographic Centre (NMOC)
- Administrative Support

Regional Offices (RO) x 7

- RO Executive
- Marine Weather & Ocean Services Regional Managers

HO & RO Marine Weather & Ocean Services Management



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Phase 2 Scope – Regional Forecasting Centres

Regional Offices (RO) X 7

- **Regional Forecasting Centres in each Capital City**

  Hobart

  Melbourne

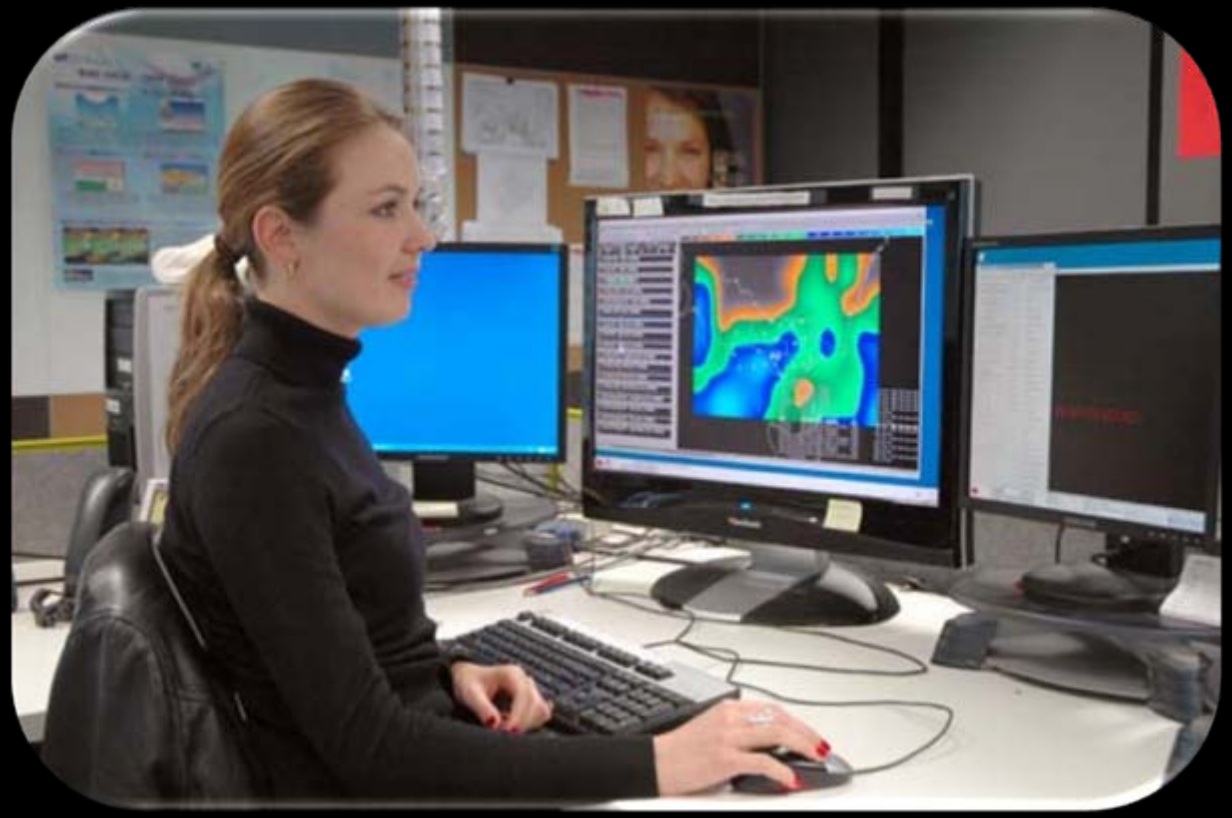
  Sydney

  Brisbane

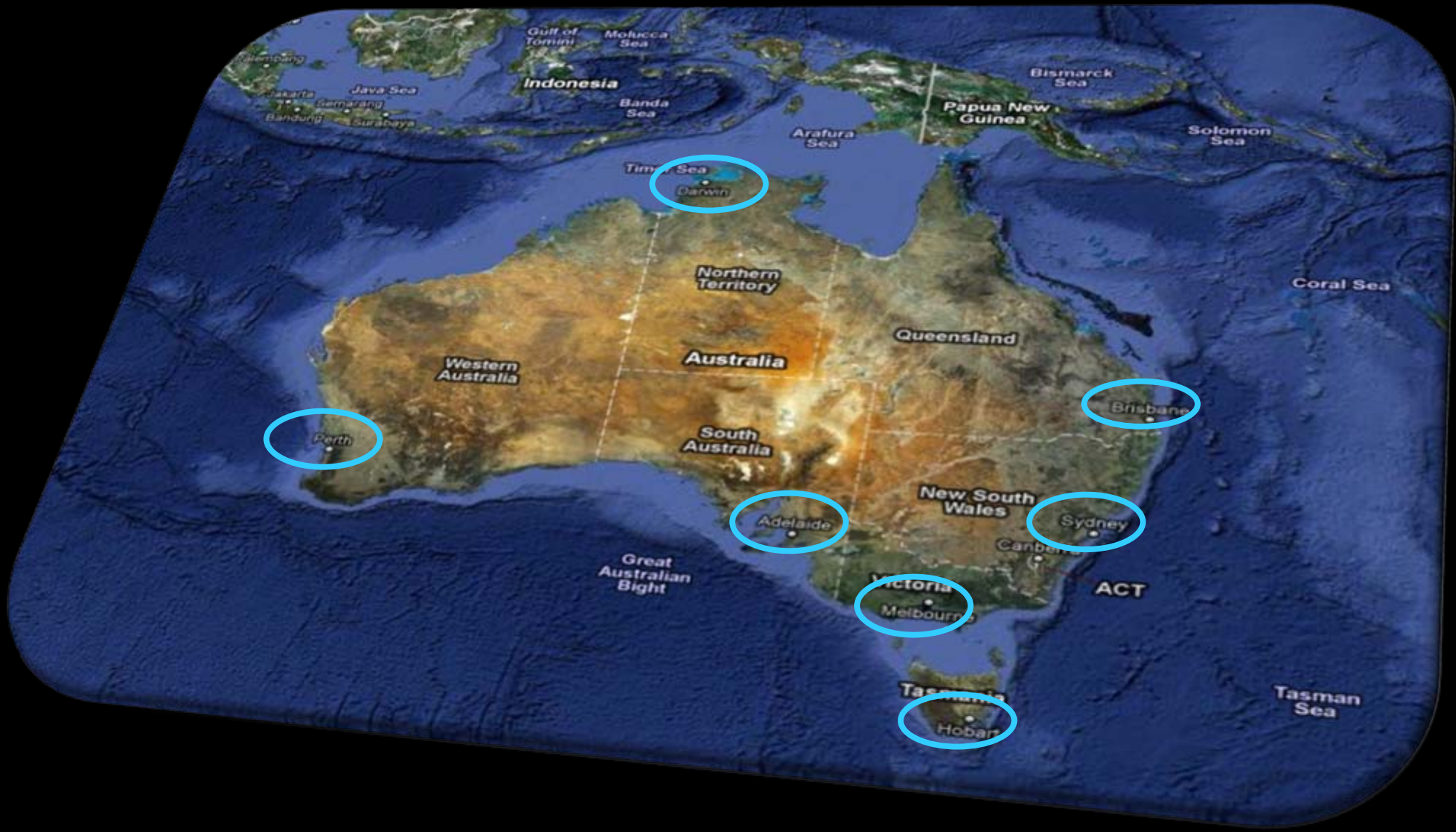
  Darwin

  Adelaide

  Perth



Phase 2 Scope



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STEPS FOR IMPLEMENTATION & CURRENT STATUS

Steps for implementation – Phase 1

- Obtain the full endorsement, support & active participation by the Director/CEO & organisation Executive

- Appoint an appropriate “full-time” Quality Manager

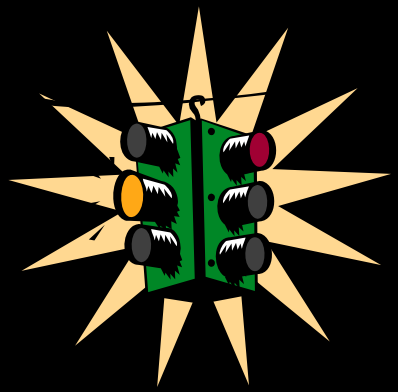
- Identify the scope for Phase 1 & Phase 2

- Identify a certification body that clearly demonstrates an ability to understand & align with your organisational culture

- Identify & provide comprehensive training for appropriate individuals to be internal auditors

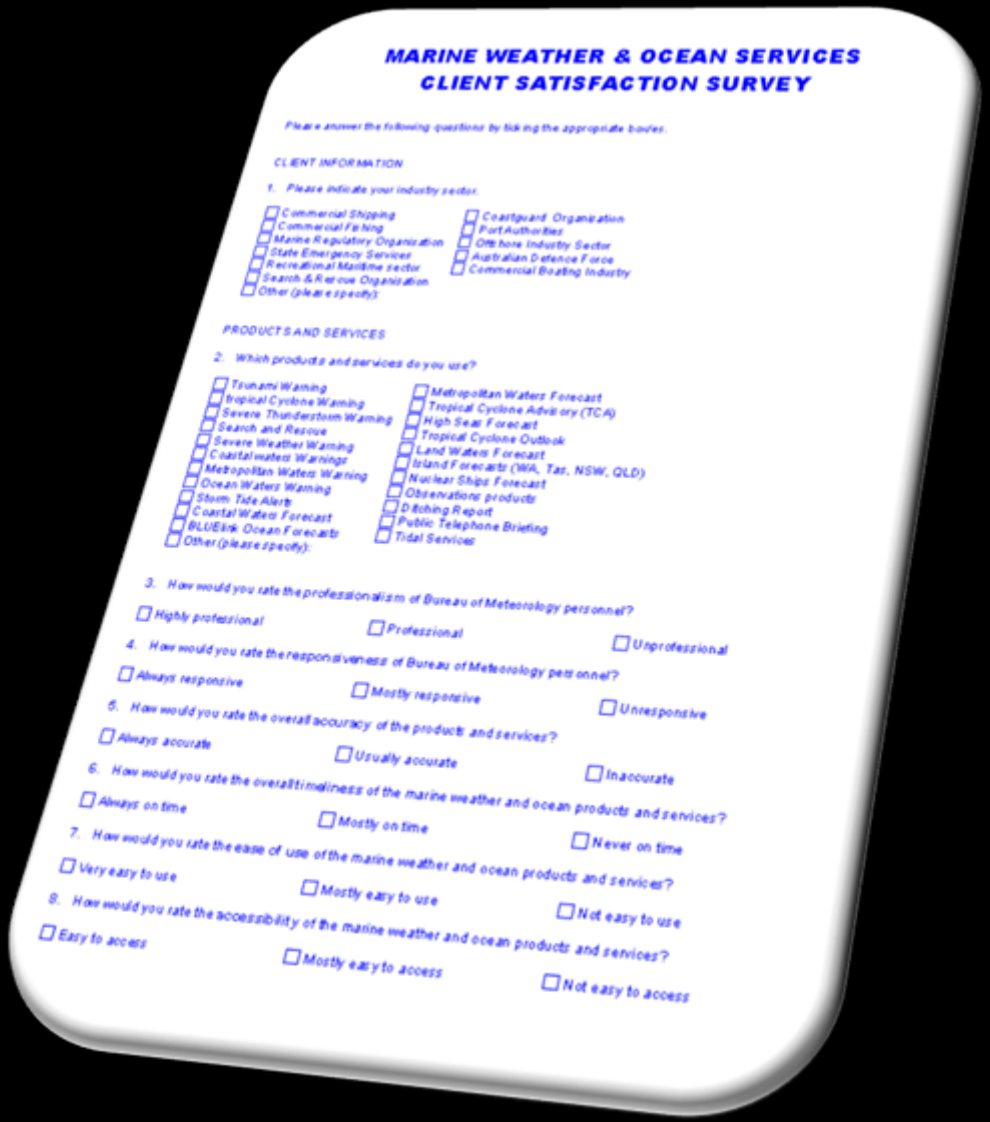
- Provide comprehensive training for all appropriate staff to “demystify ISO”

- Produce a comprehensive Quality Manual



- Ensure all of the QMS procedures are understood & endorsed by all key stakeholders

- Establish appropriate client satisfaction measuring tools



MARINE WEATHER & OCEAN SERVICES
CLIENT SATISFACTION SURVEY

Please answer the following questions by ticking the appropriate boxes.

CLIENT INFORMATION

1. Please indicate your industry sector.

- ☐ Commercial Shipping
- ☐ Commercial Fishing
- ☐ Marine Regulatory Organisation
- ☐ State Emergency Services
- ☐ Recreational Maritime sector
- ☐ Search & Rescue Organisation
- ☐ Other (please specify):
- ☐ Coastguard Organisation
- ☐ Port Authorities
- ☐ Offshore Industry Sector
- ☐ Australian Defence Force
- ☐ Commercial Boating Industry

PRODUCTS AND SERVICES

2. Which products and services do you use?

- ☐ Tsunami Warning
- ☐ tropical Cyclone Warning
- ☐ Severe Thunderstorm Warning
- ☐ Search and Rescue
- ☐ Severe Weather Warning
- ☐ Coastal waters Warnings
- ☐ Metropolitan Waters Warning
- ☐ Ocean Waters Warning
- ☐ Storm Tide Alerts
- ☐ Coastal Waters Forecast
- ☐ BLUElink Ocean Forecasts
- ☐ Other (please specify):
- ☐ Metropolitan Waters Forecast
- ☐ Tropical Cyclone Advisory (TCA)
- ☐ High Seas Forecast
- ☐ Tropical Cyclone Outlook
- ☐ Land Waters Forecast
- ☐ Island Forecasts (WA, Tas, NSW, QLD)
- ☐ Nuclear Ships Forecast
- ☐ Observations products
- ☐ Ditching Report
- ☐ Public Telephone Briefing
- ☐ Tidal Services

3. How would you rate the professionalism of Bureau of Meteorology personnel?
☐ Highly professional ☐ Professional ☐ Unprofessional

4. How would you rate the responsiveness of Bureau of Meteorology personnel?
☐ Always responsive ☐ Mostly responsive ☐ Unresponsive

5. How would you rate the overall accuracy of the products and services?
☐ Always accurate ☐ Usually accurate ☐ Inaccurate

6. How would you rate the overall timeliness of the marine weather and ocean products and services?
☐ Always on time ☐ Mostly on time ☐ Never on time

7. How would you rate the ease of use of the marine weather and ocean products and services?
☐ Very easy to use ☐ Mostly easy to use ☐ Not easy to use

8. How would you rate the accessibility of the marine weather and ocean products and services?
☐ Easy to access ☐ Mostly easy to access ☐ Not easy to access

9. Does the marine weather and ocean service contribute to enhancing the economic viability of your operations?
☐ Always ☐ Mostly ☐ Rarely

10. Does the marine weather and ocean service contribute to enhancing the safety of your operations?
☐ Always ☐ Mostly ☐ Rarely

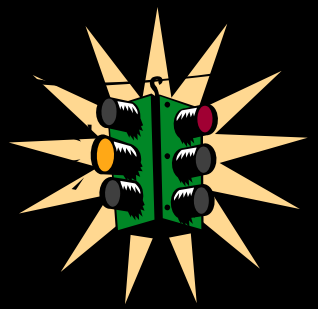
11. Does the marine weather and ocean service meet the needs of your organisation?
☐ Always ☐ Mostly ☐ Rarely

12. What impact do you believe the marine weather and ocean service is having on your operations?
☐ Always positive ☐ Mostly positive ☐ Negligible

13. What is your level of overall satisfaction with the marine weather and ocean service?
☐ Very satisfied ☐ Fairly satisfied ☐ Dissatisfied

14. Can you suggest ways that we could improve the marine weather and ocean services?

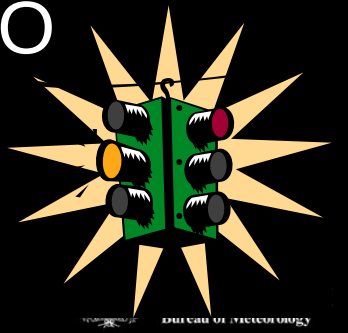
- Establish a schedule of internal audits



- Appoint an external certification body

Lloyd's Register Quality Assurance (LRQA) Ltd

- Establish date for the Stage 1 assessment and Stage 2 external audit to establish compliance with ISO 9001:2008 Quality management standard.



THE CHALLENGES SO FAR ...

- Branch restructure
- Recruitment of new staff not finalised
- Completion of the QM Manual
- Coordination of training sessions nationally
- Ocean services documentation incomplete
- Ensuring a sound resource base - $$’s & HR


QUESTIONS?